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THE SCHOOL, THE CHILD AND THE TEACHER

SUGGESTIONS FOR STUDENTS IN TRAINING

WRITTEN, WITH SPECIAL REFERENCE TO THE WORK IN SOUTH AFRICAN SCHOOLS, BY

ELLEN WINIFRED ADAMSON

FORMERLY MISTRESS OF METHOD IN BLOEMHOF GIRLS' HIGH SCHOOL, STELLENBOSCH, AND IN WELLINGTON TRAINING COLLEGE

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PREFACE

In publishing these *Suggestions* for the use of South African student teachers I make grateful acknowledgment of much kindness and help received from a number of friends and especially from some of the officials of the Cape Education Department.

The publishing of a book of this kind, the purpose of which is to offer to young teachers the knowledge gained from study no less than the experience resulting from classroom practice, inevitably places the writer under a debt to earlier publications. Of this debt, it is impossible in many instances to make other than general acknowledgment. Where this is the case the textbooks and other educational publications which I have used in study and teaching are named among the books marked with an asterisk in the lists recommended for further study and reading. In all cases of direct borrowing footnotes are made in acknowledgment; and, where the nature of the debt seemed to demand it, permission to incur the debt has been asked and granted. Special thanks are due on this account to the authors and publishers of *The School* (Home University Library), Professor Findlay's account of the stages of growth in childhood having been somewhat closely followed in Chapter i.; of *How to Study* which helped me greatly in formulating my ideas for Chapter ii.; of *The Dawn of Character* from which matter has been drawn for Chapter iii.; of *Circular* 13 (on English Pronunciation) of the Transvaal Education Department, and of *Clear Speaking and Good Reading* from which some of the vocal exercises in Chapter iv. have been taken; of *The School Music Teacher's Guide* for the scheme of breathing exercises used; of *Studies in Teaching of History;* of *Let Youth but Know* and certain articles in *The State* magazine from which quotations have been made in Chapter ix.; of *Underwoods* for permission to quote *The House Beautiful;* of *Longmans' Prac-*

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tical Arithmetics used in writing Chapter xii.; of *A Manual Drawing* (Rawson) used in writing Chapter xiv.; of *The Prim Curriculum,* Chapter xii. of which is quoted and to some extent followed in the section on woodwork; and of the English Board of Education's *Syllabus of Physical Exercises* used in writing Chapter xvi.

The English Board of Education's *Suggestions for the Consideration of Teachers;* the Scottish Department's *Memoranda* on the teaching of class subjects; publications of the Cape Education Department (both the Gazette and certain pamphlets) and the Transvaal Education Department's *Regulations for Primary Schools* have been consulted throughout. Where wording or idea has been taken from any of these permission has been obtained—in the case of the first two from the Controller of His Majesty's Stationery Office; and in the case-general of the last named, from the Superintendent General and the Director of Education. Responsibility for the selection of extracts, and the manner in which they are made use of, rests, of course, with me.

My suggestions are made to junior student-teachers themselves. It is hoped that the provision for their private study of a book which endeavours to put before them in broad outline and in simple language the ideas and ideals which should govern education in public elementary schools, will set their method ins
to deal with their subject in detail according to thei
convictions of what is best in school practice.

The chapters or sections on such " special " subject
drawing, woodwork and needlework are, it will be n
brief. The manuals in use give detailed instructions regarding methods of teaching these subjects; all that has been attempted, therefore, in the following pages, is to give such knowledge of principles as should be acquired by students during training.

E. W. A.

BINDURA, MAZOE VALLEY,
RHODESIA,
June 1914.

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CHAPTER I

THE SCHOOL AND ITS WORK

"And these I see—these sparkling eyes,
These stores of mystic meaning, these young lives
Building, equipping like a fleet of ships, immortal ships,
Soon to sail out over the measureless seas
On the soul's voyage."—WALT WHITMAN.

THE word school at the present day has many shades of meaning. Of two of them we make use frequently, as in the sentences: "I left my books in school," and "School begins to-morrow." In the first of these the word means a building, in which pupils are gathered together that they may be taught; but it is not a building that is meant by it in the second. There it stands not for a concrete object, but for an abstract idea—that of an institution organised for the purpose of education. It is to the school as an institution that I wish to call attention just now. What is the aim of the education that such institutions are meant to furnish?

In every form of education two things must be kept in view—the preparation of the child to take his place in the society to which he belongs, to "earn his living" as we say, and the development of his intellectual and spiritual being. In both cases a growth of natural powers is involved, and it may be said that the aim of education is to provide opportunity for physical, mental, and spiritual growth, while taking account of the claims of material life—the need to earn a living. If, as teachers, we are to help this growth, we must, it is clear, know something of its conditions in a normal

child. In our study of these conditions we must try to see how we can suit our teaching to the facts and needs of child-life, and of the child-nature in accordance with which it must be lived.

The life of human beings passes through several stages before it comes to full growth or maturity. School life embraces only half of them, but it will not be enough for us to consider these alone. We must know both from what we are rising and to what we are reaching, and at each stage we must try to discover what business Nature has in hand, and strive to second it. Beginning, then, our study of childhood in the first stage of life, we find that it opens with the period known as *infancy*. The derivation of this word shows that it means, literally, the period before children are able to talk; but in general use we apply it to the time of their greatest dependence on their parents,[1] even though they have mastered speech sufficient for their needs. The period ends in the sixth or seventh year.[2]

During *infancy* children grow faster, proportionately, both in height and weight, than at any other time of life. Nature, then, intends this period to be given to the business of physical growth. Growth in size is most rapid during the first twelve months. In this year, we may say, a baby does little but feed and grow. He cries, laughs, crows, and makes sounds which resemble the sounds of speech; he stretches, kicks, creeps, and perhaps makes efforts to walk; but the remarkable thing about him is the rate of his growth. This rapid growth continues to attract notice till the third year of life, when it slackens, and restless movement begins to appear as the characteristic feature of later infancy. But this is also a form of growth. By its means Nature is striving in him for a growth in the control of the muscles of the body. This control, as our own observations may show us, has a fixed order of development. The earliest movements of a child are such as require the control of the large muscles only. He moves his head, arms, and legs before he attempts to move his fingers or toes. This has its lesson for us as teachers. We learn from it that occupations

[1] *Cf.* also *legal* infancy—the time during which their parents a
for them in law.

[2] Earlier in tropical and sub-tropical countries than in temperate ones; earlier, therefore, in South Africa than in Europe. Compared with the "infancy" of the lower animals, this is a long period affording time for laying the foundation necessary for the higher level of mental development reached by mankind.

demanding the exercise of small muscles are unsuited to the infant room.

During this later period of infancy growth in size is still rapid, though it has been slackening since the first year. Now in all periods of rapid growth *nourishment*—not food alone, but the other essentials of physical life: fresh air, cleanliness, warmth, exercise, and rest—is the first necessity of being. Without proper nourishment, the growth both of the body and of the mind which is dependent on it, will be stunted. While it is not the business of teachers to see to the feeding of their pupils, they should know whether the conditions of nourishment are in all cases such as make healthy physical development possible. Should the appearance of any child suggest that something is wrong, tactful inquiry will often reveal the cause, and may lead to its removal. The other essentials of physical life are more under the teacher's control, and she [1] must, of course, do all that she can to render them satisfactory.

One physical peculiarity very noticeable in the years of infancy is the proportionately large size of the head. The brain reaches its full weight at the age of eight, a fact which shows that its growth must be very rapid up to that time. Such rapid growth warns the teacher against undue brain work at this period. The food taken into the body is needed to build up its increasing weight, and cannot at the same time make good the waste caused by heavy exercise. Particularly is this so in the case of the brain. Lessons which demand severe mental effort are actually harmful at this stage of life.

Nature herself points out what form brain action should take in the infant room. The restless activity which is (except when children are asleep or under restraint) the marked feature of later infancy, is not merely physical. All movement is governed by the brain acting through the nerves and muscles. Muscular action, therefore, is brain action, and is the right form of it for infants. Formal reading, writing, and reckoning must be left till later. The making of letter forms, however (by fair-sized sand- or chalk-drawings), and the giving of names to them, and the counting of concrete objects as they are touched and moved, are suitable forms of exercise, because the main effort of the children is given to making the required movements. Other forms of exercise such

[1] In the case of infant classes the word *teacher* is assumed to be feminine. Elsewhere, the masculine pronoun follows it, and is of common gender.

as those required in dressing and undressing, and in
and passing things (as, for instance, at table) will help
muscular control and apply it to the child's home duties. E
cises in form and colour will give familiarity with these and la
foundations of good taste in combining them. The additio
stories, poems, action-songs, marching and musical drill shoul
up the programme for infant classes.

Care must be exercised in the choice of occupations. While th
brain reaches its full *size* early in life, it does not come to full *de*
velopment till very much later—not till middle age, in fact; and
in infancy, as has been said, it is incapable of making the exac
adjustment of muscles required for fine work and for accuracy in
coarser work. All occupations needing close sight and fine touch
are therefore unsuitable for infants. Moreover, we should be
very careful not to make wounding and discouraging accusations
of carelessness and clumsiness. Results which may seem to be due
to these faults are more likely to be due to natural incapacities o
infancy which must be left to be remedied by time. The fault may
be in the nature of the work set or in what we expect in the
way of results. The laying of fine sticks, the threading
beads, the pricking of fine embroidery patterns, the
of small letters, besides requiring the action of mu
under the child's complete control in the first years of s
put a strain on the eyes which they are unable to bear withc
Building with blocks, drawing with chalk or in sand an
sand or moulding clay into large simple forms will, with d
ments, give all the muscular training necessary. It must be
remembered, also, that in these early years it is the n
themselves that matter, not the results. Perseveranc
provement, as we understand them, are virtues for a late
is useless at this stage to expect children to repeat the s
again and again and show improvement each time. Aft
wearisome repetitions, for instance, of the effort to draw a
a child's last attempt may quite possibly be less like t
than his first. Little children improve in a different wa
one delighted effort, under the spell of interest, to draw
to-day and an apple to-morrow will have its result in th
of a peach next week. If the exercises are suitable, any
sympathetic teacher will succeed in getting her pupils to
efforts that in course of time will yield success. But tim

effort will be the chief factors in improvement; and, until the last year of infant school life, movement for the sake of development should be the teacher's aim, not occupation for the sake of result.

It must be remembered, also, that not even the most suitable occupations and games chosen by teachers can take the place of play in which the children indulge of their own free will and on the impulse of the moment. Of course some opportunity for this occurs out of school; but there are many children who have no companions of their own age at home, and who, therefore, cannot play the games most likely to do them good. Others again, though this is not common among healthy, well-nourished children, are, if left to themselves, too listless to play actively as much as they should. No school session, therefore, should pass without intervals for free play in the presence of the teacher. The games may be sometimes suggested by her, but should only occasionally be interfered with. She should be there to come to the rescue in case of any accident, to check injustice or rough play, to see that the children who most need it are not left out through their own timidity or listlessness, or through the small unkindnesses of which children are sometimes guilty. Now and then she may take part as a welcome playfellow, but her presence should not be too much felt. Play is Nature's way of educating children between the years of three and six; and groups of children of the same age, left to themselves, instinctively choose the form of play best suited to their needs at the moment, and go on till they tire—which, again, is Nature's way of telling them that it is time to stop.

It is interesting to note here that the occupations suited to infancy are such as would engage the imitative powers of children were there no school course to direct them. Some form would strike their fancy, and they would try to copy it with such material as they could find; they would notice men laying brick on brick in building, and would imitate the action with such smaller objects as they could lay hands on; they would watch their mothers kneading bread and making puddings and cakes, and would try themselves to make loaves of sand and mud pies. Education in these years is not a matter of verbal instruction, but of practice—with the one exception of mother-tongue instruction, in which the speaking of words *is* the practice demanded. "*See*" is the word that should be most often on the lips of the infants'

teacher, for it is by imitating her example that her pupils will best learn.

About their seventh or eighth year children are seen to be changing in their habits, interests, and desires. They are leaving infancy behind them ; but, as Nature's processes of growth and change are gradual, not abrupt, they have not yet fully entered on the second well-marked stage of life. All times of change create a feeling of uneasiness and dissatisfaction in those passing through them ; and, between their sixth and eighth years, our little people stand more in need of our understanding sympathy than at any earlier time. The joys of infancy are ceasing to satisfy them, while the pleasures and interests of the following period are not yet within their reach. Hitherto action and fancy have filled their lives, leaving nothing to be desired. They have passed from activity to activity, from fairy story to fairy story, from play to play, entirely happy if they have had something to do, something to imagine, something to *be*. Now, this is no longer enough. The world of work is beginning to press upon their consciousness. They are beginning to desire other results than the mere satisfaction of an impulse to do or be this or that. And, as the connection between action and some practical result becomes clearer in their minds, they turn wistfully to the occupations of their elders with a further idea than that of simply imitating their action. They want also to realise the same results. Instead of making mud pies, they want to make cakes that can be eaten. In school we shall find them fingering books, pencils, and pens. Their teacher sometimes—purposely—reads those wonderful stories out of books, and father and mother write letters. Older children can read and write. They want to do the same.

Here, if we have been submitting to her guidance so far, Nature is before us still, pointing the way. Formal reading and writing and practical arithmetic should now begin, and the occupations should change their character. Mat-weaving, straw-plaiting, paper-folding, cutting, and placing, all having for their object the making of small articles useful in the home or the schoolroom, should engage the children's energies. On these they will work most happily and with the best results. For results have now to be taken into account, and the encouragement of perseverance and improvement becomes part of our duty. We should not forget, however, that the children's newly-awakened desire for results is

already urging them, and that it may be more necessary in some cases to guard against strain. Stories and poems should also change in character, to meet the coming change in the children —nursery and nonsense rhymes giving place to poetry of a higher order, and fairy stories yielding to such as may help to satisfy and widen their new interest in the world of realities. Nature myths and stories are best suited to this transition period, for what is marvellous in them mingles with what is true in a way that fits them perfectly to the needs of little folk emerging

> Wide-eyed and wistful, with the dream
> Still on their faces, with the gleam
> Of lost romance still in their gaze,

from the wonderland of infancy into " the light of common day."

The second well-marked stage in growth is childhood, which, in this country, may be considered to begin about the age of seven or eight—the time at which the brain comes to its full size and weight—and to last about four years. In these years physical growth is much less rapid than during infancy. It seems, indeed, almost to stop for a time—and children of this age, therefore, are able to endure more prolonged and harder exercise of both body and brain.

Activity loses its restlessness and gains in power. The desire for results, which awoke in the period of transition from infancy, induces the perseverance which is necessary for successful accomplishment, whether of work or play. The power of endurance, resulting from the decreased rate of growth, renders this perseverance possible without undue fatigue; and children get through a surprising amount of vigorous physical or hard mental exertion before they show signs of tiring. Compared with either the earlier or following stages of life, childhood is a time of stability and power within its limits. Infants are exploring, as it were, both themselves and the world into which they have been born. Older boys and girls, again, feeling themselves on the brink of a new self and a new world—the adult world—return to their earlier method of restless experiment in seeking knowledge of them. But children between these stages seem to be satisfied for a time with the footing they have gained over the threshold of life, and to pause there, engrossed in the many activities thrown open to them, before pushing on into a wider room.

In school the desire—first seen at the close of infancy—to read and write and share in the other lessons of older scholars urges them on. They are willing, indeed eager, to work hard at any task, if its purpose is clear to them and its result seems worth while. More than this, they delight in striving and conquering for the mere sake of the effort and the satisfaction, as must be apparent to who has watched a class of Standard III or IV children set to working out long multiplication and division sums whic seem to them to serve any useful end. But while drill a are specially suited to this stage of life, we cannot doubt tl dren would have more joy in their work if we were careful to keep before them the ultimate purposes of the us they are learning. "Drudgery is the grey angel to success," and our pupils at this age are bent on succeeding; bu delightful, and the drudgery of learning to read, fo be lessened if children were excused in turn fron read privately some of the favourite stories of the drill necessary to secure good reading alou gladly undertaken if we were to show what pleas complishment is capable of affording. In writing les the value of the accomplishment should always be bef dren. They should not be kept writing at a snail-like any longer than is necessary. As soon as the need done its work they should be led, by such useful exe can devise, to realise the worth of writing as a means ing and communicating thought. Arithmetic, too, sho practical by being related to present needs and futur work.

The study of geography and history begins genera years. This is not chiefly in order that the children certain amount of ground in these subjects before leaving school The amount that can be done in any circumstances during schoo years is so small, that all that teachers can hope for, even in the best is to be able to create a desire for further study i reason is rather to be sought in their effect on the seen that children at this age are bent on doing ar Useful as that inclination is, it has its dangers. Al as was said earlier, is in some degree mental—ex well as muscle—and therefore helps to develop the mind. But th minds of children need the developing power of thought no less tha

of action. The world of things must not be allowed to eclipse the world of ideas ; and just at this stage there is a danger of its doing so. The years of childhood are to some extent a rest period mentally ; and if this rest is not to become permanent inaction, the stimulus of thought must be brought gently into play. Again, the desire for personal accomplishment tends to make the eager strivers somewhat self-centred, if not actually selfish ; and to correct what might become a serious fault, sympathy must be cultivated through an outlook on other lives than their own. We must not take the children outside the realm of their interests, or expect of them virtues which do not belong to their age ; but we may, and should, widen those interests by opening up new studies that will lead them away from a too close concentration on their own doings. Geography and history, with the nature study, literature, and music begun in the infant room, offer us the very means we need for our purpose. Tales of little folk in other lands, life stories of some of the world's great men and women, some knowledge of the best literature suited to their age, together with the influence of good music, will have the desired effect of stirring imagination and awakening sympathy, and so of helping towards a full development of childhood.

So much for the school subjects. But, when all is said, these do not, at this age, have their full effect unless brought into relation with home activities and needs. The division between home interests and school interests, always to be deplored, is most harmful at this period when the nature of children is turned full-face towards useful activity. Their keenness for games is no greater than their eagerness to be helpful at home and in school, and we should be poor educators if we failed to make use of so marked a trait. It is not necessary to remove the school desk—as some reformers would have us do—in favour of the carpenter's bench. Reading and writing and the power of working out a certain amount of " paper " arithmetic, even when not preparatory for adult occupations, are increasingly necessary accomplishments, for the mastering of which no other time of life is so suitable ; and the part to be played by geography, history, literature, nature study, and music lessons is important in the development of well-balanced interests. It is, moreover, possible to make all these subjects serve as links between school and home, and in this way to give them a new value. There can be no doubt, however, that the time-tables of junior classes

should give a larger proportion of half-hours to manual occupations —cardboard-modelling and light woodwork for boys, needlework, simple cookery, and laundry-work for girls, and gardening for both. The present-day desire to have workshop and housewifery departments attached to our schools is quite in accordance with the revelations of child study. It is not, however, in carrying out ambitious syllabuses that these have their greatest value, but in closely relating such school-work to home occupations and to the supplying of home needs.

Again, in gardening—one of the best forms of practical nature study—school and home life should be brought into close connection. Not only should the children grow in their school plots vegetables and flowers for home use, but they should be helped to master the principles underlying the preparation and working of gardens in order that they may know how to make productive any pieces of land attached to their homes.

As at the close of infancy, so at the close of childhood—which, as a rule, occurs a year later in boys than in girls—we encounter an unsettled period which marks the onset of a new stage of life. In this transition period, as in the earlier one, there is a dissatisfaction with pursuits and methods hitherto found satisfying. As far as school work is concerned this shows itself in distaste for the drill mode of mastering subjects. Repeated mechanical effort becomes wearisome. Our pupils wish to apply their minds to their work in a new way. They are beginning to be capable of discerning the meaning and value of the subjects which have been occupying their time. The effect of mere memory work, as they pass beyond childhood, is to deaden interest and degrade knowledge, that should be pursued gladly for its own sake, to the level of mere examination subjects studied only for the sake of passing some test. In their play at this time children begin to care less for personal achievement, and to choose games which require them to combine for the success of the " side " to which they belong. In this change we see the awakening of the social instincts which, rightly cult
prepare them to play their part in their future citizen l
self-interest lower than the good of society and of the
both work and play the tastes and interests of girls an
to take different ways, a fact which gives strong supp
who desire separate schools for them when the years o
are over.

The widening of this difference in outlook marks their entry upon the third decisive stage of growth—girlhood or boyhood. In more ways than one the stage shows resemblances to that of infancy. It is, for instance, a period of rapid growth both in height and weight, and, like the earlier period of rapid growth, is a time of susceptibility to sickness—a fact which should be taken into account by us, and made to act as a check on our demands if these encroach on the amount of rest and recreation necessary for healthy youth. It is also a time of experiment, though this is concerned with different powers. In the years of infancy our pupils were interested chiefly in their muscular powers. They were fond of watching the actions of their elders and of trying to copy them. They were interested in the world of things and in exploring it—primarily by means of their senses of sight and touch, and, in a lesser degree, by means of their hearing, taste, and smell. In early youth these characteristics repeat themselves, but with a difference. Mere muscular movement has ceased to interest; and mind movement, with its result in conduct or behaviour, becomes the subject of their new experiments. Their interest in adults makes them desire to be treated as their elders are treated, and leads to the practising of grown-up ways. The sense of change within them calls for a new method of discipline. The direct commands suitable in the case of children should be given up as far as possible for the method of suggestion, our government at this period yielding gradually to self-discipline. At the same time, submission to customary rules of good behaviour should be enforced. This is important, for at this time the individuality of our pupils begins to urge them towards opinions and actions which in the absence of wise and firm guidance may lead them astray. It is impossible to lay down hard-and-fast rules for the government of girls and boys, for the fact that in this stage of their growth they begin to differ widely both in character and in capability makes individual treatment necessary. What is needed in our attitude of the teacher is a quiet insistence on ordinary good conduct and manners, together with a generous forbearance in matters not likely to bring evil consequences either on the pupils themselves or on others. We must, moreover, be prepared for some variableness and inconsistency in the opinions, feelings, and actions of our pupils. In healthy, wisely-guided youth these are only as the oscillations of a compass-needle before it sets true to its pole.

The matter of government and discipline is made easier by the fact that there is at this time a marked development of the feelings and emotions which influence conduct. "Fear, anger, love, pity, jealousy, emulation, ambition, and sympathy," we are told,[1] "are now born or are springing into most intense life." With these aids at call, we should not find our task of direction—difficult and delicate as it admittedly is—in any sense hopeless.

As far as the actual work of the school syllabus is concerned, we need have no fear of any lack of interest at this period if our teaching deals suitably with suitable matter. As has been said, a restless and inquiring interest in conduct marks this stage of growth, while the meaning and value of studies to which hitherto they have perhaps applied themselves mechanically now begin to grow clear to our pupils. As, at an earlier stage, the nature of children is inclined towards useful activity, so the mind of youth is turned towards all that concerns adult behaviour—the thought, endeavour, achievement, and aspiration of grown men and women. As "all that men have devised, discovered, done, felt, or imagined lies recorded in books," an introduction to some of the best of these should enter largely into the education of pupils in this stage of growth. Books of travel and biography, historical novels and records of history from original sources, works dealing with the wonders of science and art, the finest prose and poetical literature of their own and—by translations when otherwise impossible—of other nations, will admit them to an adult world, a knowledge of which will do much to stimulate in a healthy way their developing intellect and emotions.

But, just as in childhood there is a danger that the world of material things may eclipse the world of thought and ideas, so, in this later period, the opposite tendency is to be feared; and it will be part of our task to see that our pupils do not lose themselves in bookland. The duty of living their lives in deeds as well as in dreams must be impressed upon them by suitable activities in school and at home, and by the provision as far as is possible of such social intercourse as a variety of school societies may be made to afford. Above all, they must feel the personal interest and affection of warm-hearted and broad-minded teachers whose earnest desire it is to help them to realise the ideals of life and conduct which they form in these opening years. Once again, they are

[1] By Professor J. J. Findlay in *The School* (quoted from *Adolescence* Stanley Hall).

passing through the discomfort of a transition period. Behind them lie the pleasures of childhood; before them, the fuller and deeper joys of adult life not yet attained; again, as in their first period of change, they have need of all the help which an understanding sympathy can give. No period of their growth is more critical than this; and if their elders fail them in it by not recognising its infinite possibilities, or by not yielding them opportunity for the healthy exercise of their awakening emotions, their whole future life will be stunted by their being unable to grow to the stature of the full manhood or womanhood Nature meant them to reach. It is of equal importance that certain of these emotions shall not be stimulated and prematurely experienced, for too early development of them will in the long run be found more stunting even than the suppression against which warning has been uttered. Prevention lies largely in the hands of parents and teachers, who, by a wise supervision, and the provision of interests and pleasures suited to this time, may keep their young charges from reaching forward to those of a later age.

With the latest stage of growth—adolescence—which begins (allowing for variation in the case of individuals) about the fifteenth or sixteenth year, and with maturity, which marks the end of growth, young teachers are not directly concerned, as their pupils pass out of their hands before these stages are reached. We may now, therefore, proceed to apply to the subjects of instruction, and to the teacher who uses them to promote the education of his pupils, what has been said of the school and the child, endeavouring to see how he may best use the one for the good of the other.

The desire to impress one all-important idea animates these pages—that schools are institutions in which lives, and not lessons merely, are to be dealt with. Hence the subjects of school instruction are chiefly important in proportion as they affect, through mind and character, the lives of the pupils. In choosing them, therefore, and deciding the amount of time to be given to each, we have to ask what Education is meant to do for the child. To this question Froebel answers in *The Education of Man*, that it "should lead and guide man to clearness concerning himself, to peace with Nature and to unity with God; hence it should lift him to a knowledge of himself and of mankind, to a knowledge of God and of Nature, and to the pure and holy life to which such knowledge leads"; that is, "it must train him to understand the world

he lives in, and to act rightly in it with regard to his Creator, his neighbour and himself."

The answer suggests a consideration of knowledge under three heads—spiritual, natural, and humanistic. With the spiritual side the Church has a special concern. If we leave that aside for the moment, we see that all other subjects fall under the head of either Nature Study or Human Study. Under the former, we should group not only what goes by that name in schools, but also geography and the various sciences ; all, in fact, in which any aspect of the universe forms the subject-matter. Under the latter would come all which are concerned with the story of man's life, activities, and aspirations. As, however, it is largely in their relation to man that nature studies have value for us, and as man's life and activities have been always and everywhere controlled by Nature's laws, we shall not expect to find the two groups rigidly separated from each other. There will naturally be numerous inter-relations. Thus, although we put arithmetic, geography, and the natural sciences in the "nature" group, it is clear that arithmetic deals with man's mode of reckoning and counting, that geography treats of the earth as the home of man, while scientific research is carried on by men and primarily for the benefit of mankind. In the "human" group we find that history gives the story of mankind as lived on the earth, his home, of which geography treats ; that literature is closely linked with nature studies through the writings of naturalists and explorers, and that language itself is the means by which the discoveries of natural science have been made known. In teaching we need to make use of all these threads of association as well as of those connecting the separate subjects within the two main study groups.

We must now endeavour, from this new point of view, to relate the various branches of knowledge more systematically to what we know of child nature ; for only as they are seen to influence the life of the child beneficially—through his interests, activities, and needs—can they claim a place in the school curriculum. When we have made our inquiry it will be necessary "to balance the curriculum so nicely that no ordinary aspect of the world is wholly omitted and no ordinary human activity entirely starved," [1] for, though "the school cannot set before itself as the aim of its instruction an attempt to cover all departments of human activity," "it must consider the

[1] Dodd, *The Child and the Curriculum*, p. 46.

broad nature of them all in order that no typical aspect of human experience or form of human activity may be omitted." [1]

The claim of language to be included in the school course will be readily acknowledged. As a social being the child feels a need for language in his earliest years. As he gets to know more people, to gain new experiences and to feel new interests in passing from the home to the school, his need to understand and speak his mother-tongue increases. Language, therefore, as the expression of desire and determination and thought takes the first place among the subjects of instruction.

While, however, the child's social life begins in the home and develops in the school, it does not end in either. His life will be lived in a world of men whose traditions of government and conduct are rooted in a distant past, whose inventions, discoveries, actions, feelings, and thoughts "lie recorded in books." It is necessary, therefore, that he should be prepared for his wider interests and activities by extending inquiry, thought, and feeling to matters outside the range of his own personal observations and experiences. Literature and history—Bible literature and history where religious thought and feeling are concerned—are the subjects best fitted for this purpose, and are consequently included in the humanistic group of studies.

Along with this increase of interest in words, and in the world of thought, feeling, and action of which they tell, the child develops an interest in the world of concrete objects which surround him on every side—the furnishings of home and farm, of school and street, the features of the country-side and the phenomena of nature. In direct relation to this interest are nature study, the observational side of geography and lessons on familiar things, the aim of which will be to make him at home in the world of nature, as the earlier-named subjects should do in the world of men. These, therefore, must also be given a place. Number, in its relation to things, demands consideration; and arithmetic, beginning with concrete counting and leading up to abstract calculation, must be admitted as a necessary member of the same group.

The interest in making and doing things, so noticeable in children, together with the need for training hand and eye, claims room for modelling and weaving, cardboard-, wood- and metal-work,

[1] Welton, *Principles and Methods of Teaching*, p. 36.

housework and needlework, cookery and laundry- of course, can be admitted to the time-tables of e one at least—more, if the staffing permits—fro according to the age and sex of the pupils, should be memory can be trained in committing tasks; a c of the reasoning powers can be acquired through l and mathematics; but, after all, this is somewl shadowy compared with the training of attention that is acquired in having to do things with a rea and a real outcome ahead." [1]

Closely associated with the useful arts and they are a development, are the higher arts—the po song developed from speech, the designing, whether pencil, that adds beauty to the usefulness of garment The world of nature reveals beauty on every side, ar tion of works of art that mirror and transmute tha beyond all doubt the existence in man of the power and respond to it. It is part of the work of the scho power of appreciation, so reciting, acting, and singing, and art needle- or other tool-work should also enter into the cu

Lastly, time must be found for some form of physica through play and games and ordered exercises.

The order in which these subjects are here named is not meant to suggest the age at which they should begin, for the firm estab- lishing of the body, as we have seen, is Nature's first physical education—placed last above—must, ther with the beginning of school life and be continued language, the first mental exercise. It is in early year three to six—that play has its greatest value in de child. With regard to the other subjects of instru suitable plan of studies will introduce each in turn as appeals to the child—literature, for example, as soon enough to enjoy stories; geography and nature stu begins to notice earth forms or substances and natural phenomena history, at the time of the awakening of his interest in t his own people; arithmetic, when he has need to number, or to measure. The object is always to present ideas an activities at the moment when the pupil's mind and ser are ready for them. This moment will occur when som

[1] Professor Dewey, quoted in *The Child and the Curriculum*, Dodd, p. 5

experience—something in his school or home life—has set him thinking about or trying them, for "the life from which all fruitful school instruction must start is always the actual life of the pupil."[1] Thus the relating of sign, sound, and idea in reading will provide exercise for the vocal organs and the senses of sight and hearing as soon as the earlier speech work has served its purpose in the infant room; and the exercise will be most fruitful when the underlying ideas are such as the children can understand and feel interest in; the making and combining of letter forms in writing will at the same time provide a new means of expression and a new occupation. In arithmetic, rational methods will teach the truths of number through concrete objects provided by nature studies and familiar experience. Nature study itself must in the early stages have to do with the outdoor things the child sees and likes and wants to know about, and with the things he does; with his love of plants and animals, his fondness for keeping pets and tending a garden. Observational geography begins to make him mentally at home in the place he lives in; and the descriptive side of the same subject, through his imagination, enables him to picture the surroundings and the lives of the children of other countries. Through such activities as modelling, brushwork, and drawing, simple handicrafts, singing and the rhythmical movements of musical drill, he is trained in new ways of showing his own thoughts and feelings. Accompanying this practical and expressive work are the beginnings of literature and history—in folklore and fairy tales and "fireside stories of battles and brave deeds"—developing him further on the side of his imagination and emotions.

These subjects in this form—constantly concrete and practical—should fill the school programme of the two lower standards. In Standard III the work of arranging and classifying knowledge should begin—in language, by a study of the work of words examined in the actual speech of the children themselves; in writing, by the putting together of sentences in brief continuous narrative; in arithmetic, by more general introduction of abstract number; in geography, by the mapping of large areas not previously seen or measured; in history, by the cultivation of a time sense through the making of simple time-lines. The movement towards more abstract work in all subjects is continued from this point on until, in the highest class, studies which in each case began

[1] Welton, *Principles and Practice of Teaching*, p. 34.

with what the children themselves had discovered or experienced or otherwise become aware of, can, because of this early treatment, be understood in their wider and more general form.

The late position of abstract studies is absolutely necessary because of the way in which the mind develops. In the early stages of growth "the child has not yet acquired much knowledge of human nature or of the world of things and forces around him."

"He has a tolerably quick grasp of isolated things and events, but has small power of synthesis. He cannot combine in his little mind things and events so as to perceive the principles and laws underlying the things and events which are brought under his notice. He consequently is not able to get much insight into the trend of human affairs, or to draw logical conclusions from convictions or ideas. It is a necessary characteristic of primary instruction that it must take the world of human learning in fragments; but it is the constant effort of good teaching to correct this defect, for there is a great difference between the teacher who requires only isolated details of his pupils and the one who directs their attention to their relations and interdependences from the beginning." [1]

We must begin then "at the child's end" in all subjects of school instruction and fit our steps to his in every stage of growth, waiting for him to live out each in turn—physically, mentally, and morally—before we try to lead him forward into ways of acting, thinking, and feeling that belong to a later stage. In all our beginnings we must take full advantage of his personal knowledge, gained at home, or in school, of the matter of instruction, discarding gradually its illustrative aid as we find him able to disp

Only so shall we be able to develop in him adult powers
and to bring him to an understanding of those wide
general aspects of the various studies which are in
place and person; for it is only through a childhoo
lived out in all its stages that the full powers and plea
life can be realised.

Coming now to a consideration of our duty as teachers
be ready to acknowledge that it is only by secondin
designs for their development that we can deal rightl
young lives in our charge, and we have seen that Natur
consideration is to establish health in the body. Wher

[1] Harris, *Psychologic Foundations of Education*, quoted in *The C*
the Curriculum, Dodd, p. 98.

conditions are satisfactory, this will be accomplished to some extent before school years begin. The child will have made, as we say, a good start, and our work as teachers will be so much the easier. It will only be necessary for us, then, to see that, in training his mind and character, we do not check the growth of his body by interfering with the conditions of health and vigour.[1] Unhappily, however, in many cases the homes of children attending public elementary schools are very far from providing the conditions necessary for bodily well-being; and there are children who come to school heavily handicapped in the race of life. They are pale and languid and grimy from overcrowding and underfeeding—or wrong feeding—in unclean, ill-ventilated rooms; from dirt and all the discomfort it brings in its train; from being too hot in summer and too cold in winter; from want of rest and from the want of exercise to which the other harmful conditions of their lives incline them. Children in this state cannot learn. The mind cannot be reached by, much less concentrated on, lessons when the body is tortured by such disease. Whoever or whatever is to blame, such conditions must be altered before school work can hope to be successful; and how much and how quickly they will be altered will depend to a very large extent on our own interest goodwill, tact, and determination.

The task, perhaps, seems hopeless; but a beginning can be made in the school, which is our own domain. The first step in the removal of such conditions is to create a discontent with them; and the best way of doing this is to bring them into sharp contrast with others more comfortable and attractive. The school, then, should, to begin with, be made to offer those conditions of health and comfort in which the homes are lacking. Of course, responsibility for the building itself rests with the school committee; but if it is utterly unsuited to its purpose—if it is impossible to keep it cool enough in summer, or to make it warm enough in winter, or so to arrange it that the children can work in a good light—representations made in the proper quarter will result in its being altered sooner or later, and, if we really care, very much sooner.

Apart from all considerations of the suitability of the building

[1] How these are best maintained among school children will be discussed later. Here it must suffice to enumerate them—fresh air, sufficient and proper food, cleanliness, a right degree of warmth, exercise, rest and recreation.

is the question of its cleanliness. We must insist that the rooms in which we and our pupils work are made and kept clean. They must be swept every afternoon ; and later, when the dust has had time to settle, must be well dusted with a slightly damp cloth. Once a week at least the floor, if flagged or boarded, must be scrubbed, some disinfectant powder or fluid being added to the water. Mud floors, where these exist, must be thoroughly sprinkled with water similarly treated. If the school cleaners or caretakers are responsible persons, nothing more will be required on the part of the head teacher than to explain their duties on engaging them ; but where the cleaning is in the hands of a raw native girl or boy there must be supervision or the standard of cleanliness will be likely to fall. When the school building has been made clean, we must see that it is kept clean ; and our supervision must extend to the yard and all the premises. Nothing, perhaps, gives a worse impression than a school approached through a litter of torn papers, wrappings, and scraps of lunch. A covered receptacle —the cover being a very necessary attachment in a country where high winds are common—should be provided in some convenient corner ; and the children be made individually responsible for seeing that all refuse is placed carefully in this, and not dropped about the playground. Equal care should be given to seeing that walls, fences, and posts are not disfigured by any kind of drawing or scribbling.

When the cleanliness of the building and grounds has been arranged for, the lighting and airing of the rooms should be considered. In this country the north light is very strong, and the windows should if possible be in other walls, some form of screen or shade (such as a verandah roof) being provided for any north windows that exist. Blinds are a very necessary part of school furnishing in South Africa, and their importance makes them well worth the care needed to keep them in good order. Tattered and flapping blinds, which admit strong shafts of sunligh
desks of teachers or pupils, are a source of discomfort ar
which, being remediable, should not be endured. By p
tion to the opening and closing of doors and windo
lowering and raising of blinds, a good deal can be d
sub-tropical countries towards securing the best air a
school work. Windows and doors should never be op
dusty winds, nor blinds lowered when the sun has passed from them

The appointment of a monitor to regulate air and light throughout the school sessions, as common sense dictates, will add very materially to the comfort of teacher and class. In hot weather the temperature can be lowered by sprinkling the floor with water from time to time; and if a disinfectant fluid is added to it a double purpose is served.

A schoolroom which receives proper care in these matters, which is brightened by good pictures, and in which flowers are tastefully arranged day by day and—for faded flowers are worse than none—removed when they begin to wither, will soon impress itself on the minds of children as a much more attractive place than a home in which the laws of health and comfort are neglected. Something is gained when the children have made this comparison—however unconsciously—for themselves. Their standard of cleanliness and comfort is raised by the mere realising of the difference; and if the teacher wisely draws them into her scheme of cleanliness and order by giving to each child an individual share in maintaining it, they will hold the faster to the higher standard and be the more successful in their efforts to extend it from school to home.

But while trying to raise the children's standard of physical comfort, it is necessary to be on guard against creating any feeling of rivalry between school and home in their minds, or encouraging any criticism of their parents. All that is done for children in school must be done not in condemnation of, but, as far as possible, in friendly co-operation with their natural guardians. The children, moreover, should be led to feel that on certain specified afternoons their mothers will be made welcome visitors at the school, to listen to their stories, poems, and songs, and to look at their week's written work. By all means in our power we should, as teachers, seek to bridge the gulf that at present unhappily exists between school and home; for only when this is done can school work have its best and most practical effect on the lives of the children.

But cleanliness of surroundings and external comfort are not the only conditions necessary for physical well-being. Until State maintenance and control of schools, and societies for the protection of child-life, have gone further than they have at the present day, there will, it is to be feared, be many children who come hungry to school, or so unclean in person and clothes that there is little chance of reaching their minds through their misused bodies.

In such cases it is well to remember that if we cannot do what we would, we must do what we can ; and it is sometimes possible, as has been suggested before, to improve home conditions by tactful inquiry about them. Where no improvement follows upon representations courteously and kindly made, it must be from one of two reasons : either the parents or guardians through indifference and slothfulness will not make the needful changes, or, through poverty, ignorance, or illness, they cannot. In such cases we shall feel the need of advice. The best quarters in which to seek it will be the church to which the parents belong, some charitable organisation, or some private person charitably disposed. For the school's sake, almost as much as for the child's, the efforts must continue till some change for the better results.

It should hardly be necessary to say, that all that is done in such cases should be done in the quietest manner, without any unnecessary talking about it, and with every possible endeavour to avoid hurting the feelings of those concerned. Unless parents are quite lost to a sense of their responsibilities, there is always a certain amount of shame felt by them in accepting help of that sort, and matters should be conducted with all tactful consideration for this feeling.

If a child is habitually hungry or dirty, any ordinarily observant eye will notice the fact ; but there are other physical ills, from which school children sometimes suffer, which can only be discovered by a certain amount of special knowledge. It is necessary that we should have at least as much knowledge of physiology as will enable us to know when a child is suffering from any common physical ailment—as, for instance, eye-strain, deafness, obstructed nasal passages or any nervous complaint—which is warring against his bodily health and mental progress ; and, further, to know what measures must be taken to cure the complaint or lessen the suffering.

All that young teachers in training need to know can be easily learnt. There are many books published on the subject. A good one is Drs. Shelley and Shenstone's *Health Reader*, in three parts. Book I gives the most important facts in language suitable for children from eight to ten years old ; Book II adds details to make the course suitable for older children ; and Book III is more advanced still. If all student teachers were to master the facts contained in these three little books during their years of training—one book in each year—it would mean a very considerable

benefit to the children who are subsequently taught by them. The books are cheap, and, from the importance of their bearing on the work of teachers, they are specially fitted to be the first volumes in that professional library which it should be the ambition of all teachers to collect.

Our consideration of what is required of teachers, in schools that are to have the right influence on the lives of children, has taken us beyond the years of training, but it is necessary that these considerations should be before us from the very outset of our career. The time of training must not be looked upon as mainly a matter of class subjects and notes of lessons, but as a preparation for influencing the lives and training the characters of young children. As, however, general culture and skill in teaching are the chief means of wielding this influence and effecting this training, there follow some suggestions to help the student in his twofold capacity as learner and teacher.

FOR FURTHER STUDY

[Books marked with an asterisk are especially recommended.]

*The School.** J. J. Findlay. Home University Library. (1*s.* Williams and Norgate.)
*What is Education?** Stanley Leathes. (2*s.* 6*d.* Bell.)
*The Infant School.** J. Gunn. (3*s.* 6*d.* Nelson.)
Lectures on Teaching. Sir Joshua Fitch. (4*s.* 6*d.* Cambridge University Press.)
*Talks to Teachers on Psychology.** W. James. (4*s.* 6*d.* Longmans.)
*Teaching and Organisation.** P. A. Barnett. (6*s.* 6*d.* Longmans.)
*Common Sense in Education and Teaching.** P. A. Barnett. (6*s.* Longmans.)
*Class Teaching and Management.** J. Gunn. (2*s.* 6*d.* Nelson.)
Principles and Methods of Teaching. James Welton. (4*s.* 6*d.* University Tutorial Press.)
*The Principles of Education.** T. Raymont. (4*s.* 6*d.* Longmans.)
The Practice of Instruction. J. W. Adamson. (5*s.* National Society's Depository.)
*A Primer of Teaching Practice.** J. A. Green and C. Birchenough. (2*s.* 6*d.* net. Longmans.)
The Art of Teaching. D. Salmon. (3*s.* 6*d.* Longmans.)
Modern Views on Education. H. Thiselton Mark. The Nation's Library. (1*s.* Collins.)

*The Primary Curriculum.** F. H. Hayward. (5*s.* Ralph, Holland, and Co.)

The Meaning of Education as interpreted by Herbart. F. H. Hayward. (4*s.* Ralph, Holland, & Co.)

The Teacher's Logic. J. E. Adamson. (2*s.* Charles & Dible.)

The Child. W. B. Drummond. (1*s.* Dent.)

The Story of the Mind. J. M. Baldwin. (1*s.* Newnes.)

The School and the Child. Dewey. (1*s.* Blackie.)

Infant Schools; their History and Theory. D. Salmon and W. Hindshaw. (4*s.* 6*d.* Longmans.)

The Educational Theory of Jean Jacques Rousseau. W. Boyd. (5*s.* net. Longmans.)

Introduction to Experimental Education. R. R. Rush. (4*s.* 6*d.* net. Longmans.)

Mental and Physical Life of School Children. P. Sandiford. (4*s.* 6*d.* Longmans.)

CHAPTER II

THE STUDENT AS LEARNER

"In whatsoever it is our duty to act, those matters also it is our duty to study."—ARNOLD OF RUGBY.

THE problem of how best to study is one to which all young teachers must address themselves earnestly. They need to know what is meant by the word study, what forms of mind-exercise, that is to say, are involved in the act, and how full benefit may be derived from it.

This chapter will treat mainly of book-study; but it must not be thought that a teacher needs to learn only from books. Book-study is a part of the necessary preparation for his school work, and a very important part; but he will be a poor teacher who does not add to it the more direct study of language, of school-room practice, of nature and of human nature, particularly that of children.

General experience goes to prove that, to average students, studying is a process of learning in which mechanical memorising plays the leading part—in which, indeed, it is very apt to take up the whole stage of the mind from start to finish. When they have tried their best to learn by heart the matter set for study, most students close their books with a relieved sense of duty done. There must be a reason why one factor of study is allowed to usurp the place and parts of all the others.

The reason, one feels, is not so much that the mechanical memorising of words is easier than the other forms of study which should, to a large extent, take its place; for there are many student-teachers who do not want merely to get through their work as easily as possible; or that it has been found, in the past, to suffice for the passing of examinations; for there are many, again, who look beyond the examination room to the real work awaiting them, and

are eager to prepare for it. It is, rather, that no other way of studying has been insisted on, and, therefore, no other way has been tried. The great majority of young students qualifying as teachers simply do not know any better way to study. They have had given them for study books written in language so different, in many instances, from their ordinary speech as to be almost a foreign language to them. They have not been able to understand these books easily, and have therefore hit upon the plan of memorising the words. Finding that it has enabled them to "pass their examinations"—which, too often, is all that has been demanded of them—they have become confirmed in the method and have remained ignorant of any other.

Two grave errors are here seen—the first, that the passing of their examinations has been allowed to assume more importance in the eyes of student-teachers than the preparation for their calling; the second, that passing has been possible by means of answers in words mechanically memorised and quoted, as is only too apparent, without any grasp of their meaning. The fact, however, that those concerned are alive to these errors, gives hope for the future. It is definitely stated in a recent syllabus of the work of student-teachers that "*questions set in the examination at the end of the year will not be of such a nature that they can be answered as a result of mere memorising.*"

Since it is clear that the excess of mere mechanical memorising in the work of students is having an injurious effect on their intelligence, it is urgently necessary that the amount of it be reduced. It has no power to educate, for it is practised without reference to any underlying ideas; it is a mere impressing of words on the memory by repeated impact; it starves the mind and nauseates the student, thereby defeating two chief ends of study, which should nourish the mind with ideas and stimulate the student's appetite for them. Even from the examination point of view, as shown above, it will not serve any longer. What is needed now, therefore, is that some more intelligent form of study be made known to young students.

The first step towards more intelligent work is made by putting before us the proper motives for study. For all teachers a great animating purpose is pointed out by the words of the famous Rugby schoolmaster which stand at the head of this chapter: "*In*

whatsoever it is our duty to act, those matters also it is our duty to study." We have chosen to be teachers; we have assumed a grave responsibility with regard to the lives of children. For us, then, every subject of school instruction is a matter in which it is our duty to act. But in teaching, as another great schoolmaster—Thring of Uppingham—constantly impressed by his work and writings, "Lives, not lessons" are to be dealt with. Lives first, that is, and lessons only as they may be made of service to our pupils in helping them to live. We have, therefore, an enduring motive for the study of each subject of the school course, in our need to find how to make it of material use or spiritual benefit to our pupils.

In the second place, the amount of verbal memorising during study must be, as emphasized above, considerably lessened. This will happen when students make an effort to understand and enjoy their study before they set to work to memorise the words of it. The change will necessitate a wider and more exact knowledge of the meaning of such words as are of common use in students' text-books than is a general possession of their readers. Before anything else, therefore, it is necessary that, as students, we learn to make companions of our dictionaries. It must be a habit with us to look up the meaning of every unfamiliar word in each sentence that we read. Moreover, we must not be content simply to find another word or phrase to substitute for the one in the text. We must see the meaning clear before we are content to pass on; pursuing it, if necessary, from page to page of the dictionary until it yields us words the sense of which is as unmistakeable as that of the everyday talk in which we take part. We must be prepared, too, to do more than merely run our eye down the dictionary's columns of words and meanings. Ruskin tells us that in studying books we must regard ourselves as on a quest for gold, the metal we are in search of being the author's mind or meaning, and his words the rock which we have to crush and smelt in order to get at it. Our pick-axes are our own care, wit, and learning; our smelting furnace is our own thoughtful soul. "Do not hope," he says, "to get at any good author's meaning without those tools and that fire; often you will need sharpest, finest chiselling and patientest fusing, before you can gather one grain of the metal." Therefore, first of all, he says further, we must get into the habit of looking intensely at words and assuring ourselves of their meaning, syllable by syllable—

that is to say, we must not be content with finding meanings, we must look for derivations. We may say, as a general rule, that we know a word fairly well, when we can see for ourselves how some root meaning, at first sight remote, has entered into it. We should not, in study, be content with any knowledge less than that. To quote Ruskin again:

"Nearly every word in your language [he was writing of English] has been first a word of some other language—of Latin or Greek—not to speak of Eastern and primitive dialects. And many words have been all these—that is to say, have been Greek first, Latin next, French or German next, and English last: undergoing a certain change of sense and use on the lips of each nation; but retaining a deep, vital meaning which all good scholars feel in employing them, even at this day."

When meaning has been "chiselled" and "fused" from the containing mass of words in this way, verbal memorising becomes unnecessary. The matter is understood so well that we can give it again in our own words.

But, we may be inclined to think, this way of studying will take so much time. We shall get through our study more quickly by the old way of—*cramming*. Yes, but with what results? With no results whatever, except harmful ones; not even, nowadays, examination results. Lessons which are crammed are only remembered for a time; they are forgotten as soon as tested, if not before. Such learning is of no use to student-teachers, whose knowledge is needed years after it has been acquired. If understanding is sacrificed, the mind is totally unaffected for good; its ability to understand anything is lessened daily; and students w
memorising without trying to understand *first*, end b
without trying to understand at all.

When the whole of a study has been read through with understanding, we may feel that there are some parts of it which should be learnt by heart—if we are studying history or geography, for example, certain conditions, causes or effects;
arithmetic, certain rules or definitions. Even
should not be committed to memory in the word
but in words of our own, which our understan
enables us to substitute. This paraphrasing is a valuable in
exercise, and verbal memorising, thus kept to its proper plac
function, is a helpful factor of study.

Intelligent study is concerned with ideas. The third factor of it, therefore, is the organising of ideas met with in the matter of study. Young students are apt to treat these ideas as if they were all of equal value. This points to a narrow examination view of their work. They say in effect: "I may be asked about any of this, so I must know it all equally well." Older students learn that parts of their textbooks may be safely neglected, so far as the examination is concerned. Questions on them are never asked. But this is because their examiners have realised what they have not—that the ideas contained in any book differ in value; and, as examiners, they naturally put more emphasis on the more important. Now while examiners may be regarded as safe guides to what is important in the matter of a textbook set for study, the students who feverishly look up old examination questions and order their study by them, are putting their minds in shackles. They do not study this or that carefully because their judgment tells them it has an important bearing on their chosen work; but simply because they may be asked about it. Their judgment, therefore, remains untrained in this particular, and this is a very serious thing in the present press of subjects and subject-matter. It is very necessary nowadays that young teachers train themselves to decide what is important, both in their own study and in the lessons of their pupils, and to choose in accordance with their decision.

In organising ideas Thring's warning—"Lives, not lessons"—should be the touchstone for their value. When put to this test the worth of ideas will be found to vary greatly. Moreover, they will be dependent for much of their value on other ideas connected with them. From this it is clear that they must be studied not in isolation but in associated groups. Common experience shows the importance of this. Let us take one instance of association to make the matter clear. You may enter your classroom one morning and find there a fellow-student at work upon a piece of preparation which you yourself have forgotten. Taking paper and pen to write, in order to repair your omission, you remember that you are without a necessary book. This reminds you, in turn, that you lent it to another student; and the thought of him calls up a further thought of his illness which has prevented him from returning it. You pass then from the thought of his illness to the thought of its nature. This brings along another associated thought, the prevalence

of that particular form of illness, and it, again, connects itself with a thought of the weather, the apparent cause of it. As the weather may be threatening to interfere with your favourite sport or a prospective picnic, your thoughts may here take another turn. Thus, you have been led on from one to another—from that of an omitted task to that of a book—a friend—his illness—its prevalence—its cause—other effects of the same cause ; and you may be led further and further till the entry of your taskmaster or taskmistress, with a brisk request for test books, snaps the connecting thread of thought with an unpleasant jar. But examine that connecting thread : what is it ? The " association of ideas." And how easily it drew you ! Quite involuntarily you followed it—indeed, not only without but against your will, or at least away from your intention, which was to do your forgotten exercise. Well, it is in this way that the ideas gained in study act, and you may tell whether you gathered ideas, or words merely during a study by their doing or failing to do so when you try to recall it. But how easily, then, thoughts may wander in study—wander from it ! Yes, and how easily they do, and how often, unless there is a will strengthened by exercise to insist on their centring, for the time being, in the matter of study—to insist on *concentration*.

Of course the path had been prepared, by connections previously made, for the little mind-journey traced in the foregoing paragraph. Now, it is part of the work of study to prepare similar paths for newly-presented ideas, arranging them in such connected order on their entry into the mind that when an effort is made to recall them they follow as readily the one upon another as your thoughts slipped along the thread of associated ideas from a borrowed book to a prospective picnic in danger of being spoilt by the weather. Ideas stored away together in the mind are recalled together. It was because, on hearing of the illness of your fellow-student, you inquired as to its nature and received the answer with some such exclamations as " That's the fifth student down with influenza—small wonder, this weather ! " and " Bother ! he has my *Julius Cæsar*," that your thoughts of these things followed so pat on one another.

The organising of ideas, then, as we gather them from the printed page, is the next necessary factor of study. The process has two distinct stages arising from the facts about ideas stated above—

that they are not equal in value, and that they depend upon each other for the value they possess. The fact that they vary—and they vary, as has been said, greatly—in value, influences in well-organised study the treatment they receive ; and our first concern must be to determine their value. As it depends on their relation to other ideas, we cannot judge of it until we know what other ideas are contained in the matter to be studied. At this point we will cease to think of the whole subject of study, or even of the book used for it, as these present too many ideas to be taken in at one sitting, and consider only the chapter, pages or passage set—by the student himself or his teacher—to occupy one study-period. At the same time it should be remembered that, in all good writing, the subject-matter is related from beginning to end, and that the best way of attacking literature set for study is to read the story, essay, play or poem straight through first, for the purpose of gathering the leading ideas. The same plan must be followed, whatever the subject, in dealing with the matter of any single study. Here it may be well to emphasize that as study is meant to be a gathering of related ideas it should be set by topics, not by amount, the student being required to learn certain things, not so much.

When the leading ideas have been grasped by a reading through of the subject-matter, the first step in organising them has been taken. The second is to examine them with the intention of emphasizing those of most importance, and giving attention to the others in lessening degree as their value declines ; for, having acknowledged that ideas differ in value, we should be foolish to distribute our time and attention equally among them. "All statement of thought gathers negligible words as wheat produces straw and chaff" (Professor McMurry in *How to Study*). Such words are used in opening remarks, in changes of subject and in attempts to keep the interest of the reader ; and the organising of ideas demands the relative neglect of them, for it is only by this means that the mind can retain those of greater moment. Ruskin had this in mind when in his lecture "Of Kings' Treasuries," he said that a man's best work was "mixed always with evil fragments—ill-done, redundant, affected work." Books, of course, differ considerably—according to their purpose—in the amount of their negligible matter. Bacon drew attention to the fact when he wrote : "Some books are to be tasted, others to be swallowed,

and some few to be chewed and digested ; that is, some books are to be read only in parts, others to be read but not curiously, and some few to be read wholly and with diligence and attention " (*Of Studies : Everyman's* edition, p. 150). Two trustworthy guides, therefore—themselves earnest students and great writers—advise you in reading and studying to advance rapidly in some places by skipping, as well as to go slowly—marking, learning, and digesting as you read—in others. A modern writer emphasizes the same necessity : " There is a notion of thoroughness," he remarks, " which insists on attention to details, and tends to obscure the relative values of things. True thoroughness is a matter of quality, not of quantity. Real thoroughness requires a constant exercise of judgment, and a high degree of good sense."

The verdict passed on the value of ideas gathered from any passage should be shown in a written abstract made in a notebook for the sake of saving time in revision for examination purposes. This abstract should give the chief ideas met with, each connected with as many minor related ones as it seems advisable to remember.

Only good students get even so far in the organisation of ideas, and it is necessary to go farther. A vigorous self-questioning should next be instituted : What are the main ideas in the passage ? Do I understand them ? Can I express them clearly ? Can I illustrate them by examples ? Such questioning is of more value than memorising at this point. Only when all the answers are satisfactory should this second step in study be regarded as completed.

As we read thoughtfully in any book of sufficient merit the ideas in it stir kindred ideas in our own minds, giving rise to a train of thought suggested by the author's words, though not actually expressed by them. This supplementing of the author's thought by our own is a fourth necessary factor of s
be absent from it except when ignorance
renders it impossible. In the case of good
for study, the passages which we cannot supp
will be short and infrequent.

While the supplementing of ideas in stu
the same time as the organising of them,
because our first concern in studying shou
from the words of our author. Speaking

wise and beneficent books and their writers, Ruskin says that we must come to them with :

" . . . a true desire to be taught by them and enter into their thoughts. To enter into them, observe ;—not to find your own expressed by them. If the person who wrote the book is not wiser than you, you need not read it. If he be, he will think differently from you in many respects."

But, though we should read and study books in order to enter into their authors' thoughts and not to find our own, we must read with the intention of stirring the latter into activity ; for it is only by so doing that we can take in the new ones which are put before us. By supplementing an author's ideas with our own we are finding a place for them in our minds—making them at home there among their connections and associates. When we come to consider the matter of oral teaching in the next chapter we shall find the same thing to be necessary on the part of our pupils, who must learn from us much in the same way as we—and they upon occasion —learn from books.

The supplementing of thought which brings it into relation with our previous knowledge and experience makes it possible to introduce another factor into our study—the criticising of ideas. We should read, as Bacon has reminded us, " neither to contradict and confute, nor to believe and take for granted . . . but to weigh and consider " (*Of Studies*). And the warning is needed, for the majority of us fall into one or other of the errors he cautions us against.

It is only when the new ideas gained from study have been organised, supplemented, and criticised that the time comes for memorising such as require memorising by special effort. Even at this point the process should not be the unintelligent repetition which it too often is. It is possible to improve upon the merely mechanical method of memorising ; and we will now consider how this may be done. We have already seen, in connection with the grouping of ideas, how one idea recalls another previously associated with it. No idea exists in the mind unrelated to other ideas ; and the recalling of one results in the recalling of another and another in succession from among the number of those connected with it, till a train of thought is formed. Now, as ideas are recalled in the same connection as they are taken in to the mind—or learnt, as we say of those taken in during study—the association of them in learning

is clearly of the greatest importance in the matter of remembering them. Our concern must, therefore, be to strengthen their chances of recall by increasing the number of their associated ideas, and we may do so by both mechanical and intelligent means.

Mechanical devices for aiding memory are more in place in subjects which require a good deal of mechanical effort; and one or two examples connected with elementary subjects may be helpful in suggesting others. The sounding of words in the English language is very irregular; and the mechanical side of reading gives, on this account, considerably more trouble than in the case of Dutch, in which a closer relation exists between sign and sound. The lists of words enclosed below represent two black-board schemes, the one made without any regard for mechanical association, and the other with the intention of getting all possible help from it.

morning	porridge	season
early	sugar	attached
bathe	cream	answered
practised	bloater	languages
floating	promised	coastguard
breakfast	sailor	tablet
bread	explained	purpose
	rocket	
oatmeal	apparatus	stored
	break	
treacle	hovering	board

On the first board all the more difficult words are written down as they occurred in the reading lesson. The children could get little help through the eye, for the combinations of signs are so varied as to cause confusion. Lists of words so written can only be learnt by most mechanical and laboured repetition. The second shows a scheme prepared to appeal to both eye and ear and to make use of comparison and contrast. Many words that may rightly

be considered hard for the class (Standard II) are omitted because of the impossibility of teaching them all in one lesson. In those taken, special attention is drawn to the particular difficulty they present. There is the same number of words on each board ; but there can be no doubt that more words will be learnt from the second, because the impression made by the arrangement is so much clearer. It may be noticed that if we were attempting to associate ideas the former blackboard scheme would be the more useful, but such a method of association would be of no use in teaching the sounds of words. In teaching and studying we need to have definite notions both of what we want to do and what we do not want to do, and to prepare our work accordingly.

As another example of the aid of mechanical association in teaching, a helpful treatment of the nine times multiplication table may be instanced. Examining the various products 0, 9, 18, 27, 36, 45, 54, 63, 72, 81, 90, 99, and 108, we find the units figures after the first cypher diminishing by one to the next cypher from which the process repeats, and the tens figures increasing similarly from the 1 of 18 to the 10 of 108. Moreover, the sum of the digits in the case of all but 99 (in which it is 18 or twice 9) is 9. When these facts have been pointed out to children they have no need to spend time in laboriously committing the table to memory.

Memorising is the last of the processes of study which we need mention ; but study is not an end in itself ; it is a means to an end—efficiency in life and action—and we must follow the subject farther to see how that end is to be achieved.

Ideas when acquired must be put into use. With this end in view they must be examined from one standpoint and from another, and students must question themselves on them and exercise themselves in using them both actually and in imagination. The ideas gathered from this book, for example, should be considered in relation to imaginary classes during study, and tested by actual practice during teaching.

Studies vary ; and the ways of using ideas gained vary with the study. We should not narrow our notion of what is meant by using ideas till it excludes everything but a few school activities, or these will limit our aim. Ideas are used when any increase in efficiency or any enrichment of life results from them. The purpose of studying singing, for example, is as truly fulfilled when a good song well sung gives pleasure to parents, friends, or fellow-students

as when a certificate is won ; of studying handicrafts, when some simple want of the home is supplied as when a set of school exercises is completed ; of studying literature, when the emotions raised find expression in an act of kindness, courage or self-sacrifice, as much as when a prize essay is written.

But studies vary in other respects also. Some are accomplished when by conscious effort we can translate our knowledge into power, as when, having learnt to read, we can get an author's thoughts from his writings ; or when, having learnt to carve in wood, we can make, within the limits of our tools and materials, such things as we desire ; or when, having studied in history the relations between England and France in the eighteenth century, we can give to a class nourishing and quickening ideas of that great rivalry. In other subjects of study, knowledge must become so much more closely a part of us that it can be used unconsciously. Not hard work only, but time ; not time alone, but unceasing effort must go to the gaining of this unconscious control. Understanding comes first, then power to use with effort, and at last, after hard, unremitting labour, the unconscious habit.

Though we may consider the objects of our study attained when it is possible for us to use with ease and freedom—and, if necessary, unconsciously—the ideas gained from it, there is another matter of importance to be considered—namely, our attitude towards what we have learnt. We have only to think of old theories, old doctrines and old beliefs now discarded, to realise that the worth of gathered ideas changes from time to time with the discovery of new truth. As their value should be one of the deciding factors in our storing of ideas, it should influence also our retaining of them. We should not cling to ideas simply because we once thought them valuable, without examining the evidence in favour of new thought. To do so is to resist all advance, and often to be guilty of folly, injustice and cruelty. History has countless examples to show of persecutions arising out of this tendency of human nature. We need not go far back in order to recall instances of the opposition roused in a passing generation by the ideas and inventions of a younger one, as, for example, the objection of the grandfathers of the present generation to railway trains and to the newer methods of farming, or, more lately still, the replacing of horses by motor traction.

While young people are less liable deliberately to withstand new ideas than their elders, there is a danger of their resting content with

what they have learnt, and so gradually drifting into opposition to such ideas as something strange and troublesome. Such an attitude of mind is fatal to intellectual life. We should revise our existing knowledge from time to time in the light which new thought sheds upon it, and should keep an open mind towards new ideas. In no branch of knowledge is this more necessary than in that which is concerned with education ; and at no time has the necessity of keeping our study of educational theory and practice up-to-date been more urgent than now.

Another question remains to be considered—that of developing our own individuality through study. Each of us has a personality which is the sum of all our talents and aptitudes, our inclinations and possibilities, our likes and dislikes, our thoughts and actions, our ways of looking at things and our ways of doing things ; and it is our duty to develop and perfect it. It is one of the purposes of our education through study to find our niche and to fit ourselves into it. Pope tells us that the proper study of mankind is man ; and there can be no more proper branch of it for each one of us than that which discovers to us ourselves, which enables us to judge our possibilities and sets us to the work of fulfilling them.

It has been said that an educated person is one who knows "something about everything and everything about something." That definition, however, was first given before the twentieth century had revealed such a multiplicity of things to know something about, and so much to know about every one of them. However that may be, it makes a good working guide to those of us who are interested, as all teachers must be, in the matter of self-culture. It suggests that there is a large body of knowledge about which we must of necessity know as much as our profession demands in order that we may teach it. This it is which is outlined by our examination syllabuses. Over and above this, there is for each one of us some branch of knowledge or skill in which, by reason of special aptitude or inclination, it is possible for us to make ourselves to some extent experts and specialists. In this way we may add to the "all round" education essential for teachers some outstanding power that will give us distinction in our profession, to our own pleasure and the profit of our pupils. Having examined our inclinations and aptitudes with a view to discovering the subjects in which we may wisely specialise, we should give as much time as we can spare from class studies to developing our power with regard

to them. We may be of those who, through interest in facts and objects and natural phenomena, are drawn towards science; we may be idea-lovers, with a bent towards literature, history and music; or we may find our greatest pleasure in studying to obtain skill in some manual art. We should specialise in the field of greatest promise for our individual tastes and talents, and in all cases remember to specialise not merely as students of the subjects but also as teachers of them.

The members of a class—whether of students or children—show marked differences in their way of acquiring knowledge. Some are eye-minded, learning best through what is presented to the organ of sight; others are ear-minded, and profit most when they are taught orally; others, again, are muscle-minded, gaining the best result when they are able to translate ideas into action. If a poem were set to be learnt by three students differing in these characteristic ways, the first would wish to have it in an open book before him; the second to hear it recited or to say it aloud himself, while the third would wish to write it out or declaim it with action. Some students again are stimulated to greater activity of mind by discussion—or even opposition—and the competitive effort of classmates; others, when they have to master new knowledge like to get away by themselves to solve their problems. All these considerations should be taken into account in studying and teaching. Our inclinations in studying, and our pupils' in learning, should not be over-indulged, nor should our chief mode of mind-activity be exercised to the exclusion of others from the neglect of which we should suffer. At the same time common-sense demands that, if one manner of learning is easier to us than others, we should chiefly use that and so ensure the best results with the least expenditure of time and effort.

There are two subjects—language and child study—in which by reason of our calling we must all be experts to some extent. Language as the means by which ideas are exchanged, as "the material ready at hand for the training of the whole world" is the very foundation of all our work. Whether we think of ourselves primarily as students or as teachers, it is impossible to overrate our need to be skilful in fitting on the one hand ideas to language, and on the other language to ideas. In a country where the languages of two different nations and of two different races are heard side by side, the difficulty of mastering the medium of instruction, great

enough in ordinary circumstances, is more than doubled. We have only to listen to the language of classroom and playground to realise how much effort is needed to make educated speech a common possession—as it should be—of the students and teachers of South Africa. If the effort is not made, education itself must suffer; for "want of language, want of words filled with clear definite meaning, is the greatest hindrance to culture." Here is a cause worthy of the devotion of every teacher and of every student in the country—to discourage by all possible means, both in class and out of it, the use of slovenly speech resulting from a laziness of mind that accepts the first word that presents itself, whether it is from the language in which the sentence was begun or from another partially known, and carries over from one to the other the idioms and grammatical constructions peculiar to either; to cultivate a feeling for the dignity, beauty and worth of words that have gathered their meaning and chosen their ways through centuries of history; and to urge upon pupils and fellow-students by precept and example the righteousness of rendering them their due in careful speech.

As language is the fundamental instrument of education, so child-study is its fundamental matter. In this study "the text-book is the child living out his life before us. The legend which invites us to it is written in the poetry of free and natural child life."

It is not given to all of us to keep the key of the garden of childhood in our possession when we pass beyond its bounds. Yet we must by some means re-enter it when we are preparing to become teachers of children; for how shall we help them to become what they may be, if we have no knowledge of what they are? Our best guides in this matter will be those few fortunate members of the grown-up world who have never lost their power to get back into the garden—Charles Lamb, whose "Dream Children" have all the pretty looks and words and ways of real ones; Charles Kingsley, whose "Water Babies" have suffered no more than a sea-change since they were land ones; Lewis Carroll, who showed us "Alice in Wonderland" and "Through the Looking Glass"; Robert Louis Stevenson, whose "Child's Garden of Verses" sings for us the very songs of happy childhood; Rudyard Kipling, who has given us their "Jungle Books" and "Just So Stories" and Dan and Una learning history from that best of history teachers "Puck of Pook's Hill"; lastly, J. M. Barrie, who has added "Peter Pan"—the boy who wouldn't

grow up with the other boys and Wendy—to the children who teach us to know the real world children we have to deal with. Perhaps some of you will be inclined to exclaim that real children are not like these—are less delightful and not so good—but until we can see the reality of childhood through the eyes of these child-lovers, we are no fit teachers for any children.

We should make ourselves familiar, too, with the best pictures of children which reveal so much childlikeness to eyes that need the painter's brush to show it.

But portraiture, whether by word or line, should be regarded as only a preliminary to real child study, which should concern itself with the living children who are to be found at home and at school, in classroom and playground, in street and park and in the real country. To this study the children themselves invite us. Every shy confidence opens a little wider for us, as we turn back to it, the gate of the garden of childhood, from within which we may hear mingling with the children's voices the voice of a forgotten self calling

> "Come in awhile, and play with me—
> I am the little child you used to be."

CHAPTER III

THE STUDENT AS TEACHER

"O'er wayward childhood wouldst thou hold firm rule,
And sun thee in the light of happy faces,
Love, Hope and Patience, these must be thy graces,
And in thine own heart let them first keep school."—COLERIDGE.

"In striving to influence the growing child for good, we must ever beware of exerting an *undue* influence. The child's point of view should be his own. Even though some restraint is necessary, freedom to develop is even more necessary. He should preserve his own individuality."—E. READ MUMFORD.

"No machine-made system of teaching can ever be right. The best of methods must be modulated by human insight, sympathy and tact."—KAPPA.

"Those only wield the full power of education who know how to cultivate in the youthful soul a large circle of thought closely connected in all its parts, possessing the power of overcoming what is unfavourable in the environment, and of dissolving and absorbing into itself what is favourable."—HERBART.

WHILE one or two "born teachers" are to be found in almost every class of students, the majority, there can be no doubt, have taken up the work of teaching without any compelling conviction of an inborn capacity for it. They need not, however, be downcast or discouraged on this account. The born teacher will be happier with his class and more at home in teaching at first; but, given one condition, any student can make of himself as time goes on a teacher who is both happy and successful in his work. The one essential condition is the determination—whether from simple honesty or a sense of "the high utility" of the calling—to become a good teacher.

Most people when asked what should be the first qualification of a teacher reply: "A love of children." Now, while a love of children is not felt naturally by everyone, it can be cultivated by

every teacher—not, best, by saying, "I *must* love these children," but by acting in a way to bring the feeling to birth. All who have chosen to be teachers must be ready to admit that they have duties towards the pupils placed in their charge. These duties can only be properly performed when the teachers feel an interest in their pupils. This interest may at first be non-existent, and it cannot be forced into being. It springs naturally, however, out of an attitude of mind—attention—which is under the control of the will. Teachers who make themselves *attend* to their pupils—to their looks and feelings, their words and ways—will gain a knowledge of them that awakens interest. Interest and knowledge will react on each other and understanding grow from them. With understanding comes sympathy, and out of sympathy, love. Once the beginning is made, all follows as naturally as growth in a flower. But attention, the frame of mind in which the others are rooted, if not involuntarily yielded, must be given by an effort of will. We must sow our seed if we would reap our harvest.

There is a facile love of children which spends itself in "gushing" or indulges itself in indulging them. The teacher's love must be different from this—must be strong, patient, disciplined, broad in its foundations, "impossible to be overturned"; deep-seated, yet with the play of light upon it; shown not only in sacrifice but also in smiles. If it is of the right kind it will make heavy demands upon ourselves in all that concerns our work. It will insist upon self-management as a preliminary to class or school management, and will be content with nothing less than our mastery of the art of teaching. Let us take these requirements one by one.

Our "self," as it affects our pupils, has several aspects—person, voice, speech and manner, mind, character. All must be disciplined. That we must conform to the standard of cleanliness, neatness and good taste in dress, expected of all educated people, goes without saying. We should, moreover, remember the pleasure of children, especially little children and girls, in bright colours and pretty things, and, keeping within the limits of what is suitable and serviceable, should try to indulge it. By such care we shall not only please the eye of our pupils, but also influence their conduct. They find it easier to fall in with the wishes of teachers who, as they would express it, "look nice." This "looking nice" is very little a matter of natural endowment and very much a matter of what

we make of ourselves. It is concerned with dress, carriage, movement and expression, and is within the power of all who give time and thought to making the best of themselves in these particulars.

We should subject our speaking voice and our teaching voice to constant criticism. Both in ordinary conversation with our pupils and during lessons we should cultivate pleasantness of tone and check any tendency to loudness and harshness. It is a good plan to try to recall, between one session and another, the sound of our voice and pass judgment on it, making recommendations for future improvement. We shall find it worth while, for there is a very close connection between discipline and the teacher's voice. The importance of clear, correct and pleasant speech has been pointed out. Effort should be ceaseless until this is attained. A good manner is equally important—a manner that seems naturally firm and cheerful without that too determined brightness under which many children turn restive. An *easy* manner is wanted, for the school day is long for little folk, and there is a good deal of nerve strain attendant on the work. As teachers of young children we must, in the words of one pre-eminent lover of them, " perform our duties with laughter and kind faces ; with courage, gaiety and the quiet mind, letting cheerfulness abound with our industry, going blithely on our business all the day." This is, indeed, the first of our duties—to meet the gladness of their morning faces when they are glad with responsive smiles ; when they look doubtfully on the day, to reassure them ; when they are clouded with childish grief or pain, to console and cheer them.

Our discipline of mind must be a steady cultivation and training of it for the sake of our pupils and our work. No narrow examination end should be our goal ; but the mastering of each subject set for study in order that we ourselves may come to feel that " many-sided interest " which we must awaken in the children we teach. In some subjects, no doubt, we feel little or no interest. To these we must, to begin with, attend the more determinedly. Knowledge and interest will reward us—a little knowledge at first and some interest ; then more knowledge and more interest, and more and more and more. It is in the beginning only that subjects are dull, and we must have passed this first stage before we can hope to teach with any success. Our task is nothing less than to bring our pupils to a realisation of the beauty and wonder of the

universe ; to teach them that in spite of sorrow, pain and evil, *Life is good.* In their own childish language

> "The world is so full of a number of things,
> I'm sure we should all be as happy as kings."

Here speaks the natural child, the child "under school age." Does he seem as sure of it as he sits in the class to which our modern educational system has brought him ? Too frequently "a number of things" that hitherto have made him glad have disappeared in a mist of unfamiliar words which he learns to call *lessons.* To keep alive in the heart of little children the gladness of living, to bring to rebirth in older ones in whom it has not survived early childhood, their sense of the wonder of the world, these are the tasks for which the discipline and training of our mind must fit us.

The aim of education is character-forming. It is only character that forms character, and it forms it after its own kind. Whatever faults we would have our pupils guiltless of—cruelty, injustice, dishonesty, lying—we must hate in all our being. Whatever virtue we wish them to practise or possess—kindness, honesty, truthfulness, industry ; a sense of duty, of justice, of honour—we must show in all our dealing. In constant training of our own personal character lies our only hope of influencing our pupils for good.

Class management must each day begin before class assembles. Much of the success of the day's teaching and discipline depends on the preparation made for it in the ten minutes which every teacher should try to secure in his classroom before school work begins. The glance round the room to see that it has been properly cleaned since the last session ; the glance at the windows to see that they are opened or closed as the state of the weather demands, at the blinds to see that they are in good working order and raised or lowered as the light requires ; the getting out of all books and apparatus needed not for the first lesson only, but for all that come before recess—all these make for order and good work.

In these few minutes the class monitors should be busy in the room seeing that everything of which they have the supervision is in order, and as the time offers a good opportunity for a little informal intercourse between teacher and children, not monitors only, but all who come early to school should be admitted. The class monitorship should not be left to choice, but given to each pupil in turn, because all children have to be trained

to responsibility; and, if any are ignorant of the pleasures of usefulness, they stand in greater need of being taught to enjoy them. As a general rule children take great pride in their monitorship, and there is seldom need to call their attention to neglect; but we should always be aware of the manner in which they are carried out and give to special care a word of commendation. Where carelessness is apparent, a little good-humoured raillery is usually effective in banishing it; but, of course, there are children who have not learnt to find pleasure in helping others, and we must be prepared to deal with them. It is better to take away a monitorship in such cases, by way of reproof, than to insist on its being held for a longer period. Of course we must manage to make the deprivation felt, and it should be only temporary. Children are not hardened criminals; and there should be no life sentences in dealing with them. When their turn comes round again, the delinquents should not be passed over, but be given another chance.

The few minutes spent in the classroom before school may be made a time of very real help to the children, not only by establishing less formal relations with the teacher than lesson-time permits, but by offering opportunity for such self-chosen work as provides far more enjoyment than does aimless idling about the school premises. A class is in a good way when the members of it like to come early to school, and, on getting there, set cheerfully about whatever they may wish to do—one renewing the flowers, one copying some verse of a poem felt to be too good to be forgotten, one reading a book or a magazine from the classroom shelves, one, it may be, studying a picture with a future composition in view. In these minutes talking should be unrestricted, as long as it is low-toned; and the children should feel that they may use them to get needed help from the teacher or from each other. Occasionally the teacher may be glad to use the time in reading some poem or some passage of a book to which reference has been made in a previous lesson, or in showing pictures or an experiment for which the thirty minutes allotted by the time-table gave no opportunity.

A classroom which is to prove attractive to the children must have, of course, a certain amount of care expended on it. The notice board—to begin with a very important item of classroom furniture—should either be big enough to leave space to spare after all necessary time-tables, syllabuses and class lists have been

affixed, or be supplemented by a second one. The spare space on the board should be used for bringing to the notice of the children any pictures, printed matter or written notices which may serve to widen and increase their interests.

The method of fixing is important. "Notices" which, precariously attached by a bent pin, flap in every breeze, or, becoming detached, flutter from point to point on the floor, add nothing to the appearance or interest and much to the distractions of a classroom. All papers should be firmly secured by their four corners; and for further safety the board should be placed out of the way of draughts.

Rightly used, a notice board may be made a means of making the children keener about their work, and of extending their interests indefinitely. The better magazines and illustrated weeklies, copies of which can be frequently, even if not regularly borrowed, are filled with portraits of famous men and women, and pictures beautiful in themselves or interesting for their bearing on history, nature-study or geography. Newspapers, again, will furnish paragraphs and occasional columns that refer to something that has come up for discussion in the classroom. In fact, so much of educational interest is published nowadays, that our chief difficulty will be one of selection. This is a matter requiring some thought and system. As a general rule no portrait, picture or paragraph should be put on the board unless we have reason to believe that the subject of it has already found an entry into the children's minds. Each one, that is, should have been previously introduced, unless we feel it to be of sufficient importance to spend some minutes in bringing it to our pupils' notice before making a place for it on the board. The children themselves should be encouraged to contribute; and, while it is possible that at first picture post-cards will prove to be the bulk of their contributions, it is surprising how great a variety of "notices" will be furnished by them when once they have begun to keep their eyes open. We shall find, too, that the habit of gleaning in likely and unlikely places results in a very considerable harvest, and we shall come to see more and more how much may be brought from outside the classroom to broaden the minds and widen the interests of our pupils.

But a word of warning is needed. The contributions of the children must be censored, for their taste and judgment are still

undergoing training. The fixtures, too, if they are to keep their value must be frequently changed, for out-of-date notices are as stimulating to the intelligence as is a jar of withered flowers to the sense of beauty. Pictures and portraits which have more than a temporary interest should not be kept long on the board, but should be removed to a cupboard or drawer and there kept carefully for future use. If the children feel sure of finding something interesting and up to date on the notice board, they will get into the habit of examining it daily. From time to time we should call attention to the more important fixtures, and endeavour by a little informal questioning to discover how far they have served their purpose.

Frequently we find that the only relief to the eye on classroom walls is afforded by maps and object-lesson sheets. However useful these may be, they cannot claim to be ornamental enough to take the place of pictures; and when, as is often the case, they become torn from their rollers, and, in that condition, are allowed to hang askew, they are positive eyesores, and silent forces, moreover, of disorder and harmful influence.

It is a question whether the number of wall map and lesson-sheets in many schools is not in excess of the children's needs. In lower classes, plans and maps have much more educational value when they are drawn in the presence of the children during the course of their lessons. In the upper standards a good atlas in the hands of each child offers greater freedom for consultation, and, supplemented by the teacher's sketch maps, does away to a large extent with the necessity for the ordinary physical and political wall maps, which are awkward to place and a burden to remove. The right method of nature study, again, is almost independent of lesson charts. If, however, it is felt that they cannot be done without, they might be stored, neatly rolled and tied, in some convenient place, as, for example, on the bottom shelf of the class cupboard, space being thus made for good pictures.

Much has been done of late years to bring more books and better books within reach of our public elementary schools, and something is being done to make it possible for reproductions of some of the best pictures to find their way to our classroom walls. In choosing pictures for a classroom it has to be remembered that it is not enough that they should be good pictures; they must also be suited to the children occupying the room. Those which are suit-

able for the highest class are not equally suitable for
It is interesting to study—though not always wise to
children's taste in the matter of pictures, and to disc
varies according to age and sex. The things which delight th
children are those that come within the circle of their interests a
any particular age. On the walls of single-roomed sch
fore, there should be a collection of pictures which show
tion for the changing tastes of children from the lowest
highest. In classrooms occupied exclusively by ju
mediate, or senior scholars, the tastes of that one age o
considered.

Some small schools have very little wall-space available fo
pictures. In such cases, it should not be difficult to find means c
changing them from time to time. In schools which have severa
classrooms the advice " Neither a borrower nor a lender be " may b
disregarded as far as the school pictures are concerned. While th
greater number of those belonging to one classroom will be mor
especially suited to the occupants of it, there is
overlapping of interests in the various classes ; anc
be passed from one to another, both because certa
acquire additional interest in relation to a particula
for the sheer delight of enjoying a new one.

There are some excellent books now published
those of us who wish to train our own taste in pictu
tain coloured reproductions of famous pictures wit
letterpress of critical and historical notes on them
school library these may serve a double purpose, a
enable the children to extend their knowledge of
than it is possible for them to do by means of t
ductions for wall spaces.

The word " library " brings us to the question of books fo
classroom use. In every school there should be, indep
the general lending library, a number of books in eacl
for purposes of reference and private reading, and, for t
who are so fond of books that they wish to spend sc
every schoolday over them, there should be an effort to arrange
reading corner in the classroom. A small table near the boo
shelves with a chair or two, or a desk, beside it woul
looking up of references easier and serve to hold suc
magazines as the library funds allowed. *The You*

Home Reading Magazine, *The Nature Study Monthly*, and one good illustrated weekly suggest themselves as suitable.

The matter of class control must now be considered. We may distinguish between two forms of control—"government" and "discipline"—giving the former name to the teacher's management of the class, and reserving the latter for self-control exercised by the pupils. Government is proper in the case of junior pupils, but from the outset it must have for its aim the substituting of discipline as soon as pupils are of an age to exercise it.

Our constant endeavour in controlling a class must be to prevent breaches of order, not only because of their bad effect on the work of the school, but also because of the harm they do to the children who are guilty of them. The child who has once been naughty finds it harder to be good after his fault than before it. Repeated faults and naughty acts make, as it were, a pathway for themselves through the field of the child's consciousness, and pathways are easier to follow than untrodden ground. It becomes a duty, then, of us who have charge of children to try to find out *why* they are naughty that we may, when it is possible to do so, remove the cause and so prevent the fault, prevention being, for the reasons given above, very much better than punishment.

The matter of behaviour is closely bound up with the matters of interest and attention. Most breaches of discipline in class begin in the inattention which results from want of interest in the work being done. It will be helpful here, therefore, to state the chief laws governing interest and attention, illustrating them by examples such as any teacher's experience will furnish.

We may begin with the theory of interest put forward by a German educationalist, Herbart, whose teachings have of late years greatly influenced school practice. He points out that any attempt to interest children artificially during lessons is due to a misunderstanding of the relation between interest and knowledge. He tells us that we must not think of interest as something outside of knowledge that must be added to it, as jam is added to a powder in order that it may be more readily taken in, but as something that grows out of knowledge itself. He says, in effect: "Make a thing known to children and you will make it interesting—or rather it will make itself interesting."

In this connection, however, we must remember that we can only make a thing known to children by teaching in accordance

with the laws which govern their minds' growth and actio
children, as we have seen, have little power of graspin
tions. It will be of no use then to try to make arithm
interesting to them by giving more examples and teachin
if, in doing so, we adopt the abstract form of statemen
Standard V children think very largely in concrete te
therefore, must be allowed to work chiefly with these in a
During a lesson on the "Method of Unity," for instance,
if we kept to abstract figures, be likely to find that ou
working out examples did not give the attention need
racy. If, however, we state the sum in concrete form
let us say, the story of a shipwrecked crew of so mar
away on an island with provision for so many days only, and
asking how much sooner they will need to be rescued if their number
is increased by so many more, we shall find that the boys work
with greater zest, and so more correctly.

As soon as our pupils begin to feel in
attend without any effort of will, though
have had to make themselves attend in ord
lesson creditably. This brings us to a dis
two kinds of attention—*voluntary*, as, for
our pupils to their arithmetic before the sl
brought into it; and *involuntary*, that which they gave when their
minds were set on finding out how soon the crew must be

We all know perfectly well what is meant by "payin
tion," yet, perhaps, have never considered the exact
operations performed in doing so. Let us use one of the class of
boys intent on their problem for the purpose. His mind the
moment before we roused him to interest in the shipwrecked crew
was not empty. Minds never are empty during waking hours:

"Some kind of consciousness is always going on. This con-
sciousness is not simple but complex; not a mere trickle of
thoughts entering our minds one after the other, . . . but a full
stream. . . . At any one moment the contents of our minds, our
'*field of consciousness*' at that moment, contain impressio
ceived through the senses, memories of things which have
pened in the past, recollections of objects which are not besi
at that time, emotions due to the circumstances of the moment
or something quite outside ourselves, impressions of bodily move-

ment or inactivity, of comfort or the reverse, these together forming a whole which is our "field or state of consciousness," the contents of our minds at that particular moment." (E. Read Mumford in *The Dawn of Character*.)

The boy we have chosen for purposes of illustration is at the moment, let us say, drumming his fingers soundlessly on his desk; but this bodily movement is not engaging his attention; he is almost unconscious of it. Many things at the same moment are making impressions on his consciousness just as faintly—the ticking of the clock, the hum of work from a neighbouring class, the warmth of the room, a shaft of sunlight striking across his desk. A cut finger is giving him a feeling of discomfort; a promised treat is enticing his thoughts from his lesson. It is dependent on the weather, and involuntarily he turns his eyes to the patch of sky visible through the window. The action brings into view the antics of a mischievous child in the next class, and he feels inclined to laugh. He hears his teacher give the order to open books. Half-mechanically he performs the act of finding the place. Then the door opens and the head master enters. With the rest of the class our boy rises and says "Good-morning, Sir"; but still his mind is thronged by many sensations, recollections, thoughts, and not given wholly to any one thing. It chances, however, that he is called out by the head master; and, instantly, everything hitherto occupying his mind gives place to the uneasy inquiry "What have I been doing?" This calls up in review all his late acts and omissions, among which he expects to find one to which the head of the school may have taken exception. But Nemesis passes him by. He is wanted only to give some particulars for an examination schedule. He returns to his place, and in the relief of the moment determines to attend. The "Method of Unity," however, fails when treated in the abstract to maintain a place in his mind, and this is fast becoming a field of such consciousness as existed before the head master came in, when the concrete statement of an example lends new interest to it. Setting to work on the problem, he finds that it begins to occupy his mind to the exclusion of all else.

Our boy has passed through four changes of mind as regards attention—namely: (1) *Inattention* to his lesson with some involuntary attention to what is going on around him; (2) *Con-*

centration of Attention on his late misdemeanours; (3) *Voluntary Attention*, during his spasm of relief, to the lesson he had been neglecting; (4) *Involuntary Attention* to the concrete problem and the working involved.

We may now gather up the main psychological facts illustrated in this sketch of the contents, during some minutes, of a boy's mind.

"*The proportion of the different elements in our mind—sensations of touch or sight or hearing—of memories, of emotions, etc., varies from time to time according to circumstances.*" (E. Read Mumford in *The Dawn of Character*.)

At any one moment, however, there is generally something in our minds of which we are more conscious than of the rest of the impressions being made upon it. In the same way when looking at some particular object in a room or scene we see it most clearly, but are aware of other furnishings or features. The object on which our eyes are fixed is said to be the "focus" of our vision. Similarly, the sensation, emotion, or thought which fixes our attention is said to be the focus of our consciousness; all the rest, away from this centre, constitutes the "margin." Of what is in the nearer margin of our minds we are, at least, dimly aware; but of by far the greater part of the experiences and impressions that have gone to the making of our minds we are, at any given moment, unconscious. All this is said to exist "below the *threshold of consciousness*." It is "out of our minds" for the time being, and must be "called to mind" in some way if we desire to make use of it; and if we, or circumstances, fail to recall it, it will remain "below the threshold," for all practical purposes non-existent.

"*Whatever occupies the focus one second may not occupy it the next. Consciousness changes from moment to moment.*" (E. Read Mumford in *The Dawn of Character*.)

So, in our boy's mind, the remembrance of certain things he had done or left undone, in the farthest margin before his name was called, sprang to the focus when he realised that the master wanted him. As he returned to his desk it passed into the margin again, his lesson, by an effort of will, being brought to the focus.

"*Voluntary attention is deliberate, and we are conscious of strain*

and effort. We are forced to attend voluntarily to objects which are less interesting, for the sake of something else. Involuntary attention is spontaneous, and we are conscious of no such effort of will. Involuntary attention is the basis of the voluntary. Sustained and continuous attention is difficult." (E. Read Mumford in *The Dawn of Character*.)

Thus our boy deliberately forcing himself to attend to his lesson gave voluntary attention to it. He was not, however, equal to the effort required for sustained and continuous attention and, therefore, was soon inattentive again. This was probably because his power of attention had never been trained.

"*Concentration is an effort, and the habit of concentration is only slowly formed.*" (E. Read Mumford in *The Dawn of Character*.)

Our illustration has shown us something of the behaviour of the mind in regard to interest and attention. Let us take another example.

We may, on some occasion, have rewarded our class for good work in the morning by reading to them for half-an-hour in the afternoon ; or, perhaps, may have taken them to a museum or picture palace. In such circumstances we are likely to feel that we may expect them to behave unusually well for the remainder of the school session. They have listened to the reading, we may suppose, in an interested silence in which the proverbial pin might have been heard to drop ; or, at the museum or picture palace they have shown the most intense enjoyment. But alas for our expectations ! For the rest of the afternoon the children are naughtier, we think, than we have ever known them, and so disorderly over school closing that many of them have to be kept in. We leave school feeling that it will be a long time before we give our pupils another treat, as they have shown themselves so ungrateful over this one.

But the children are not altogether responsible for their behaviour in such a case. *Both interest and concentration of attention cause strain ; and after strain reaction follows.* It is Nature's way of restoring the balance. The very intensity of the children's interest and enjoyment had exhausted interest and attention for the time being, and the strain undergone had lessened, temporarily, their will power.

How then should we act in such circumstances to avoid a painful end to the afternoon's pleasure—to *prevent* breaches of order which we feel must be punished when they occur? In the first place, if we could choose the time for it, we should put the little treat as late as possible in the day—the last hour or half-hour would be best. If, however, as often in the case of visits to museums and galleries, the time is fixed for us, we should see on our return to school that the lesson following is changed, if necessary, to one that does not make anew a heavy demand on the children's attention—writing, preferably from dictation, or singing would serve the purpose very well. In either case we should make short work of closing school—not keeping our pupils standing and waiting while we attend to something that can just as easily be attended to after they are gone; not choosing this time to give long notices or a lecture, and not picking the longest hymn and prayer in our school-service book. We should also be especially forbearing, not visiting offences with severity to show our lively sense of the ingratitude of the offenders. If we act thus, we shall probably prevent disorder.

Close attention, if voluntary, is difficult. We should therefore give our pupils all the help we can when we require it of them. Lessons demanding it—arithmetic, for example—should be given as early as possible in the day, and we must not exact it for long periods at a time. Silence should be enforced while exercises are worked, for distractions must be removed. Individuals may need special help in this direction. Harry, say, for instance, is a boy who lets his attention be caught away from the work in hand by any sound or movement. It will be advisable to send him to work in a corner of the room where he will be screened from the sight of his classmates and from what is going on around him.

"*The greater the capacity of the child to observe and to be interested in all that goes on around, the greater the difficulty in learning to attend to any one thing in particular; and therefore the greater the necessity of deliberately training the power of concentration.*" (E. Read Mumford in *The Dawn of Character.*)

It is only when we have made attention possible for individual children that we shall be justified in blaming them for inattention.

We must remember, too, that *attention in one direction causes*

inattention in other directions. If we give the order for books to be closed to a class of children at work on a study or exercise, it is likely that some of the most industrious will not hear us. Their work is in the focus of their minds, and if our order penetrates them at all, it remains in the farthest margin, and only impresses itself faintly on their consciousness. If in such a case we were to punish or reprove the children who went on with their work, they might reasonably think us unjust. We must make sure before giving the order that the children's attention is withdrawn from their work. This can be done by saying the name of the class and giving a preliminary warning in some such words as: "*Listen, all of you,*" "*Stop work,*" or, simply, "*Attention.*" We should speak, not loudly, but in a voice that carries weight, and is not easy to disregard; and we should see that all are attending before we go on to our order.

Observance on our part of the laws governing attention and interest will do much to prevent neglect of work and the disorder arising out of it; but other conditions enter into the question of good class management, and a strong leaven of commonsense must go to the securing of them. There are some breaches of order that result so surely from the absence of certain necessary conditions, or the existence of other undesirable ones, that we have only ourselves to blame when they occur. However *interesting* a lesson may be, it will not be likely to keep the *attention* of a child who is placed so that he can only see the teacher with difficulty. He probably has something in his pocket or desk that is even more interesting to him, and he will turn his attention to it very philosophically.

Commonsense tells us to place all our pupils where they can both see and hear us easily; and, having done so, to give at least an occasional glance to see that they are taking full advantage of their position. This brings us to an important part of class management, the arrangement of the class for various kinds of lessons. The main points to be remembered in making such arrangements are that both we and our pupils must be able to see and hear all that it is necessary for us to see and hear, and that our pupils must besides have space for the position and movements and materials required by their work.

For reading classes many teachers prefer their pupils to stand in a circular or three-sided formation, the open side being for the

blackboard. If we adopt this arrangement we must be careful to see that at such times as we stand—or sit—still, none of the children at the ends of the two side wings are behind us, for "out of sight" in class is frequently "into mischief." Standing, however, is rather a trying position for upper standard children, and perhaps even for younger ones in this country, though it offers the advantage of providing a change from the position necessary for most lessons. There should be no difficulty in securing good voice production from a class of children seated, for the body from the waist upwards can as easily be held erect when sitting as when standing. Little children, however, are probably helped both to keep their place and to read better when they are in a position which enables their teacher to pass behind them round the class as she reads with them.

In writing lessons the chief necessity is that the children shall have room to sit in correct position, and be able to see easily anything that they may have to transcribe. During dictation they should be able both to hear and to see the teacher, and should be so far from each other that they are not tempted to look at their neighbour's work, for we should always try to make it hard.

For oral lessons children should be grouped in a compact class, but not too closely, for hygienic reasons. Such movement as may be necessary on their part during a lesson should be possible without disturbing the whole class. Specimens and other illustrations should be well within view, or some suitable arrangement should be made for passing them. The teacher should be easily seen and heard by every member of the class. Arithmetic lessons belong to one or other of the foregoing groups.

The arrangement of a singing class will generally change during the progress of a lesson. Part of the time the class may need to be grouped for oral instruction, and part of it to stand for breathing exercises and actual singing. This may necessitate a further re-arrangement. Position should vary with the nature of the exercises. It must be remembered that during both singing and drill practice the lungs are brought into more energetic action, and doors and windows should be as widely open as weather and other conditions allow. Singing is more closely bound up with class management than we realise.

Serious breaches of discipline may be brought about by very trivial causes. A class may be moving from floor to desk position, and a child who is not looking where he is going may walk into something that is out of place—a chair, for instance, or an easel and blackboard—in such a way as to stumble or to knock it over. Just what happens next it will be hard for anyone to say. Possibly a second boy may stumble over the first, hurting himself slightly, and vent his annoyance by striking out at somebody else. A scene of disorder may result, and we may treat those concerned with something less than justice. We may reprove the first boy for not attending to what he was doing, and the others for want of self-control. Probably there was some impishness in it that we shall have to ignore; but the fact remains that if the way had been clear, as commonsense tells us *it should have been*, for the class to pass, there would have been no disorder. This is only one instance of the need there is for untiring attention to details in our class management. The preparation and putting away of materials and apparatus, the keeping of things in their places, the regulation of light and heat, the seeing to this little thing or that little thing that may cause disorder or waste of time if unattended to, these are cogs in our wheel of work, and must be kept well oiled if that is to run smoothly.

In the classes of young teachers, increasing disorder frequently results from a failure to make the first command sufficiently impressive, and a consequent failure to secure obedience. It is a good plan to give some thought to this matter of the first command before encountering a new class. It should be given in a clear, firm, deliberate voice, and its treatment by the various members of the class must be noted. When they realise that the new teacher can see and discriminate they will be more ready to submit to him. There is, for children, little satisfaction in behaving well in the class of an undiscriminating teacher.

The secret of stopping disorder is to check it at the outset by discovering its cause and removing it. We should insist quietly on orderly ways of work and conduct, refraining from complaint and threat—holding punishment in reserve, unhinted at. It is not difficult to create in this way a feeling on the part of the class that nothing will be passed over until it is properly done, and, where this exists, children quickly yield to authority.

To turn away from the class without seeing whether obedience

promptly follows an order is fatal. Yet the mistake is very often made by young teachers. They say, "Pass pens and books," and immediately turn to the cleaning of the blackboard or some other such operation. The intention apparently is to save time; but the practice defeats its own aim. When a teacher has trained his class in habits of prompt obedience, it is right for him to cease from strict surveillance and to go about his business while the children go about theirs, as this is a first step between "government" and "discipline." To begin the practice at the outset, however, is to count upon more obedience than most young teachers can be sure of.

Another thing affecting obedience is the nature of the command. Commands should be firm and unmistakable, not a blending of order, plea and warning which can only make a blurred impression on the children. Decision of mind, of course, is a matter of personality; but it is a characteristic that can be cultivated, and during cultivation the outward signs of it—the f brisk tone and the brief words of command—may be made t duty in its place. To assume a necessary virtue is the best of making it ours. By degrees the lack of decision that causes hesitating orders and changes of front will yield to resoluteness of mind and will.

The problem of the management of "single teacher schools" not remote from that of class management, and should perhap touched upon before we turn to another topic. To teachers in charge of a school the school is the class—a class which presents a number of problems to be solved by management. Such teachers frequently make the mistake of attempting too much in the way of standardising, the usual practice being to keep to th standards in a fully staffed school—or at least as seven, with sub-standards besides, as pupils presen for. This is not good either for teachers or for pupils to teach seven, or even five, divisions puts undue teacher's powers, and is responsible, moreover, for a waste. The energy given to planning how to fit in o another will be more profitably given to the prepara teaching.

The solution of the problem will be found in grouping. It i to be doubted whether any teacher can do justice to a number o children if the attempt is made to teach them in more than thre

divisions. A sense of hurry and worry will almost certainly invade the work, and this will be bad for all concerned. On the other hand, if the children are grouped as *Infants*, *Juniors* and *Seniors*, those in each division may receive the kind of teaching suited to their stage of development, and the covering of set syllabuses of work is a matter of much less importance. Moreover, there is no reason why the actual progress of individual children in the "standard" requirements should be less, and there is a very great likelihood that it will be more by reason of the time saved.

So far the suggestions made refer generally to class management of either younger or older children. It remains to suggest how "government" may yield gradually to "discipline"; the teacher's control to the self-control of the pupils.

Young children are, by reason of their undeveloped natures, unfitted to govern themselves. The will is weak, and while momentary desires are specially keen, the capacity for foresight and forethought hardly exists, so that children are apt to act upon impulse, regardless of consequences. Their moral natures, like their minds and bodies, are undeveloped. It would, therefore, be both unwise and unfair to expect them to assume responsibility for their own behaviour. Government and supervision are necessary throughout the lower standards, where definite orders must be given and the carrying out of them seen to. A Standard I or II class, again, should not be left in a classroom for more than a minute or two without a teacher. Yet, as the only way to acquire a virtue is to practise it, even young children must be given opportunity for self-control. The amount of the exercise must be suited to the weakness of their moral nature; and that expected of young children should be easy and of short duration. In Standard III the periods of self-government may be lengthened; but inquiry should be made at the end of each. All children should be expected to confess their own misdemeanours, and tale-bearing should be discouraged. In Standard IV inquiry should not be so much a matter of course, but should be made from time to time when circumstances seem to demand it. The class is as it were a bridge between the lower and higher standards; and in it government should yield to a larger extent to self-control. In the upper standards opportunity should be further increased, until in Standard VII conduct should be governed less by class

rules than by individual respect for the wish of the school authorities, consideration for the work of the class, regard for the rights and privileges of schoolfellows, and personal sense of right and wrong. At this stage all that the teacher possesses of tact and discernment will be needed to show trust and at the same time prevent abuses of it; for while children become trustworthy by being trusted, it is too much to expect that no breaches of trust will occur, and much evil may result from these if they go undiscovered.

What can we do to assist the growth of the higher moral qualities? To begin with, they must have the right atmosphere for growth; for the fruits of the spirit are as dependent on "climate" as are the fruits of the soil. They then must be nourished; and character, like mind, is nourished by ideas. We may supply these directly by presenting in fable, story and poem examples of the virtues and qualities we wish to see in them. We may also supply them indirectly through the subjects of the curriculum, every lesson that we give from first to last tending in some measure to realise this aim of education. Thirdly, we must provide opportunity for the exercise of desired virtues that they may be strengthened in action. But one thing is certain. If we have not ourselves the feeling that it is lovely and to be desired, if we have not striven with some measure of success to make it our own, we cannot make any virtue theirs. Herein we differ from the gardener, to whose work our own is often likened: we must have in ourselves the qualities we try to cultivate.

Child-study has made the question of means of punishment in schools much less acute, for it has shown that children
greater interest than in learning if they are taught suitabl
in the right way. It has been proved beyond all doubt tha
this condition exists, there is no need to "drive" children
or to hold punishments over their heads in order to get th
work out of them. Happy at their school tasks, they
always on the look-out for mischief, or very frequently guilty of acts of insubordination. Yet, because teachers are at times confronted with the necessity for punishing, the inexperienced
some guidance in a matter which presents serious problems
solution.

In considering the treatment called for by wrong-doing or part of our pupils, it is necessary for us to try to look on the

of children from their standpoint, to try to see each act as it appeared to the child at or before the moment of committal. Having little experience, children do not always foresee the evil consequences of an action, and we must not judge their misdemeanours as if they did. It is possible, however, that some dangerous practice indulged in has been forbidden. Here, then, is a fault of disobedience; and as obedience may be expected of children even before school age, a suitable punishment has no element of injustice in it. Incidentally, it may be said here that, as a rule, a practice should not be forbidden until an inclination towards it has been shown. We should not "suggest" wrong-doing.

A word or two is necessary as to the form punishments should take. The use of one form of it—corporal punishment—is wisely forbidden to young teachers, as much in their own interests as in the children's. There are better ways of governing children than by caning; but caning is apt to present itself as easier, and if it were allowed to young teachers, it is possible that they would never discover the better ways. Their powers of management would remain undeveloped, their characters would suffer, and the happiest relations between themselves and their pupils would not be likely to be attained. The case is different when, after having proved themselves efficient in control without it, they decide in the case of some individual child that corporal punishment is the most appropriate form. For the children's sake, also, the prohibiting of corporal punishment is advisable. Young teachers are without experience in fitting the punishment either to the fault or to what the offender is able to bear without injury; for corporal punishment should be infrequent and severe—severe, in order that it may be infrequent. If it is too severe or too light, serious harm is done.

Other usual forms of punishment are detentions, impositions, and the withdrawal of privileges. The first must be governed to a large extent by the hours of the school sessions. If children, as is sometimes the case in South Africa, have been at lessons from half-past eight to half-past one, with only a short interval, it is obviously not right to detain them for punishment except in the most extreme cases of insubordination. Very frequently, too, the long distances between school and home, or weather conditions, make it almost impossible to bring them back to do neglected work later in the afternoon, though this suggests itself as the best

time. Home impositions are another unsatisfactory form of punishment, as children frequently succeed in evading them. Further, when pages of geography, history or verses of poetry are set to be learnt as impositions, a dislike of the subject, which it was no part of our intention to cause, is the main effect of such punishment. The withdrawal of privileges is probably the most satisfactory form of punishment devisable, and it is important that school work should be regarded as the chief of these privileges. If a child causes disorder and disturbance in class, it is more fitting to dismiss him from the lesson than to give him a task in connection with it; but, of course, a teacher who dismisses a child from class must make the dismissal felt so much that it acts as a deterrent both on the offender and on the other children.

In the case of self-governed children the deprivation of their privilege of special exemption from rules is generally felt so much that they rarely repeat an offence. Where a fault is repeated, the offender should be brought back—publicly or not, as the circumstances demand—into the ranks of those to whom the privilege of self-government has not been accorded, and should be regarded as one of them till such time as he has won it back again. As a rule this punishment is enough for an older pupil.

The inquiry into a misdemeanour must be pursued without vindictiveness—good-humouredly, indeed—and will then in no wise injure the relations between teacher and pupils, the latter being quite ready to allow the teacher's rights in the matter.

The question of rewards also calls for consideration. Where school-work is regarded as a privilege and pleasure in itself, the need for rewards as an encouragement of application to that work seems to disappear with the need for punishment. Consequently, teachers' ideas of prizes are undergoing revision. It is realised that they tend to create ill-will in some natures, and heartsoreness in others, and to weaken the feeling that the work and successful attainment are rewards in themselves. Moreover, injustice is often done, the prizes going not to the children who have been most conscientious and done the best with reference to their powers, but to those who, through favouring circumstances for which they deserve no credit, have taken higher places. It is doubtful, too, whether the parade connected with public prize-giving has an altogether desirable effect on the natures of the prize-winners.

There is one reward, however, which one would like to see

given to every child who by diligence and effort in class work has won a place and power that seemed out of reach, or by interest in or natural aptitude for some subject has reached a point at which it seems to open before him with new meaning—the reward of being able to go on. It may be given in the form of some equipment, book, or bursary which makes going on possible; but it is not necessary that it should take a material form at all. It might be the reward of further instruction which the teacher has found means of giving—not perhaps personally—and there need be no public ceremony of award. Another good form of reward is that given to a whole class in the form, say, of a picture, of reference books, or of some equipment necessary for the continued study of a subject in which the class has shown special interest. Such rewards engender no bitterness of heart in individuals, and tend to foster that *esprit de corps*, the exercise of which is the child's first training in considering other interests than his own.

There is a duty of teachers closely concerned with this matter of rewards and punishments—the duty of seeking in their work the co-operation of parents. The interests of parents and teachers are so much the same in all that affects the children, that results desired by both are more likely to be attained when they work together. In the past, it is true, the feeling that school lessons and home life were in some measure antagonistic has been not unreasonably held on both sides; but present-day efforts to bridge the gulf between the two should soon succeed in establishing happier relations. The school has everything to gain and nothing to lose from an increased interest in its work on the part of parents. Often a need for punishment can be avoided by a visit to a child's home, which reveals causes that when known are seen to be removable, or to form, perhaps, an argument in favour of patience. Often, again, if the interest of parents in better circumstances is gained, it may lead to the relief of suffering among poorer children. Nor should the visiting be all on one side. Parents should feel that they will be welcome at the school, though in the interests of the children's work it may be necessary to ask that their visits be made at set times. On these occasions some informal singing and reciting, and the exhibition of some of the children's work, will have the effect of increasing home interest in school tasks, and so bringing the two sides of the children's lives into closer relation.

We come now to the matter of teaching. How are we to learn to master the art which we have chosen as our lifework? To begin with, we must get away from the notion that teaching is concerned with the giving of lessons only and try to make our work what it should be—the daily development of the life and nature of children. What needs to be emphasized is the connection that must exist between one lesson and another, the continuity that there must be in all teaching. School time-tables, it is true, are marked for half-hour periods, the time of a single lesson; but this is for reasons which we can all appreciate. The subject-matter of teaching has to be divided in such a way that neither the bodies or the minds of children grow tired for want of change—of position or of occupation—and to allow opportunity for food, exercise and rest. Study of the mind has shown that its power of attending without a break to one kind of work is strictly limited. In the case of infants it lasts only a quarter of an hour, increasing gradually until in the upper standards thirty-five to forty-five minutes is found not to cause undue strain. A fair average time for middle standards is the thirty minutes familiar as the length of a lesson. But though this division of our work is absolutely essential, it should be regarded as what it is—simply a convenient way of meeting the needs of mind and body, and not as forming a barrier between one piece of teaching and the next.

The necessity of preparing notes of lessons for inspection has, perhaps, done more than anything else to place undue emphasis on single, separate lessons. Yet the writing of notes of lessons by teachers in training is essential. Written preparation of lessons before they are given may or may not be advisable in ordinary school practice. When there are eight or ten lessons to be given in the course of a day, the writing of even short notes of them takes more time than a teacher may be able to give. If he can satisfy himself that he has the matter for any of them clearly arranged in his mind, he will be well advised to save the time he would need to give to writing notes for these in order that he may concentrate attention on other lessons about which he feels less sure. But student-teachers are in a different case. For one thing, however well they may know the subject-matter of a lesson as students, they are unlikely, until they have had a good deal of practice, to be able to make the best of it as teachers. The early lessons of even students suffer very generally from want of form, and writing

out beforehand helps to bring their ideas, and therefore the presentation of them, into shape. Another reason why notes of lessons are required of teachers in training is that they have to satisfy not themselves but their instructors and examiners of their ability to teach any lesson they may be called upon to give. It is impossible to judge of this in the absence of written notes unless a complete lesson is heard, and this cannot be done over the whole range of subjects professed. Full notes have therefore, necessarily, to be submitted; but these of late years have come to take too large a space in our thoughts. It seems sometimes as if we felt the "Notes" to be more important than the lesson; and we are apt, as has been said, to look on teaching as the giving of a succession of single lessons, losing thereby the sense of that continuity of purpose and training through which alone natures are developed and lives influenced. We have passed, in fact—or are in danger of passing—from formlessness to formalism, and we need now to find the happy mean between these two extremes.

One reason why notes of lessons and the lessons themselves tend to be formal is that the question of form is too much in the minds of student-teachers at the time of writing them. This should not be the case. Form should be studied during composition lessons, and practised every time a written abstract is made of any matter set for study. A good clear style of statement would then be habitual; and this would allow the mind during the writing of "Notes" to be given almost wholly to what is more important than the form of them—their purpose and the best means of attaining it.

Apart from examination purposes, which should never be the first consideration in our minds, the writing of notes of lessons is meant to give an opportunity for selection and arrangement of matter enabling us to choose from our whole knowledge of the subject just what will make the most effective lesson for the particular class of children to be taught, and to decide upon the best form of presentation and illustration.

This brings us to the lesson itself. How are we to teach it? The answer, whatever the subject to be taught, is the same: "As the children can learn it." We need, then, to discover how children learn.

In the effort to do so we may turn back to what was said of the stages of growth in Chapter I. The most obvious physical change in

children from infancy to boyhood or girlhood is their increase in size. Less physiological knowledge than is necessary for young teachers will explain this increase. During life there are going on continuously in the body two opposite processes—a wearing down and a building up. The wearing down begins with the first breath drawn. It is the waste of bodily substance due to the using of physical energy. The building up is brought about by eating and digesting food. If these two processes balanced each other there could be no change of size in the human body ; but this, we know, is not the case except during a few years in middle life. In youth the building up of the body is in excess of the waste going on, and young people consequently *grow*, as we say. With the approach of old age the amount of waste exceeds what it is within the failing powers of the body to repair, and it therefore, as a rule, lessens appreciably in size and weight.

While we must not push the comparison too far, for one is matter and the other is not, there is a similarity between the growth of the body and the growth of the mind. The mind, like the body, is dependent for its health and growth on food and exercise taken under right conditions. *Ideas* form the food and the means of exercise of the mind. Among the right conditions we may mention suitability of food and the alternation of exercise and rest. As in the case of the body, food suitable at one age is unsuitable at another. A wise mother will give her children much milk and little meat—will allow them sweets, but will keep pickles from them ; and a wise teacher will not furnish abstract ideas as mind-food for young pupils. Our glance at the changing interests of children and at the things they are most easily able to do as they pass from age to age has given us some notion of what forms suitable mind-food for them in the various stages of growth.

The question now arises : " By what means and in what manner does the mind take in and absorb its food ? " In the case of the body the natural stimulus of the building-up process is hunger. That the mind feels a like stimulus we cannot doubt, and more particularly in youth, its period of greatest growth. It has been well said that the attitude of the child-mind towards life can be expressed by the one word *Hunger*. It is hungry to be, hungry to do, hungry to find out and to know. The mind then, stimulated by one or other of these hungers, stretches out towards action and knowledge and from these it builds up its substance and strength from day t

day. Civilised man, however, has learned to anticipate his hunger both of body and mind—in the one case by regular meals, in the other by regular lessons. Regarded in this light, our work of teaching reveals itself as being the preparation and serving of food for the child mind—food which must be, to continue our physical comparison, at the same time palatable (appealing to taste) and digestible (resulting in nourishment).

Now, just as the only food which can become part of our bodily substance is that which contains some of the elements which compose the body, so the ideas which form mental food can only be taken in by the mind if they are of the same sort as, or have something to do with, ideas which—previously taken in—have built up that mind.

Our minds begin to gather ideas as soon as we begin to feel and see and smell—in other words, as soon as we begin to use our senses. Each new idea has to gain its entrance through the influence of some previously admitted idea, being, as Professor Adams puts it, in the same position as a person who seeks entrance to some club or society through the good offices of a friend already a member of it. If we pursue for a moment this figure of a club member, we can see what his course of action will be on gaining entry to the club: he will "associate" at first chiefly with his friend; but as time goes on will form connections with other members of tastes similar to his own, whether these entered the club before or after him. In the same way an idea gaining entry to the *circle of ideas* forming a mind makes associations first with the introducing idea or ideas, and then with other ideas of a like nature. This way in which new ideas find lodgment in minds through similar ideas already present is known as *Apperception*, and a group of associated ideas as an *Apperception Mass;* but the remembering of the names is very much less important than the accepting of the theory as a guide in teaching. We owe the theory to a German mind-student and educationist named Herbart, and the word Herbartianism, with which we frequently meet in educational writings, is used to express the sum of his teaching.

Although the mind is unable to take in any totally foreign or unrelated idea, there is a constant effort on its part—at least where interest is aroused—to form an association between newly presented ideas and those stored within it. This fact is made clear by the habit little children have of naming some new object from its re-

semblance to some other that is familiar. Thus an orange, seen for the first time, is called a ball, and a child who has a pet cat will fondle a fur muff and call it "kitty." A little book written on the subject of "Apperception" gives a further illustration in its title: *A Pot of Green Feathers*—a child's exclamation on first seeing a fern.

Since the ideas we present in teaching can only enter our pupils' minds through association with some one or more of the ideas which have entered previously, we must always ask ourselves, when thinking out a lesson to be given, what the children are likely to know about the subject of it before we begin to teach. If we can answer the question we know our starting-point; if we can not, we must give the first minute or two of our teaching to finding out. Let us take a few examples.

Under ordinary class-teaching conditions most of our lessons follow some other on the same subject. In these circumstances our best opening is by brief questioning on that part of a previous lesson which will bring into activity the ideas associated with the subject-matter of the new one. Let us suppose that the lesson is on addition of money, and that the class is Standard III. Their having passed out of Standard II is a guarantee that the pupils know the simple rules. Probably division was the last of these taught to them; but we should not, of course, try to connect compound addition with that, but with simple addition that was taught earlier; and, when the necessity comes for turning pence into shillings, we shall associate the operation with that of turning units into tens. The fact that in the one case it takes ten of the smaller to make one of the larger, and in the other twelve, will give no trouble if the children are reminded of it in the first few exercises. This example has been taken as showing that, in class teaching, it is sometimes necessary to go back to a much earlier lesson in order to find the true connection with the new one to be taught. What is necessary in such cases is to summon in review previous lessons in the same subject and to see what old knowledge can be made most serviceable in forming associations with the new.

Sometimes, however, we have to introduce our class to a new subject. On first thoughts it might seem that children who have never had a history lesson cannot have any ideas on the subject. But almost all children have heard stories from history and have gathered ideas from these; better still, their own experience has

furnished them. History is at their doors; within them, indeed. The white faces, the black and the brown—how is the presence of different races in the country to be accounted for? Are any native? When and how and why did the others come to it? South African history from a European standpoint begins with these last questions, and the children are ready for their first lesson on it: "How the White Man came." New subjects, indeed, are never wholly new.

The new class is a greater difficulty—a difficulty that is met with at the beginning of the school-year and upon change of schools. But even with a new class we have, to help us, our knowledge of the facts that are broadly true of all children at the same stage of growth. Until childhood is over, the differences are not so great as the resemblances. As regards their school work it is necessary to consult, if possible, the previous teacher of the class; failing that, to study the class syllabus and record. It is advisable also to allow some time—say, a week—for learning something about the children before beginning the formal programme of work. After this, we should be able to find the right opening for any lesson that has to be given.

Where the children are strange to the teacher, and the subject is unfamiliar to the class, the first thing to be done is to recall the broad facts true of children of the age of those to be taught, and to be guided by these in the search for their interests which, in turn, will show where preparatory ideas are to be found.

Let us suppose, for example, that we are required to give, on examination day or in the practising school, a first grammar lesson to a Standard III class that we have not taught before. It has already been pointed out that grammar lessons for young children should concern themselves with actual speech. But where are we to begin? Surely, in the case of a new subject, at the beginning. And where must we go for the beginnings of speech? To babyland, of course. Are the children in the class likely to have had any chance of hearing a baby trying to talk? Without doubt most of them will have had this chance. They have, then, sufficient knowledge for our purpose; there are, that is to say, in their minds ideas related to those we wish to present. They have heard some baby learning to speak, and can tell us in answer to our questions that he begins by making unintelligible sounds which gradually increase in number and variety and at last form recog-

nisable words. Further, some of them can tell us the first word that the baby in their house was heard to say. If we write these words—"dadda," "mamma," "babba," etc.—on the board as they are given, the children may be led to see that the first words of a baby's speech are names. But soon, they will tell us, the baby learns to use others—"give," "kiss," "want," etc. These are not name-words, as the children will readily see on examining them. By means of these the baby tells those around him what he wishes them to do. Later, he advances from saying single words to putting a whole thought into speech, as, for example, "Baby wants dolly."

During such preparatory questioning our pupils will have been led to bring into the focus of their minds from below the threshold of consciousness old knowledge which will "open" them, we may say, to the new ideas we wish to present: the grammatical truths that there are different kinds of words which have different work to do in speech; that the two chief kinds, their importance being proved by the fact that they are learnt first, are distinguished as name-words (nouns) and action-words (verbs); that name-words and action-words are put together in speech in a way that expresses a whole thought; that such an arrangement of words is called a sentence; that every sentence has two parts; and that these may be called, after the chief words in them, the name-part and the action-part.

Ideas of this introductory type which will prepare the minds of the pupils for the new ideas to be presented are always to be found if we know where to look for them:

"No part of human knowledge or experience is without relations to every other part. One mark of a well-trained mind is just this, that the proper connections have been formed between the various classes of ideas which make up its furnishing. . . . The uneducated man may have two ideas which are really closely related to each other, but he may fail entirely to see their connection. The skilful teacher is always able to introduce the unknown by means of something partly known, even with her youngest pupils, and it is with the youngest that the difficulty of doing so is greatest. As the circle of the pupils' ideas enlarges, the available points of relation increase with great rapidity, and the difficulty of knowing where to begin becomes less and less. Hence one reason why the youngest pupils should always be under the most skilled teacher.

The fewer ideas the mind contains, the fewer will it receive by its own unaided action from among the indefinite number which are offered by the subject of study. The fuller the mind is of ideas, the richer in new ideas does it find the world of things and of men, and the less need it has of the teacher's guidance" (J. Gunn, *The Infant School*, p. 83).

When once the necessary association of ideas has been made, the giving of the lesson is no longer affected to the same extent by varying conditions with regard to the subject and the class.

Having brought the mind into a state favourable to the acceptance of the new ideas we desire to present, we must next proceed to present them with all the skill we can. During this presentation of ideas we must beware of introducing such as are alien to the purpose of the lesson. In preparing pupils for their first grammar lesson, for instance, as suggested above, we must not allow ourselves or the children to be drawn by the fascinations of the babies, whose aid we have invoked, away from the subject of grammar, and begin to talk of other things they do. "Wandering by the way" is one of the chief causes of unfinished lessons and of their failure to fulfil their aim. Such distracting ideas must be rigidly withstood, only such new ones being presented or encouraged as further the teaching in progress or pave the way for the next lesson of our prepared scheme.

In presenting ideas to a class it is necessary to be very clear. Clearness is a result, in part, of a wise selection of ideas; but it is also partly due to the order of their presentation. Want of arrangement is very common in the lessons of unskilful teachers, but may be made to disappear under training—a self-training that consists in the careful preparation of all subject-matter to be taught. Thus, in choosing his ideas for a lesson, the teacher must ask himself "Which is it necessary to present first? Which are the concluding ideas? How can I arrange the intervening part so that the thread of my teaching passes straight from point to point and is not lost in a maze of words and ideas?"

To this second division of the lesson belongs whatever illustration we deem necessary. The purpose of illustration in teaching, as the derivation of the word (from Latin *illustrare*, to light up) may help to remind us, is to make clear our meaning to the minds of our pupils. Although objects, specimens or other apparatus, and draw-

ings—pictures, sketches or diagrams—are very valuable means of illustration, it is not to be thought that they form the only possible ones. Illustration is possible by word as well as by substance and line. A homely simile, a reference to some familiar experience, the recall of some piece of previous knowledge, may all be made to serve as useful illustration; and we should be ready with these no less than with those mentioned above. We must provide objects and specimens when these are the best means of illustration, and when they are available without creating more disturbance and discomfort than is justified by their value. But we should remember that apparatus, except in the case of advanced experiments not common in the elementary school, is no more effective for being elaborate and expensive. We must learn to use for purposes of illustration the material which is to be found at hand in common things and familiar doings in nature, and in the school and home.

In drawing for illustration we must beware of unnecessary detail and elaboration. Any drawing which takes more than a minute or two to put on the board is out of place in a half-hour lesson. Nor is any useful purpose served by sketching what is so familiar that a few words would serve to call up an image of it. Illustrative drawing in teaching should have the one aim of shedding light on what is dark in the teacher's meaning. Rightly used, there is no better means, for by it meaning can be made quite unmistakable; and the more readily a teacher is able to draw, the more successful his teaching is likely to be.

In the two preceding divisions of lessons the work is done mainly —though it should not be done entirely—by the teacher. In the first place he makes it possible for the children to receive the new ideas to be presented; and in the second he presents the ideas in the manner and order necessary for clear understanding, making this easier by the use of suitable illustration. In these parts of the lesson, ideas are used mainly as food for the mind; in the following ones, they serve chiefly their other use as its means of exercise. To go back to our physical comparison, we know quite well what would be the effect of serving a second meal before an earlier one had been assimilated. It is quite certain that mental indigestion exists to an alarming extent among school children, and forms one of the main reasons why their minds benefit so much less than they should do from the class-teaching they receive. They are given one lesson after another in which, while ideas are furnished by the teacher,

there is no provision for the assimilation of them by the children. We are familiar enough with the necessity for exercise to aid digestion—or assimilation—in the case of the body, but are apt to overlook it in the case of the mind. Of course, this is not true to the same extent in all subjects. In reading, writing and arithmetic the tendency is the other way. In these subjects the pupils are frequently required to exercise overmuch on very few ideas—the result being to render their work mechanical—but in the higher subjects the exercise provided is very frequently insufficient.

The first way in which the mind exercises itself upon the newly presented ideas is by finding a place for them among the ideas with which earlier knowledge and experience have furnished it. Conversation between us and our pupils is what is needed at this point; and we should stimulate this by such questions as will set them comparing and contrasting their newly-gained ideas with their earlier ones, for it is on resemblances and differences that associations are based. If we give the children time to think, and help them with an occasional hint, they will find for themselves companion ideas and helpful illustrations in a way that will surprise us.

When all the ideas that bear on the subject have been *associated* (compared, contrasted and arranged), another step must be taken—that of stating the discoveries made or the conclusions come to, in a way that gathers up the new knowledge gained and expresses it in a form easy to remember. With a little help and encouragement, again, the children will be able to make some statement of the main teaching they have received. At any rate, it will be good for them to try. Their minds will be more active than if they were only required to read or repeat a statement written or spoken by the teacher. Such statements should always be very simple; for the stilted language of formal rules and definitions has little meaning for children, and the best they can do with it is to memorise it mechanically. Their own language is far more likely to convey ideas to them, and, with such corrections as may be necessary, should be accepted. This systematised statement of knowledge gained completes the fourth division of lessons. As it forms a summary of the lesson, it may be used for the purpose of recapitulation, the teacher briefly running through it and so recalling the chief heads of the lesson before examining. It is important that no new ideas be introduced at this stage.

We come now to the final division of our teaching. This is the

stage at which exercises should be set to prove whether it has been effective. It corresponds to the using of ideas gained in study. If the exercises are suitable and the pupils are able to respond to the demands made by them, the ideas—previously conveyed, connected and systematised—may be regarded as assimilated. They have become part of the mind, as material food, when digestion is completed, becomes part of the body, and so may be used in future work.

While this application of ideas is just as true a part of any lesson given as the other divisions of it, it is possible—though not advisable, except in cases of necessity—to reserve it for a subsequent one. It may, for instance, take us the whole of thirty minutes to explain the principle of subtraction to a dull class. We should then, naturally—after, perhaps, a brief revision—devote our next lesson in arithmetic to exercises on the rule; and these exercises would be the application of our previous lesson.

The nature of the exercises given to test knowledge will, of course, differ with that of the lesson. Their purpose is to get pupils to prove that they *know* by showing that they are able to *do* such tasks as the lesson, rightly learned, should have fitted them for. But the meaning of the word *do* in this application must not be narrowed. We may often be content if we succeed in making our pupils think for themselves about what they have been learning, and see how and where they may apply it to their work and conduct.

The subject of class teaching cannot be left without reference to the matter of questioning, which enters so largely into it. In the first place it is necessary to distinguish between the two purposes of questioning—teaching and testing. Questions which are used for the former purpose must be something more than a mere interrogation. Regarding the lesson as a line of thought to be followed out to some desired conclusion, we may say that each teaching question must carry the reasoning a step forward. The final shaping of such questions, though they must necessarily be *considered* in preparation, should be determined during the course of the lesson; for they must grow out of the pupils' answers. Testing questions may be put to several uses—to testing knowledge at the beginning of a lesson in order to discover the starting-point; or, during the lesson, to see whether the pupils have grasped the presented ideas; or, at the close, to show whether the teaching has been effective. They are useful also in checking inattention.

In order that their meaning may be understood, questions must be clearly worded, and, for the same reason, should not contain words unfamiliar to the children, whose vocabularies, it must be remembered, are extremely limited. The questioner must have a definite idea of what he wishes to ask, and of his purpose in asking; and the words which he uses must have an equally definite meaning —and the same meaning—for his class. Questions should also be as concise as possible, so that the pupils may be in no doubt as to what is wanted of them. Furthermore, they should be reasonable, not assuming on the part of the children knowledge and powers they cannot be expected to possess. The form of questions should be decided upon before the first word of them is spoken. Only confusion can result in children's minds from a question which is begun in one form, is felt to be unsatisfactory, and after a break and some stammering, takes on another form in the middle, resolving itself into quite a different question before the end. When this sort of questioning is not due to nervousness, it is due to insufficient preparation, or to slovenly habits of thought and speech. In any case the cure is in the teacher's own hands, for it lies in self-training. Questions should be in the interrogative form throughout—not beginning in the affirmative, as, for example, "Johannesburg is noted for what?"—a clumsy construction that should be avoided. Lastly—a necessary injunction in a bilingual country—they should be expressed in correct idiom of the language used. "This is a bean—not so?" is not English, and should not, therefore, be heard in a lesson given in that language. Finally, questions should not be repeated; and, as a rule, neither should answers.

The skilled questioner is shown also in his treatment of answers. The requiring of complete sentences in answer to all questions has been overdone of late years. To expect a child to say in answer to the question: "At what time did the sun set yesterday?" "The sun set at six o'clock yesterday" is to encourage waste of time and stilted speech. In questioning it is not complete sentences, but complete answers that are wanted. At the same time, children are, unless constant care is taken, very apt to answer in monosyllables. They jerk out a single word, and seem to expect the teacher to be satisfied, though it but vaguely suggests the required answer. No such incomplete answers should be accepted. They are offences not only against good language, but also against good manners. Other answers which must be rejected are those which show culp-

able carelessness or mere guesswork. A restatement of ungrammatical answers must always be required ; but very tactfully, and in such a way that the train of thought is not broken. Answers wrong in substance also need correction—by the child himself if possible ; failing that, by other members of the class ; in the end, if necessary, by the teacher. The cause of the error must, if possible, be shown. It is, however, in the use of answers that are partly wrong and partly right that the good teacher is shown. To lead a child to truth through his own error is the feat of a skilled questioner.

Those of us who find it hard to question well should revise the rules during preparation of lessons, and it will be helpful to draw up a number of questions in order, though we must not expect to be able always to ask them, since the exact course of the lesson will not, or should not, be decided by ourselves alone but, in part, by the children's share in it. At the end of a lesson, too, we shall find it helpful to recall our questions as well as we can for the purpose of criticism. We should not be occupied with the matter while we are giving a lesson, for then our thoughts should be fixed on the lesson and its effect on the minds of our pupils, and our questioning left to take care of itself. It will be our general habit of speech, therefore, that will decide matters for us ; for, " one questions as one talks. Good questioning like good exposition is the outcome of habits of clear thought and precise expression. And precise expression can only be successfully attained if it is cultivated in speech generally, and not merely in interrogation in school " (Welton, *Principles and Methods of Teaching*, p. 92). Once more, we find that the cultivation of the power of speech is intimately bound up with our success as teachers.

The principles and methods of class teaching and management are here put forward broadly rather than in detail, for it is felt that the real strength of teachers comes of their working out their own problems once they have mastered the broad principles involved. It only remains to emphasize the truth that far beyond the power of the best rules ever framed is that of the spirit in which we take up the work, the purpose which animates us. The desire for their good and happiness should be inseparable from our thoughts of children. Happiness is their birthright, and it should be our aim to restore it to them where they have been robbed of it, and elsewhere " to make the happy happier by adding sunshine to daylight."

FOR FURTHER STUDY

[Books marked with an asterisk are specially recommended.]

*Herbartian Psychology.** J. Adams. (3*s.* 6*d.* Heath & Co.)
*The Teacher and the Child.** H. Thiselton Mark. (1*s.* Fisher Unwin.)
*The New Movement in Education.** H. Thiselton Mark. (6*d.* or 1*s.* Charles & Dible.)
Suggestion in Education. M. W. Keatinge. (4*s.* 6*d.* A. & C. Black.)
*The Little Book of Health and Courtesy.** P. A. Barnett. (3*d.* Longmans.)
*The Dawn of Character.** Edith E. Read Mumford. (3*s.* 6*d.* Longmans.)
The Making of Character. McCunn. (2*s.* 6*d.* Cambridge Press.)
Children's Ways. James Sully. (4*s.* 6*d.* Longmans.)
Essays on Educational Reformers. R. H. Quick. (3*s.* 6*d.* Longmans.)
*Suggestions for the Consideration of Teachers.** English Board of Education. (8*d.* Wyman.)
Scottish Memoranda (8).* On the Teaching of School Subjects. (About 2*d.* each. His Majesty's Stationery Office, London.)
*Regulations for Primary Schools.** Transvaal Education Department. (Government Printing and Stationery Office, Pretoria.)
The Primary Curriculum. Hayward. (5*s.* Ralph, Holland & Co.)
Principles and Methods of Teaching. Welton. (4*s.* 6*d.* University Tutorial Press.)
The Practice of Instruction. J. W. Adamson. (5*s.* National Society's Depositary.)
The Art of Teaching. D. Salmon. (3*s.* 6*d.* Longmans.)

CHAPTER IV

THE CULTIVATION OF SPEECH

"Language is the most perfect field of exercise for accuracy. . . . The whole world as it emerges from the nursery has already gained without conscious labour the best material. . . . No nation can be considered, therefore, to have made a beginning of true educational system which does not use the store of material which the most ignorant have already got in order to train thought, observation and accuracy."—THRING.

"The teacher of young children must be a person who can speak language as it should be spoken,—purely, clearly, pleasantly and with force."
—SARA C. BRYANT.

WHEN little children first come to school they show, as a rule, extreme poverty both of language and of ideas, and our first efforts must be directed to supplying their wants in these two particulars. The first subject of school instruction, then, is speech—the language spoken in the home—and early lessons should result in our pupils' gaining new ideas and new words for their expression. Informal talks will be the best means of furnishing both, though ordinary school intercourse must be made to help. Our aim sho
get the children to talk freely, putting their childish thou
childlike speech, whilst day by day we try to give them
grasp of ideas and to get from them a more exact use
The work is of first importance. It affects not only the
the children's later school-work, but also their success a
ness in after-school years. Without ideas and the words t
them they would find it hard to advance in learning, in b
in friendship.

In the early stage of language work, it will be valuable to con
sider how children below school age gain the power of speech ; fo
at home they learn naturally. Their first efforts, as we have seen
are in the direction of naming things. Professor Sully in an inte
esting chapter of his book, *Children's Ways*, gives some particula

of the development of speech. He shows how, having but few names at first, "the little experimenters make the most of these by extending them in new and surprising directions." Thus "when one child first saw a star and wanted to name it he called it an 'eye.'" For a time their name-words do double duty, mamma and baby being used, for example, to cover contrasts of size, as in "a mother shell" and "a baby shell." But not only do they stretch the meaning of words, they also make new and ingenious compounds. One child knowing the word "steam-ship" and wanting the name sailing-ship, cleverly hit upon "wind-ship." From naming things they pass to naming actions. Amusing examples of their word-building powers at this stage are seen in "unhotted" and "unparcelled." At last they begin to put words together in sentences, a great advance on their earlier habit of making known their thoughts and wishes by single words.

The cultivation of speech in the classroom, then, should follow the manner of its development in the home. The fact that children learn naming-words first, then doing-words, and finally learn to combine the two in sentences, will teach us to take various common things as subjects in our earliest language lessons, and the reflection that children learn to speak first and most readily about the things that they see, will determine that each object—or a representation—shall be actually before them during the talk about it. The talk will then pass from what it, or any part of it, is, to what it does—or what is done to it—and oral sentence-building will take place on natural lines.

In South Africa, as in other bilingual countries, a special difficulty is encountered in language-teaching. In addition to the home language the child has to learn, or finds it desirable to learn, a second language. When he goes to school, his knowledge of this second language is slight; he may even not know a single word of it, and has to begin learning it as a foreign language. The procedure to be followed in this case is clear enough. We must take the child through those stages in the use of the second language which in the case of his mother-tongue have already been passed through in the home. As instruction in the second language has thus to begin a stage farther back than that in the mother-tongue, it may be as well to deal first with the method to be followed in this preliminary stage of teaching the second language. The wisest plan will be to use the "direct" method of language teaching, which

has of late years proved so successful in the teaching o languages both to children and to adults.

Remembering what has been said of the natural mode of learni to speak, our first endeavour should be to teach name-words. first lesson might be on the names of the parts of the body. picture showing a fairly large figure of a man, woman or child wou be useful in the first stage of the lesson, before it is desired to intr duce pronouns.

Pointing to the figure as a whole, we should give t word—man, woman, boy or girl as the case may be—ar the class to repeat it after us. Fortunately not all th will be entirely ignorant of the language which is the m instruction; and when, after naming the figure, we tell the cla to "Say *man*," the example of those who understand will secure th compliance of those who do not. Should it happen that no child i the class understood, we should need to give the word of comman in the home language of the children or to trust to look and tone b which a great deal can be accomplished. Then, pointing to the par of the body in turn, we should teach the names, requiring each t be said after us. From the very first we should be get the words correctly pronounced. At the end of fiv the class should know the names of the visible parts ar of the body,[1] and be ready for the next stage of th This should introduce possessive pronouns used with the already taught. Touching our own head in a manne invites imitation, we should say "*My* head," and so throu list of name-words, the children copying. Next we shoul at some individual child, and pointing to his head say ' head," inviting imitation again. At this point it will be sary to see that the children look at and speak to the whom they point. The second pronoun should then be in turn to all or some of the name-words taught. T the third pronoun we might bring a boy out of the class, an pointing to the parts of his body, but looking at the class, sa "*His* head," "*his* face," etc. The children, imitating, mus likewise point to the boy while addressing some one els procedure may be repeated with a girl to teach "*her* etc. Subsequently, a boy and girl standing together sh

[1] This may seem a long list; but not all the words will be unknown to a the children. There will also be frequent opportunities for revision.

pointed to for "*their*." Objects may be shown for teaching the use of "*its*." A second five minutes should suffice for this pronoun work. In the third stage short sentences, their meaning shown by look and gestures, should be used. Again, if needful, the example of children with some knowledge of the language should be brought to aid those who have none. As knowledge of the meaning of "one" and "two" will be useful in this stage; these numerals should be taught by showing and saying at the same time: "One arm—two arms"; "one hand—two hands"; "one finger—two fingers"; "one foot—two feet." After this, we may say with appropriate action: "This is my head. I nod my head—I shake my head." "This is my face. I hide my face—I show my face." "These are my eyes. I close my eyes—I open my eyes." "These are my arms. I lift my arms—I drop my arms." "These are my hands. I raise one hand—I raise two hands." "These are my legs. I touch my leg—I touch my legs." "These are my feet. I stamp one foot—I stamp both feet." This should complete the first lesson. Exercise on the pronouns of the second and third persons should be left for a later one.

A second lesson might teach the names of the school furnishings and the children's school property, pronoun and sentence work following, as in the first, the simple naming.

A third might teach through a toy tea- or dinner-service—the property of the Kindergarten, or lent by one of the children for the occasion—the names of the furnishings of the table for meals and the actions of eating.

Articles of clothing might provide the name-words in a fourth lesson.

A fifth lesson, taken in the playground, might familiarise the children with names of things visible from this point of view, and put them into suitable sentences—short and simple. The lesson will also offer opportunity for teaching in sentences verbs which express the children's outdoor actions.

As the children's knowledge of words and their use increases—and they will be learning all the time from their classmates as well as from their class lessons—it will be possible to extend the teaching to include the names of things not present before the children's eyes during the lesson, and to actions which cannot be actually performed at the moment. Thus one lesson may deal with the business of undressing at night or dressing in the morning, another

with that of getting ready for school, a third with the walk to school. The greetings between and ordinary school commands from teacher to children may be made a further valuable aid in language work. With a little skill the sentences in these cases may be made to form short and easy dramas which the children will thoroughly enjoy. It will be necessary throughout to see that the children have sufficient knowledge of the words dealt with to visualise the objects for which the name-words stand and to associate each verb with its appropriate action.

When the children have a fair, working knowledge of the nouns, pronouns and verbs which enter most largely into their own and their teacher's speech in school, adjectives and adverbs should be introduced into the sentence-work. The distinction between *this* and *that*, *each* and *every*, etc., will have been taught; and the numeral adjectives will be familiar through the counting lessons preliminary to arithmetic. New work in the use of the adjective will teach the children to use it in describing objects, etc., the name-words for which are known—"a *clean* frock," "his *dirty* hands," "your *red* chalk." Adverbs will be brought in to modify statements of action or being with regard to time, place and manner: "I come to school *early*," "I put it *there*," "I will walk *slowly*." The parts of the verb will need very careful teaching—of course always by use. Future tense might be learnt, for example, by talking about what we are *going to do* to-morrow or in the holidays, and past tense through the telling of stories or narrating of something which happened a while ago. Other parts of speech will be learnt incidentally through the sentence-work. Prepositions will need more systematic treatment. Owing to difference of idiom in English and Dutch they give much trouble. Teaching should also be brought to bear on the use of common conversational phrases and idioms. "Did you see the book?" "Yes, I *did*," or "Yes, I *saw* it" [to correct vulgarism "I '*seen*' it"]. "This is your slate, *is it not*?" [to replace Dutch idiom "*Not so*"].

From this point the method to be followed in the two languages will be essentially the same.

The best means of cultivating speech in early years has been pointed out. The proper subjects for these talks must now be considered. Conversation is easy only when interest is aroused; and interest, as we have learnt, is closely associated with knowledge. We are interested in those things of which we know something.

Now, while individual children have special interests connected with some particular knowledge that they possess, there is much in their experience, especially if they are about the same age, that has awakened a common interest. This common interest rises out of their contact with things and their contact with people. The whole, then, of the children's experiences—indoors and out of doors, at home and at school—and their relations with people are at our disposal for the purpose of these first talks. We can get them to tell us about the plants they have grown ; about the animals they keep as pets in the home, and those kept for use on the farm ; about the sun and the rain and the wind ; about summer and winter ; about their walks to and from school and their holiday experiences ; about their father and mother and other people they know ; about farmer and fisherman, blacksmith, postboy and policeman ; about things that happen in their holidays and about the games they play. Bible lessons, nature studies, fairy tales, stories about animals, nursery rhymes, poems and songs will furnish further matter.

It is important that we should know what part we ourselves are to play in order that the talks may have the fullest possible effect in improving and developing speech. Generally we must choose the subjects for them, although, occasionally, we may let the children do so. In carrying them on, we must remember that it is the nature of little children to tire soon of both objects and subjects unless there is some one at hand to help them from time to time to look at them in a new light. This, then, must be our work so far as the matter of the talks is concerned. We shall find that a suggestive question asked when knowledge seems exhausted and interest begins to flag will give their thoughts a new turn and make them eager to go on talking again. But we have to do more than keep the ball of conversation rolling. Part of our purpose is to make new words known to the children, and throughout the talks we must be on the look-out for places into which we can fit the words we wish them to know and use. In doing this we must be careful to see that we have introduced them in such a way that they carry their meaning with them and cannot possibly be misunderstood. This is the way in which new words must always be brought to the notice of little children, for whom definitions are quite out of place. They will make their own definitions when they know them well enough, and such an exercise should not be required of them before that time.

It is also important, since speech is learnt by imit
talking with our pupils we tune our voices to a pleasan
from tone to tone in speaking, give every consonant
for the sake of clearness, and every vowel its own sou
terests of purity of pronunciation ; that we do not hu
but use pause and emphasis in a way that makes it
children both to hear and understand what we say. We must
speak, that is, " purely, clearly, pleasantly and with force." This
we shall only do if we take the trouble to amend our own speech in
any particular in which it is faulty—grammar, pronunciation, t
modulation or accent—listening carefully to the speech of all
cultured people we meet, and trying our best to speak like the

But while we never cease trying to make our own speech more
exact and more fluent, we must remember that we must not be too
exacting with our pupils in Sub-Standard classes, or expect too
much of them. If we make this mistake discouragement and
shyness will result. We must be prepared to find that in spite of
all our efforts they do not think very connectedly or speak with
any close approach to exactness. Connected thought and exact
speech are things of slow growth, and we must be co
for them till the children are considerably older ; but
able to prune away their worst faults and, by alway
orderly ways of looking at things and speaking of
feeling for clearness of arrangement which will bear f

Suggestions for an early talk are given below to show how new
words may be introduced, and how the children's mistakes in pro-
nunciation and in grammar may be dealt with in

We will suppose that you have learnt that Chris
not too large to be brought into the classroom, and
with his young master. Before the talk begins you
to place him where all the class can see him and to tal
beside him. You will then ask him to tell the clas
his dog. The name—say, for instance, Frisk—le
question : Why is he called Frisk ? Somebody su
he is fond of fun ; but says *fon-da-fun.* [Stop the tal
the words off on your fingers say slowly : fon*d* o
children imitate. Bring several out to pattern the
class. By this time you will have found out which children enun-
ciate most clearly and which have the best pronunciation, an
use them in this way to help the others. Then have th

sentence repeated by one or two children individually, and finally by the one who made the mistake. Be careful to see that the *f* of *of* is voiced; that in *fun*, voiceless.] Christie having been asked whether it is safe, Molly is told to come out and feel Frisk's coat. If Frisk is an Irish terrier she will say that it is rough. The new word "shaggy" may be taught, and one or two children be asked to run out in turn to say that Frisk has a shaggy coat. [See that the *s* sounds get their proper value. The first hisses, the second buzzes, the third says H'sh.] As Molly pat*s* him he wag*s* hi*s* tail. [Two more buzzing s's.] Why is this? He likes being patted, and shows it in this way. [During a later talk on the cat it will be noticed that Kitty is not pleased when she waves her tail. In a third talk, in which the dog and cat are compared, this will be one of the remembered points of difference.] Jim notices that he keeps turning his head to look into Christie's face, and Mary, coming close to look, says that his eyes are brown. [But she uses the singular verb. The mistake must be corrected, NOT explained. "His eyes *are* brown." Have the sentence repeated by the class, then by individuals, then by Mary herself. Afterwards vary it with "One eye is brown"—"Both eyes are brown." From the time that you first hear it be on the alert for this mistake, and the contrary, but less common, one of using a plural verb with a singular subject. Never let them pass uncorrected; but make no reference to rules of grammar.] Susie points out that when Frisk hears a noise he moves his ears, and, on being asked, is bold enough to come up and feel them. They are very soft inside. [Singular verb again, perhaps, and the *t* of soft run on to the following vowel—*sof' t'inside*.] Yes, as soft as silk, you agree, and, the sentence affording good practice in *s* sounds, you have it said by the class and then by individuals: "His ear*s* are a*s* soft a*s* silk," changing this to "His ears are silky." [All the final *s*'*s* in the sentence—in italics—are voiced, the initial ones, voiceless. In time we shall see that initial *s* is always voiceless; but rules can be left for the standards.] Then Edward feels the nose and finds it cold. Frisk licks his hand, and he tells that his tongue—contrasted in a later talk with the cat's—is soft. Christie is asked now if he can make Frisk show his teeth and, with the pride of ownership, he does so. Several little hands will be eager afterwards at your suggestion to hold the paws. The pads and the hard sharp claws are noted. Can the latter be drawn back into the pads?

Jim tries to push them. Frisk doesn't like this and pulls
away. You tell that a dog's claws cannot be "sheath-e
other point of contrast with the cat] and add that that is
are able to hear him run. His claws tap on the ground w
puts his feet down.

The subject having now yielded all that is possible to th
vation of such little folk, Christie is invited to tell what
noticed about his dog at home. This gives an opportunity for the
beginning of continuous narrative, and has besides the effe
ing Frisk as an animal friend, and thus of cultivating
kindness to animals. A little tactful suggestion will he
to keep the thread of his narrative, and he will tell how he
how big he was then, how he used to feed at first, what
eat now, what he does during the night, what he does du
day, and what always makes him angry. A final questic
directed to finding out why Christie is fond of Frisk, a
conscious idea of the faithfulness and affectionateness
nature be made to give rise to a feeling of what we owe
If time allows, close the lesson by asking round the class the various
things already told. During this last exercise guide the order of
the replies as well as possible, and try to get the children to use the
new words taught, e.g. *shaggy, silky, sheathed.*

By means of such class talks and of individu
we should try to find time—before and after each
recess—the education of the children goes on in
ways. In the first place, their minds grow thro
and storing of new ideas associated with those a
their minds. Secondly, they are learning to exp
language, which while "broken" and faulty at
proves under sympathetic guidance and encoura
the third place, they are adding daily to their sto
talk should bring in two or three, and provide mea
of them by the children. Lastly, their character
and strengthened. In the ever-growing confiden
and class, through this free expression of ide
tunities occur for cultivating habits of kin
patience and self-restraint, which in time will fo
the training of which is the first and last aim of

While our pupils will receive some new idea
formal talks, their main purpose is the impro

through practice and the adding of new words to those the children are in the habit of using. New ideas will be more plentifully provided through stories and poems, and to the use of these in speech cultivation we must now turn.

Stories by the teacher must at first be short and very simple. They can be taken from a variety of sources—the Bible, Greek and Roman mythology, collections of fables, legends, folk-tales, fairy tales and nature stories. An example follows to illustrate the quality of brevity necessary in the early stages.

Demeter had a well-loved daughter Persephone. When Persephone was a little maiden she was one day wandering about the meadows of Enna in Sicily gathering white daffodils to wreathe in her long hair. Being tired she fell asleep, and the dark king of the underworld came in his golden chariot and carried her off to be his wife. At his touch the white daffodils turned yellow, and some of them, falling from Persephone's hair as he bore her away, grew up in spring as yellow as we see them now.

Demeter was very, very sad at the loss of her daughter. She roamed all over the earth seeking news of her ; and, learning after a long time who had borne her away, she begged him to give her daughter back to her. At last Pluto, the dark king, moved by her tears, agreed that Persephone should return to her mother for a part of every year. So each year she comes back to earth from the underworld, and flowers starting up in her footsteps make the Spring.

This story will take only a minute or two to tell. Frequently stories told to children in infant classes are too long. They take nearly the whole twenty minutes allowed for them by the time-table merely to tell once ; and, when the children are called upon to retell them, they have only a vague memory of the beginning. A story half-hour once in the week might be kept for these longer stories by the teacher ; but shorter ones which can be finished, and then re-told by several children, will give more practice and should be more frequently chosen. The re-telling of the stories should be looked upon not as a task but as a treat.

If the children seem unable to reproduce a story, a few suggestive questions should be asked ; as, for instance, " What is the story about ? " " What was the little girl's name ? " " What was her mother's name ? " " What was Persephone doing ? " " Who

bore her away?" and so forth. The answers to these questions should be gradually combined to form the continuous narrative required. Here, as elsewhere, the rule that answers should be in complete sentences must be applied with discretion; but, as one important aim of story-telling is to train the children in the power of connected expression, they must be encouraged to give such answers when the question allows of them.

When a few questions have been answered, we may ask which of the children can tell as much of the story as they cover, and from among the volunteers may choose one to come out in front of the class and do so. We shall most likely find, at first, that the same half-dozen children volunteer every time. We must not be content to have these for our only story-tellers; but must encourage the backward ones, helping them out when shyness overwhelms or memory fails them.

During reproduction we should encourage the children to give the exact words of the story where desirable—of speeches, for instance, and of any striking phrase—not by stopping and correcting them, but by always repeating them exactly ourselves. We should not interrupt the children to correct, as in the talks, mistakes in grammar and pronunciation. Story-telling should be pure pleasure, and the children's minds must be free to enjoy it. We must rely on our own model for correction to a large extent; but should make mental note of all mistakes and deal with them when we have a chance of doing so—during a subsequent talk, for example, or among the sound exercises preliminary to reading lessons. Except in the instances given, we should encourage the children to use their own words in place of those in the story; but should note ugly and awkward turns of speech for correction at another time. We should not feel it necessary to point a moral when we tell a tale. If there is one we may leave the children to find it. They are very quick to do this, and also to apply it when found.

After the telling and re-telling of a story the children should sometimes be asked to show by means of chalk drawings what ideas they have gained from it. Sometimes, too, the story should be turned into a play, and different parts be given to different children to act. They are born actors as they are born imitators, and we should give them opportunity to express themselves in all natural ways, for one form of expression helps another. There will be no need to make a stage and furnish it with scenery,

for to the kindled imagination of the little actors rows of class desks will become either the aisles of a forest or the waves of the sea as the drama requires.

A word should be added on the value of pictures as illustrations. The illustrations of fairy tales that hang on infant school walls and delight the children by their rainbow colours, by the simplicity and directness of their representation, and by their crude humour suited to that of the children themselves, are commonly taken down and hung in front of the class before the teacher begins to tell a story the scenes of which they depict. Pictures illustrating a story should not be before the children during the telling of it; for one purpose of story-telling is to enable the children to form mind pictures of scenes and events by means of the words used, and the supplying of ready-made pictures beforehand keeps them from doing so. If it is felt that picture illustrations are necessary they should, as a general rule, be shown after, not before or during the telling of the story. Even this is not altogether advisable, for there are then two separate and contradictory impressions made on the children's minds, with an effect similar to that of two photographs taken on one film. On the whole, it seems better to reserve pictures for brightening and making beautiful the walls of the schoolroom and for use in conversational lessons, and to trust for story illustrations to the children's imagination sketches and our own sketches.

At first all pictures or models used should be of very familiar creatures or things, and about these we must encourage the children to say all that they can. We should invite questions, too, and try to answer them in such a way that the questioner tries harder than before, both to see and to say. We must not regard anything as trifling which is the result of effort or cause of inquiry on the part of our pupils, and so discourage them; but must do all that we can to give confidence to the children. Only by doing so can we get them to express themselves readily, and without ready expression there is not much hope of progress. A want of sympathy with their difficulties or an inability to appreciate their efforts will end in failure. On the other hand, sympathy is not to show itself in a readiness to accept anything but their best, and appreciation must not degenerate into weak praise of anything they may say.

As the lessons progress novelty may be introduced by providing

pictures and models of objects which are not familiar. The children's past experience in observational work will enable them to find similarities and connections enough to make conversation possible. Objects in common use in other lands, scenes and people—particularly children—and products of far-away countries will rouse the children's interest and make them try harder.

In the youngest class the best verses to teach are nursery rhymes. They have delighted many generations of children, and will delight many more. Apart from any meaning the words may have, they sound a merry, jingling music that catches and charms the children's ear. The ideas are simple, the words easy, and they are in every way just the thing to give children their first introduction to rhymed words. Some of the many charming nature poems published nowadays might be chosen to supplement the nursery rhymes, while in Robert Louis Stevenson's *A Child's Garden of Verses* there is a store of child poems written by a poet who never lost the memory of his childhood, and wrote of and for children with a delicately sure touch. Other poems will suggest themselves, notably Blake's *Songs of Innocence*, and those of William Allingham.

The teaching must, of course, be oral throughout Sub-Standard classes.

With a class of very young children no wearisome effort should be made to get them to learn by heart. Slight repetition will suffice on the part of the children, but we
must quote the exact words of the recitatio
time to time the children should be taken ba
to repeat the whole as far as learnt. This is i
sisted in, it will prevent breaking down at the usual "stop

Expression will come with understanding. If we list
inflection of young children's voices and the emphasis
speech in the playground, at home, in the street, and
parks and gardens—wherever they speak naturally of th
interest them—we shall be convinced that there is no nee
them expression. If we help them to see, to understan
feel, they will show us how to express. Action should b
in poems demanding it, but always under great restrai
ture which is either mechanical or exaggerated is an annoyance to
the listeners and an injury to the child. We must alway
getting enunciation as clear as possible—if the words ar

lated properly, much has been done. We must not expect young children to grasp fine shades of meaning—their thought is limited by their experience ; but each new poem taught will make them quicker in seizing the poet's idea.

We should make little change in our methods of speech cultivation in the lower standards. The talks, stories and recitations should be continued, although less time can be given to them. The correction of errors should begin to be more systematic, and, when Standard III is reached, reference may be made to rules of grammar. Subjects of conversation should show a little advance, and more continuous and connected narrative should be expected. To supply new ideas, fairy tales, fables and legends should still be told and—to give practice in speech—re-told ; but gradually stories from history and others in which the scene is laid in unknown countries should be introduced. To secure continuous narrative at this stage, it will be well to require a brief summary of the last story or a piece of description from it before a new one is told, while the children will be delighted if they are allowed sometimes to exercise their own inventiveness by completing a story that we have told "so far." Learning by heart must show development in the choice of poems and prose passages for memorising, for though the choice must still be governed by the children's interests, these have widened considerably.

The oral work of the upper standards will differ from that of the lower in requiring more effort of memory, more continuity in narration, and consequently more knowledge of sentence-building and joining. Various subjects of instruction—reading, history, geography and natural science—will provide opportunity for exercises. Instead of the questioning suitable in lower standards we should at this stage require oral summaries of lessons and studies. From time to time a girl or boy should be called upon to stand before the class and describe a walk or holiday journey, or give an account of some book.

When studying language and literature in these years the pupils must be trained to use their critical powers, which, from twelve to sixteen, develop rapidly. The result of this study should be to give them a finer feeling for beauty of words, of rhythm, of fancy, and of its expression by means of figures of speech ; and the feeling should show itself in their own speech and writing. When this point is reached, the school study of

language and literature which began in the simplest speech practice, may be regarded as finished. As the approach to it is made through exercises in composition we may leave details of method to be considered in the chapter on that subject.

While mistakes in pronunciation should be dealt with incidentally at first, our own knowledge of these mistakes, of their causes, and of the best means of correcting them must from the beginning be full and systematised. This is not the place to teach the science of speech. The necessary knowledge must be gained from study of the subject in a manual which gives it full treatment (*The Science of Speech*, Dumville; *Voice Training*, Hulbert; *The Sounds of Spoken English*, Rippmann; and Dr. Robert Bridges' recent book on English pronunciation are recommended); but, for the purpose of reference, the mistakes most commonly made are noted below, and an effort is made to point out the causes of them and to suggest the best means for their removal. It cannot be too strongly emphasized, however, that teachers who wish to make a success of this very important part of their work must discover for themselves the mistakes which their own pupils are in the habit of making and then, in the light of knowledge gained from a textbook dealing with speech sounds, take measures to remove them. As it will be necessary to refer to them, the symbols for English speech sounds are given in tables below.

Phonetic Table of English Vowel Symbols.	Corresponding Phonetic Symbols (as given in Circular 11, 1913, of the Transvaal Education Department).
(1) *Single Symbols for Single Sounds.*	
a for the vowel sounds heard in . . .	*a*t — æ
	gl*a*ss — a
	f*a*ther — *a*
	b*a*by — e
	*a*ll — ɔː

e for the vowel sounds heard in . . .	*e*gg	ɛ
	h*e*	i
lengthened before "r," as in . . .	th*e*re	ɛ:
neutral (a vowel murmur) in unaccented end syllables, as in . . .	learn*e*r	ə
i, *y* for the vowel sound heard twice in .	pity	i
o for the vowel sounds heard in . . .	n*o*t	ɔ
	g*o*	*o*
u for the vowel sounds heard in . . .	*u*p	ʌ
	p*u*ll	u

(2) *Single Symbols for Double Sounds (Diphthongs).*

i, *y* for the sounds a (father)+e (he), as in . . .	k*i*nd	ai:
	try	
u for the sounds i (it)+oo (too), as in	t*u*ne	i
u for the sounds y (consonantal)+oo (too), as in . . .	m*u*sic	ju

(3) *Double Symbol (Digraph) for Single Sound.*

oo for the vowel sound heard in . . .	p*oo*l	u

(4) *Double Symbols (Digraphs) for Double Sounds (Diphthongs).*

ow for the sounds a (father)+oo (too), as in . . .	n*ow*	au
oi, *oy* for the sounds a (all)+e (he) as in .	b*oi*l	ɔi:
	b*oy*	

Note: a (e) as in b*a*by and o (o) as in g*o* are seldom heard as single sounds in *spoken* English, though they are sung as such. In speech they tend to become diphthongs,

a (e) as in b*a*by merging into i (e as in h*e*) ei :
and o (o) as in g*o* merging into u (oo as in t*oo*) ou.

When any of the vowels are sounded the vocal cords are brought into such a position that the breath in passing sets them vibrating. This vibration, communicated to the air passing out through the mouth, produces the musical sound called *voice*. All the vowels then, we say, are *voiced*. Consonants are either *voiced* or *breathed* (voiceless). Those which are voiced are formed partly in the throat (as the vowels are) by the vibration of the vocal cords, and partly by the closure or narrowing of the mouth; those which are breathed are formed entirely by the closure or narrowing of the mouth. Several of the consonants differ from one another as to formation in this one particular only, being, as it were, two forms of the same sound:

Breathed Form.	*Voiced Form.*
f	v
k	g (hard)
p	b
s	z
t	d
th (as in think)	th (as in then)

The difference between the two forms of any of these sounds may be readily detected by sounding them in succession while keeping the hands pressed firmly over the ears: f, v; k, g, etc.

Table of Additional Consonant Symbols in Phonetic Alphabet.

For the voiced sound of *ng* in so*ng*	ŋ
For the untrilled sound of *r* in t*r*y	ɹ
For the breathed sound of *sh* in *sh*e	ʃ
For the voiced sound of *s* and *z* (as if *zh*) in {pleasure, azure}	ʒ
For the breathed sound of *th* as in *th*in	ϴ
For the voiced sound of *th* as in *th*en	θ
For the breathed sound of *w* in *w*histle	ʍ
For the voiced sound of *y* (as a consonant) in *y*et	j

Note.—Besides making these additions to English consonant symbols the Phonetic Alphabet dispenses with certain symbols found in the ordinary alphabet; namely, *c* (because its two sounds are represented by *k* and *s* respectively); *j* (except for consonantal *y*), which is represented by *dz*; *q* (because its work can be done by *kw*); and *x* (because it is represented by *ks* or *gz*).

The convenience of adopting a scheme of phonetic symbols will be seen. The letters of the ordinary alphabet do little to

show their sound values. Many of them (note *a* particularly) are used for more than one sound; many sounds again are represented by a variety of symbols (*a* as in baby, for example, which is variously written as *a-e* (slate), *ai* (fail), *ao* (gaol, etc. etc.). Writing on speech sounds gains much in conciseness and clearness from the use of the phonetic alphabet, without which roundabout forms of expression must be used. In these notes sounds will be indicated both by their phonetic symbols and by means of type words, since the former are as yet unfamiliar. Words, for the same reason, will not be printed in phonetic characters.

With regard to common forms of error Circular 11, 1913, of the Transvaal Education Department may be quoted:

"Examination and analysis of departures from standard pronunciation show that the great majority of errors in vowels as in consonant sounds are traceable to a general tendency to secure greater ease in production, and it will be found that slovenliness of utterance exists to an extraordinary degree in South Africa. It is no exaggeration to say that speech and reading are sometimes largely unintelligible to the unaccustomed ear."

The common forms of error are mainly due to three causes: the *dropping* of sounds hard to say in combination with others; the inserting of sounds in order to make easier the change from one position of the speech organs to another; the substituting of sounds easier to say than the correct one. There are also individual errors not due to any of these causes.

Common Errors in Vowel and Diphthong Sounds:

æ (*a* as in *a*t) is often given as ɛ (*e* as in egg), a sound produced with less effort. The lower jaw is not dropped sufficiently, and the lips in consequence are not far enough apart. Among Dutch pupils it may be due to making too much effort to distinguish between Dutch and English pronunciation of the vowel sound in such words as "man." But it is almost if not quite as common among English pupils, in the case of whom it is probably due to laziness and a bad example.

a (*a* as in f*a*ther) is often given as ɔ: (*a* as in *a*ll). The fault is to some extent an affectation. It is brought about by rounding and closing the lips, raising at the same time the lower jaw. This

trick of narrowing the mouth is a common one, and as an effort is required to prevent this narrowing, the error may be regarded as due to laziness also. To correct it lips and teeth must be opened widely and the tongue must lie low and flat.

e (*a* as in b*a*by). Two mispronunciations of this sound are common. One, the tendency to make it into the diphthong ei: that is, *ay* (as in s*ay*) + *ee* (as in s*ee*), has been referred to as being generally heard. It also becomes ai; that is, *ah* + *ee* (as in s*ee*) being thus turned into a diphthong in two separate ways. To say it correctly the jaw must be raised and the front of the tongue kept fairly high. It must then be held steady in this position, as any change from it will convert the single vowel sound into a diphthong.

ɔː (*a* as in *a*ll). In Native schools this vowel is frequently shortened into ɔ (*o* as in n*o*t). It must be dwelt upon. In European schools it becomes o (*o* as in g*o*), the mouth being closed to the oh position and the lips too much protruded. The causes are the same as given in the case of a (*a* as in f*a*ther) changed to ɔː (*a* as in *a*ll)—an affectation of refinement on the one hand, and the ease of common usage on the other.

ɛ (*e* as in *e*gg). Two errors, again, are common in the case of this sound. The neutral vowel murmur ə (*e* as in learn*e*r) is often given for it. The cause is the lazy habit of speech which is so common, trouble not being taken to give the definite sound required, crisply. The opposite fault of over-pronouncing it—trailing it into e (*a* as in b*a*by) is also heard frequently, *fed* becoming *fade*. It is one of the commonest and one of the ugliest mispronunciations. It is also very hard to remove, as it is only distressing to a sensitive ear. Pupils should be made to place their vocal organs in the positions first for ɛ (*e* as in *e*gg) and then for e (*a* as in b*a*by). Practice of pairs of words pronounced similarly but for this one sound (*fed* . . . *fade*, etc.) will also be useful. A third mispronunciation of ɛ (*e* as in *e*gg) changes it into i (*i* as in *i*t). Carelessness and the force of a bad example are the probable causes.

ɛː (long e before "r" as in th*e*re). Another ugly and common form of mispronunciation is heard in words containing this sound, ɛː (*e* as in th*e*re) being separated from the following "r" with which it should be combined, and given the sound of e (*a* as in s*a*y). Thus *there* becomes thay-re; Mary, May-ry, etc. etc. Again what is needed is crisp, clear utterance that prevents slovenly drawling. Where the vowel murmur takes the place of final "r" it is dropped

with very irritating effect, as in " fay hay " for " fair hair." There is a possibility of affectation in the making of this fault also.

i (*i* and *y* as in p*i*t*y*). As for ɛ (*e* as in *e*gg) the neutral vowel murmur ə (*e* as in learn*e*r) or even ʌ (*u* as in *u*p), is substituted and from the same cause. The fault is most common in words of more than one syllable which have *i* in the last—ev*i*l, timid, civility, etc. Another substitution is that of i: (*e* as in h*e*), his and him becoming " hees " and " heem." Constant practice in changing from i (*i* as in p*i*ty) to i: (*e* as in h*e*) and *vice versa* is needed :

it	eat
bit	beat
fit	feat

and

heat	hit
meat	mit
peat	pit.

y (as in pit*y*). When a vowel at the end of a word, this is very often given wrongly as i: (*e* as in h*e*) both by Dutch- and English-speaking South Africans. A common example is reelee (for really) where, also, the two separate vowels preceding are lazily given as one. The i (short *i* as in *i*t) sound should be exaggerated till the fault is corrected.

ɔ (*o* as in n*o*t). In native schools there are two common mis-pronunciations by which not becomes n*au*ght and n*o*te respectively. The pupil turns not into n*au*ght by dwelling on the vowel sound, and then having lengthened the vowel alters it again by bringing his lips into the *oh* position. To correct the second fault the lips must be kept broadly open ; to correct the first the vowel must be sounded crisply and clearly. In European schools the former fault is fairly common, and an " r " is sometimes inserted, as in " orff " for " off."

ʌ and ʊ (*u* as in *u*p and p*u*ll). Mispronunciations are not so frequent in the case of these vowels. One example, however, may be given : " just " which becomes " jest " or " jist." An opposite tendency is heard in " thutty " for " thirty."

*a*i: (a as in father + *e* as in h*e* = *i* as in k*i*nd). When *a* (a as in father) becomes ɔ (*o* as in n*o*t) the diphthong is also mispronounced and " t*i*le," for example, becomes " t*oi*l." The fault results from rounding the lips in saying the broad a (as in father) and dwelling

on the second sound of the diphthong i: (*e* as in h*e*). Like so many other mispronunciations it arises from the tendency to speak with as little trouble as possible, ɔ being easier to say than *a*. The open position of the mouth must be maintained while *a* is said. The *a* and i: should then be practised separately at first and then rapidly run together. Pairs of words such as tile, toil, should then be sounded in order that the difference may be brought out.

*a*u (*ow* as in n*ow*). There is a tendency to give the two sounds of the diphthong (a as in f**a**ther + *oo* as in t*oo*) separately instead of in combination. Frequently, too, it is sounded as though the short vowel ɛ (*e* as in *e*gg) preceded the diphthong. This is slipped in during the change of position necessary for saying the vowel sound after the initial consonant. It is a very unpleasant sound, and effort should be made to correct it. The two sounds of the diphthong **a** (as in f**a**ther) and *oo* (as in t*oo*) should be practised, separately at first and then by rapid conjunction. The initial consonant should then be prefixed while the mouth is broadly open for the following *a*.

ɔi: (**a** as in **a**ll + *e* as in h*e*). The two elements are given separately instead of in conjunction. Occasionally also ɔ: (**a** as in **a**ll) is given the closed sound of *o* (as in g*o*). The two sounds must be practised, the conjunction being made more and more rapidly, and the mouth must be kept more broadly open on the former.

u (*oo* as in t*oo*). As in the case of *a*u a vowel resembling **e** (as in *e*gg or **e**: (as in h*e*) is sometimes slipped in before the true vowel sound with very unpleasant effect. The cause and remedy have been suggested.

Common Errors in Consonant Sounds

As these lend themselves to classification in the four groups of errors distinguished on a previous page they will be dealt with according to that grouping.

(1) *Errors due to the dropping of sounds difficult in conjunction.*

Dropping of "r." The fault common when this is represented by the vowel murmur ə (*e* as in learn*er*) has been remarked on among vowel mispronunciations. The dropping of the first "r" from "secretary" and "February" (leaving "sek'etary" and

"Feb'uary") is very common. The sound is sometimes left out between two vowels, "moreover" becoming, for example, "mo'e-over."

Dropping of "g." "Strength" becomes stren'th. From "England" the unrepresented (hard) g-sound which should follow the pronunciation of the *ng* is omitted. To correct the fault such words should first be sounded as far as the point of difficulty, a new effort being made, after a pause, to finish: *e.g.*, streng+th, Eng+(g)land. The presence (in sounding) of the unrepresented g, must be emphasized in the case of the latter word.

Note:—The dropping of *c* in such combinations as cts (*e.g.* insects) is also common, the cause and remedy being the same.

Dropping of "h." A very common fault heard in the case of both initial and medial "h," as for example, 'istory and in'abit. The practice in the case of "have" has resulted in "would *of* been." Pupils who find it hard to attach this initial breathing sound may be told during some recess to run up and down the playground for two or three minutes; then, returning breathless to the teacher, to say: "*He* did it, *he* did it, *he!*" (Suggested in *Clear Speaking and Good Reading*—Burrell.) But the fault is due less to inability to produce it than to bad habit and the force of example.

Dropping of "d" (and *t*). This is common when another consonant follows, especially from the end of and—*e.g.*, "boys an' girls." When a vowel follows, the d (or t) is transferred to it, as in "ever an' d'ever," "aun' 'tan' d'uncle."

(2) *Errors due to insertion of sounds to make transition easier.*

Insertion of "r." This is often made between two vowel sounds (*cf.* dropping of this letter, above) as, for example, in "the law-r of the Lord." It is due to the ease with which this "r" runs into a following vowel. An effort is necessary to say two separate consecutive vowels (as in "law of"), and this effort is not generally made. The effort must be insisted on, a pause between the vowels being required at first.

Insertion of indefinite vowel murmur. This occurs between an initial consonant and r following: t(e)rain, g(e)reat. It is probably due to the difficulty experienced in passing from the initial consonant to the r. Practise in sounding such combinations as br, cr, dr, fr, gr, etc.

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(3) *Errors due to substitution of easier sounds for harder ones.*

The substitution of breathed for voiced consonants is one of the commonest mistakes in the pronunciation of South Africans. While probably caused in the first instance by difference of usage in Dutch and English the fault has spread so by infection that it is now made equally by English-speaking pupils who have not the same excuse for it.

d becomes t at the end of words, the substitution of i (*i* as in *it*) for ɛ (*e* as in *egg*) accompanying, and making "expected" "expectit" and "wicked" "wicket." "And" becomes "ent." *Voiced s becomes breathed s* as in "hiss" (or "heess") for "his." To correct the fault classified lists of words similar except in this one particular (*e.g.*, bat-bad) should be made, and the words practised until the different sounds are impressed on the mind in association with their proper symbols.

It is more difficult to see why j (sound of *y* in *y*ou) should become as it frequently does, *dz* (sound of *j* in *j*ump) in the case of "yes," which is said like "Jess," as in this case a harder sound is substituted for an easier one. Perhaps speakers aware of a general tendency misapply the remedy.

j (sound of *y* in *y*ou) is substituted for "h," "Come here" being sounded as "Come yere." The cause is the greater ease with which the latter can be said.

(4) *Errors less easy to classify.*

With regard to these the Transvaal Circular may again be quoted: "There are many forms of error that cannot be easily classified: they arise usually from misplacement of accent, from jerkiness of utterance, from lack of light and shade in expression, and from an inability to articulate sounds clearly: the general effect of these . . . is to make the reading or speech blurred and indistinct."

The special treatment necessary in the case of certain specified errors has been pointed out, but general systematic treatment is necessary during the cultivation of speech and the teaching of reading from the earliest to the latest stages. This general treatment will consist of breathing exercises, mouth exercises and practice of lists of sounds and words.

An excellent and simple scheme of breathing exercises suitable for use before speech, reading, and singing lessons is given in *The School Teacher's Music Guide* (Venables: Curwen & Sons).

It is adapted below by permission. The brief, tabulated instructions indicate the part to be played by pupils and teacher :

Ex.	Pupils	Teacher
1.	Breathe *in* slowly and *out* quickly, *i.e.*, "relax" letting breath escape naturally.	Places palms of hands together, then slowly separates them for breathing in and brings them together again for breathing out.
2.	Breathe *in* and *out* slowly.	Moves hands as required counting 1, 2, 3, 4, slowly each way.
3.	Breathe *in* slowly; hold; *out* quickly.	Separates hands slowly; holds them still counting 1, 2, 3, 4; brings them together quickly.
4.	Breathe *in* slowly; hold; *out* slowly.	Separates hands slowly; holds, counting 1, 2, 3, 4; brings them together slowly.
5.	Breathe *in* quickly; *out* slowly.	Moves hands to indicate speed of breathing and duration of pause.
6.	Breathe *in* quickly; hold six seconds; *out* quickly.	
7.	Breathe *in* quickly; hold six seconds; *out* slowly.	

A fuller set of exercises, giving in addition to those for breathing, others for strengthening the muscles of the chest, lungs, throat, neck, and jaws will be found in *Clear Speaking and Good Reading* (Arthur Burrell: Longmans), a book of great value to teachers because of its practical suggestions with regard to the teaching of speech, reading, and recitation. The exercises for the mouth, as specially necessary for the correction of some of the faults of speech common in our schools, are, by permission, quoted below :

1. Open the mouth wide.	(Maximum 10 times.)
2. Open and close the mouth rapidly.	(Maximum 20 times.)
3. Twist lower jaw to left and right.	(Maximum 5 times.)
4. Bring upper teeth over lower.	(Maximum 5 times.)
5. Bring lower teeth over upper.	(Maximum 5 times.)
6. Purse the lips for whistling; shape them for *oo*, for *oh*, for *aw*, for *ah*; but emit no sound.	(Maximum 20 times.)

These mouth exercises—with the exception of the last—are more suitable for home than for class practice, once the proper

positions and movements have been taught and mastered. The pupils should be urged to practise them before a glass, and, from time to time, individuals, whose speech shows the greatest need for them, should be privately examined on them.

For the practice of clear utterance of difficult sounds several lists should be prepared. In the earliest the vowel and consonant sounds should be given in groups. Later, lists of words containing difficult combinations, as, for instance, *breadths*, *sects*, *strength*, *tsetse*. Later still, sentences presenting doubled consonants will be useful for overcoming the laziness or carelessness in speaking which results in one sound being made to do duty for two. "Slee*p* *p*eacefully," "Bo*b* *b*others so," "He ma*d*e *D*avid go," are examples of this type of sentence. It will be found that the tendency to run final and initial into one sound is greatest when the same vowel sound precedes and follows, as in the examples above. Another useful exercise is the practising of pairs of sentences which emphasize the need for giving each consonant its full value and for separating words properly :

"I had a nice, cold drink," "I had an ice-cold drink."

Individual sounds that are found difficult should be repeated in conjunction with slightly different sounds. The following sentence (from Hulbert's *Voice Training*) has been made with a view to providing this practice :

"The Duke paid the money due to the Jew before the dew was off the ground on Tuesday, and the Jew having duly acknowledged it said adieu to the Duke for ever."

A variety of exercises of the kind will be found in Salmon's *Art of Teaching*, and in Hulbert's *Voice Training*.

In addition to faults of speech arising from bad example, bad teaching, and slovenly habits of speaking, there are others traceable to some physical defect or mental weakness. Some of these will be beyond our power to remove, requiring the services of doctor or dentist. In such cases we should try to discover the nature of the trouble, and urge upon the parents the necessity of having the matter attended to. Bad cases of stammering and lisping may also refuse to yield to our efforts ; but, as a general rule, in ordinary cases improvement follows upon suitable treatment if it is persisted in.

Stammering, in the majority of cases, is largely a nervous complaint. The first thing to be done, therefore, is to tone up the

physical health so that the system may have a better chance of throwing off the tyranny of the nerves. It is of the first importance, of course, that all conditions likely to cause or increase nervousness be removed. Stammerers should never be hustled and hurried into speech, should never be spoken to impatiently or have their nerves jarred in any avoidable way. When the right conditions prevail the following exercises should be enjoined :

1. Speaking slowly in front of a mirror set words and phrases.
2. Practising set chest and lung exercises.
3. Practising breathing out exercises, especially blow-pipe breathing.[1]
4. Blowing pith or celluloid balls about a large polished table —¼ hr. at a time.
5. Beating time with the finger when speaking.
6. Singing. Singing on monotone, dropping into speaking, practising whispering.
7. Reading and reciting aloud and singing with a non-stammerer.

Lisping is due to a want of adjustment between the teeth and tongue, or sometimes to a defective state of the teeth. It is heard on all *s* sounds, and on *r*, *ch*, and *j*.

For the necessary exercises given below lispers must be made to join the teeth carefully at the most natural position of the bite, using the fingers, if necessary, to adjust them, and making the adjustment in front of a mirror. They must then keep the sides of the tongue from pressing outwards and :

1. Whistle softly ten times in succession, accenting well the first of each series of three.
2. Repeat the following sounds in the same manner : *s*, *z* ; *sh*, *zh* ; *ch*, *j*.
3. Repeat the same sounds, prefixing to each in turn the vowels *oo*, *oh*, *aw*, *ah*, *ur*, *air*, *ay*, *ee*. The teeth will need carefully adjusting after each vowel sound.

[1] Blowpipe breathing may be done with the stem of a long pipe and a glass of water. The bubbles should go on rising without any cessation for five minutes at a time, the necessary air for this being held in the cheeks and natural breathing going on regularly through the nose meanwhile. (Burrell : *Clear Speaking and Good Reading.*)

FOR FURTHER STUDY.

[Books marked with an asterisk are specially recommended]

*On English Pronunciation.** Circular 11, 1913. Transvaal Education Department (Government Printing and Stationery Office, Pretoria).

The Bible for Children. (Bible Stories in Bible Language.) Chosen by H. Thiselton Mark. (1*s.* net. The Pilgrim Press.)

*How to tell Stories to Children.** Sara C. Bryant. (2*s.* 6*d.* Harrap.)

*Stories to tell to Children.** Sara C. Bryant. (2*s.* 6*d.* Harrap.)

Science of Speech. Dumville. (2*s.* 6*d.* University Tutorial Press.)

Voice Training in Speech and Song. Hulbert (1*s.* 6*d.* University Tutorial Press.)

*Clear Speaking and Good Reading.** 2*s.* 6*d.* A. Burrell. (Longmans.)

*Principles and Methods of Teaching.** Welton. (4*s.* 6*d.* University Tutorial Press.)

The Voice. By W. A. Aikin. (7*s.* 6*d.* net. Longmans.)

The Voice. Pronunciation Chart. (3*d.* net. Longmans.)

The first, for the sake of uniformity, has been by permission, somewhat closely followed.

CHAPTER V

THE TEACHING OF READING

"Books, we know,
Are a substantial world both pure and good.
Round these, with tendrils strong as flesh and blood,
Our pastime and our happiness will grow."—WORDSWORTH.

"All that men have devised, discovered, done, felt or imagined lies recorded in books."—CARLYLE.

"The reading which we should try to cultivate is intelligent reading, that is, it should express the meaning of each passage clearly; sympathetic reading, that is, it should convey the feeling delicately; musical reading, that is, it should move in accord with the melody and harmony of what is read, be it prose or verse."—DOWDEN.

WE have seen that when any new subject is taken up, motives for effort are needed at the outset. When little children, during their earliest schooldays, are learning to talk more freely, more clearly and more accurately, they are urged forward by their need to understand and their desire to be understood by their teacher and class fellows. Motives for learning to read are to be found in its value to the reader himself, for "all that men have devised, discovered, done, felt or imagined lies recorded in books"—and in the delight the power to read aloud—rendering "the charmed sound of noble utterance with thrilling melody"—may be made to yield to others.

Very little children, of course, cannot appreciate these motives, and when they first come to school have not, in most cases, any desire to learn to read. It is one of the first duties of the school to awaken this desire, for close intercourse with good books will furnish two things its pupils lack to the great impoverishing of their lives—ideas, and a sufficiency of words for the expression of ideas. It is the want of these, far more than the want of money, that makes their real poverty in after life, and it is in the power of the school to

remove it. If it is to do so, however, the teaching of reading in schools must have certain definite results. Children wl learnt during school years to read with ease and to look as a means of enjoyment, will not, we may be sure, w much to do with books when school years are over. therefore, are of great importance—the choice of a goo teaching, and the provision of enjoyable matter for rea

In choosing our method for teaching we must be guided by a consideration of what reading is. It is, in its earliest association of printed symbols with familiar sounds for stand. For later reading we shall need to alter and ad to this definition; but that is what reading is in th

The infant reader sees on the blackboard or on the pag him certain marks. His teacher, after some preli about these marks, tells him for what familiar sounds They are, therefore, *signs*, and he comes in time to know he is to *say* (for his reading will all be reading aloud until a many associations have been made) when he *sees* any o them.

But this is not where reading ends. It is only wh What we desire to give our pupils is the power, no say sounds at sight of symbols, but to see meanings th The sounding stage is helpful as a link between mark a —between sign and idea—because the children hav associated sound and idea in learning to talk. It to make the new connection desired between sign a the children's minds. We tell them to say a certain sou look at a certain sign, knowing that as they do so th corresponds to it will, if we have chosen our sound (an our symbol) well, spring to their minds. Later they v to associate symbol with idea without the help of sound. They will then be able to read silently, gathering ideas for themselves from the printed page.

This brings us to a question for decision. What must be the marks, or signs or symbols, which we present to our pupils in their first reading lessons? They must be whole words, because for little children it is with whole words that ideas are associated, not with their separate parts or letters. They did not learn to say their first words—"dadda," "mamma," "babba," "milk"—letter by letter or even sound by sound. They learnt to say them as wholes,

and it is with the whole word that their idea of their father or their mother, of their own personality or of their food, is associated. How did they learn the words at all? They heard them; they heard them over and over again, and at last they said them. So they learnt to speak, and when they are learning to read they must follow the same process. Only, as the later accomplishment is dependent on sign instead of on sound (which is needed merely as a link in the early stages and for other purposes later) they must see instead of hearing—see, and see, and see, and in order to see, look. They must *look and say*.

What we have to remember is that each word in their reading books is to all intents and purposes a small object at which the children must look, as they will look if they are not taught to do otherwise, exactly as they look at any other small object, gaining a general idea of its whole appearance—not noting its parts successively and then combining them to form the whole. Consider for a moment what plan we adopt when we wish to draw the attention of any small child to the domestic cat. We do not say: "Here is a head, here is a long body, here is a waving tail and here are four legs" (most certainly we do not first isolate these parts and present them separately), "all these together make the cat," but simply: "Look at Kitty!" and the child looks and gets a general impression of Kitty to which fresh detail is added each time he looks at it, until he knows the parts of the household pet as well as we do. So with the words in his reader. He gets a general impression of them the first time he meets with them, and this impression is made clearer and gains in detail each time they recur in the course of his reading. Of course, the words are much smaller than the cat and the differences between them more minute than those between the cat and other objects to which his attention is drawn. Consequently he needs to look at them more often in order to distinguish between them. And how much more often he does do so! The words *the* and *them*, for instance, may occur dozens of times in a single lesson.

This "Look-and-Say" method is the only method by which children learn to read; just as the "Hear-and-Say" method is the only one by which they learn to speak. There has been much discussion of methods. It is all beside the mark. Several objections have been urged against the "Look-and-Say" method. They are all removable or negligible.

It has been urged, for example, that as the children's attention is fixed on whole words when learning to read by this method, they confuse words of similar form as, for instance, *though*, *thought*, *through* and *thorough*. This is true of their early reading; but the confusion disappears later. In the same way little children confuse one fur-covered animal with another, or even a muff with the cat; but we do not distress ourselves or them about the mistake. We point it out, perhaps, (as teachers, we must point out the confusions in reading), adding a word or two to aid distinction; but we know that repeated seeings will set the matter right.

Another objection urged against the method is that the children are not helped to spell by it. This is not true. They are helped to spell, because every time they look at a word as a whole, its form tends to impress itself on the eye with more clearness until at last the eye readily detects the mis-spelling of any familiar word. We may admit that the method does not teach spelling quickly; but that is not what we are trying to do by means of it. We use, or should use, it for the purpose of teaching reading quickly. Spelling is more concerned with writing than with reading, although reading is a valuable incidental aid. Consequently, throughout the school course, and particularly in the early stages, reading and writing should be closely associated. After every reading lesson certain words—those particularly which, because of their similarity to other words, or through some irregularity of form, may cause mistakes—should be set as a writing exercise. In the same way if we desired to impress the details of the cat's form on a child's mind, our best plan would be to set him to draw it. Writing is the drawing of those smaller "objects"—*words*. It is during writing lessons, and not before reading lessons, that the alphabet—the letters by their forms and names—should be taught, and even in writing lessons the letters should not be taught in alphabetic order, as will be seen later.

A third objection raised against the "Look-and-Say" method is that the use of it leads to indistinct utterance. But slovenly enunciation is a matter of habit arising out of constant unconscious imitation of slovenly speech. If a child hears language spoken clearly and purely at home, and then learns to read by the "Look-and-Say" method in the class of a teacher who speaks distinctly and with purity of vowel sound, his utterance will compare favourably with that of a child who has learnt of a bad speaker

by any other method. It is not, therefore, the method which is at fault.

Lastly, it is urged that however quickly children may learn by the "Look-and-Say" method to read words that have first been pronounced for them by a teacher, it gives them no help at all in mastering new words when they are reading by themselves. But as all words are combinations of certain of the same twenty-six letters, the children are helped in this particular. Unconsciously as they read, day after day, they are gaining knowledge of the *powers*—the usual sounds—of the various letters, and they apply this knowledge to any new words they meet with. Because of the irregularity of the English language they will make mistakes. Having learnt the sound of *i* in "in," they may give it the same sound in "mind," but such mistakes can be corrected as they occur, and the number of them will lessen as the children's familiarity with words and their ways increases.

But while none of these objections is a sufficiently weighty argument against the use of a method which is the only one by which children learn to read, the last two point to the advisability of supplementing it by one which places more emphasis on individual sounds.

Such a method is the "phonic" (Gk. *phōnē*, a sound). According to this method words are pronounced by saying in succession the powers, values, or sounds of the separate letters forming them. The method demands a perfect alphabet, and the English alphabet, as we know, is very imperfect. Consequently, to get the full benefit of it for the teaching of English reading, certain devices in printing—either variations in the form of, or the addition of marks to, the usual printed characters—must be adopted in order that each separate sound may be represented by a single symbol. In using it merely as a supplementary method, however, we may dispense with these devices, simply making a list of all the sounds in the language and teaching them in connection with a type word. When this has been done all faults of enunciation or pronunciation may be corrected by means of drill exercises in pronouncing, sound by sound, such words as demand the treatment. These exercises may be given either before or after the lesson. When all the sounds of the language have been taught systematically, the drill should be confined to words in which mispronunciations have been detected. While great improvement in utterance will result from

using the method in this way, there should be no attempt to teach reading by means of it. For that purpose it is quite unsuited, because as has been said, children in learning to read must—and do—recognise words as wholes. The knowledge of the powers or sounds of letters which the method gives will enable the children to make out occasional new words, but that is the most that can be expected of it in that direction.

In brief, then, children must be taught to read by the "Look-and-Say" method; from the very beginning writing must be connected with reading in order that they may gain that more exact knowledge of the form of words needed for spelling; and exercises in the sounding of familiar words according to the "phonic" method must be introduced to correct faults of utterance and give closer acquaintance with the sound values of the alphabetic signs.

We have, in South Africa, a special need for this use of the "phonic" method in the errors and confusions of pronunciation resulting from our admixture of languages. These errors and confusions are so deep-rooted now that they can only be removed from the speech and reading of our pupils by their obtaining this more exact knowledge of the separate sounds which together make up any given word. Whatever the language in which reading is being taught, drill exercises in sounding will improve pronunciation; and Dutch, being more phonetic than English, lends itself to the method more readily.

The teaching of reading is very often begun too early in schools. Little children frequently have books given to them for a reading lesson, or are asked to attend to a reading sheet, on their first day at school. This is quite wrong. There should be no formal attempt to teach children to read until they can speak with some ease. Reading lesson time for the first few days should be given to finding out whether the children have gained this power of speech. If, as is very probable, they have not, reading lessons must be put off until they acquire it by the means suggested in the last chapter.

Even when, having gained ease in speech, they are ready to learn to read, books or reading sheets should not be too abruptly introduced. Little children need to be prepared for their reading lessons in two ways. We have seen that at first reading is the association of signs with sounds. This work, which they will have

to do in reading, should be linked on to something similar to it in their past experience. No difficulty attaches to this necessary preliminary, for little children are accustomed to use signs for sounds in the expression of ideas. They nod their heads for "Yes" and shake them for "No"; they put a finger on their lips for "Be quiet" and wave their hands for "Good-bye." In all these cases they are using a sign for a sound. It is easy for us, therefore, to get them to understand the use of printed speech signs. After gaining from them some such examples of muscular signs as are given above, and accustoming them to the meaning of the word sign, we can tell them that we are going to make some new signs on the board, and that the signs we make will, like those they have been talking about, "speak" to them without sound. We should tell them further that their part in the game will be to learn and tell what the new printed signs say. We should then print on the board a number of words which they are in the habit of using and teach the children what to say when they see them. This work connects symbol with sound, the only necessary exercise at this stage, because all the words supplied by the teacher will be familiar ones and the connection of sound and idea will have been made previously in learning to talk. Speech is idea *plus* sound; writing is idea *plus* sign; reading, in its earliest stage, is sign *plus* sound *plus* idea; later, it is sign *plus* idea *plus* (in the case of reading aloud only) sound. When single words are printed on the board they should be notional ones, each one, that is, capable by itself of giving rise to a notion or idea. Relational words, which have not this power, should be introduced in sentences where they will be recognised more easily.

This work should be continued until the children have learnt a fair number of familiar words, and are able to read them when they are printed together on the board to form greetings and commands and such little speeches as the children themselves make at home and in school. They may then be led to tell that spoken words are not only used in ordinary talking, but for the purpose of telling stories; and they should be told that printed words are also used for telling stories. Short ones may be printed on the board but for longer ones they must turn to books.

At this point we might promise to *read* our next story instead of telling it, and afterwards might continue to do this from time to time until their desire to read for themselves is kindled. In this

way we shall have made the second preparation necessary ing them what they will find in books and what pleasur can give. They will then be more ready for formal readin

It will be seen that the plan suggested above for the v liminary to formal reading lessons, ignores altogether the letters o the alphabet as single separate symbols, and makes no attempt t teach their names. Such instruction has nothing whatever to d with the teaching of reading. The children will need to kr names, but the time to teach them is during early writin for in writing our pupils must perforce form one single le another, and it will be an advantage to them then to l letter names. While a knowledge of these was necessa the "alphabetic" method of spelling words letter by let be put in practice, it was useless lumber so far as learning in the real sense, was concerned. Even when *taught* "alphabetic" method, children *learnt* by seeing and sa same words over and over again.

If we prepare our pupils for their formal reading lesson them the desire to read we must see that they do not lose i should contain stories as delightful to the children as th have been told. They should be well printed and bri trated. Compilers of the old primers, in their anxiety short and easy words for early reading, lost sight of this n the children eager. We, however, having recognised th learn to read words as wholes, see that there is no need to keep t such as are short and of regular notation, familiar to the children in speech. As chi gular" words in talking, "irregular" words Neither the "regularity" nor the "irregula thing to do with the ease with which they a recognised in reading. The word "eye" giv the word "hand"; nor the word "laugh," for children do not stop to analyse the separate sounds or letters in any word. Another fact needs emphasizing. Children recognise words of six or seven letters as readily as words of two or three, and words of two syllables as readily as words of one. "Chimney," for instance, is recognised quite as quickly as "hob." Such familiar sentences as "A fat cat sat on a mat," in which the repetitions catch the ear and not the eye, will be seen to be useless except as pronunciation exercises. Children do not learn to *read* by virtue o

such repetitions, and as the subject-matter of them is very inferior to that of a good fairy-tale they should be dropped out of early reading practice.

During this earliest reading lessons we should use our pupils' knowledge of the power of printed words to call up ideas just as spoken words do, and should tell them that the time has come for them to learn to read stories for themselves. We must then see that we take our reading lessons in such a way that our pupils' eagerness is not checked by our methods. There should be no wearisome repetitions, no tiresome interruptions to ask what this word means or that, no crossness and scolding that cause the children to think of their reading lessons as something unpleasant. Repetitions will occur naturally in the text. Questions on meaning may be deferred; if we have chosen our reading matter well there will be little danger of its not being understood. Crossness and scolding will be unnecessary if we know how to manage our class. The books of tales should be given out and one story chosen for the day's reading. When the books are all opened we should point out to the children that among the words on the page are many familiar ones, and, after having had a few of them picked out and read, should warn the children to be on the look-out for, and to read with us, all that they recognise. We should then begin to read the story straight through, slowly enough for them to recognise and read familiar words; but quickly enough to enable them to realise that they are reading a story and not simply saying words, for the sense of what they are reading should help them to recognise the words as they come. The expressiveness of our own reading will, of course, be of great assistance in this.

When the story has been read there will be many words in it which the children will not recognise on next meeting with them; but they will occur over and over again in other stories and so, by degrees, will become familiar. This makes it unnecessary for our pupils to read and re-read the same story or, worse, the same two or three paragraphs, after their interest in it is exhausted. They should read in this way one story after another till the book is finished. When all the stories have been read once we may allow them to choose from among them favourites to be read again, or we may put the book aside and begin a new collection. Such a plan will be found to have much better results, even on examination days, than the one frequently followed of having a single book read

through and through from cover to cover, unmindful of the children's interest, in the hope that they will be able to read and spell all the words which occur in it. Two or three collections of stories —even half a dozen—should not be unobtainable, for most educational firms publish suitable ones at twopence or threepence each.

Reading lessons for children in the standards may be conveniently considered in two divisions—those for younger and those for older pupils. Those of the lower division differ in nature and method from those of the higher, because younger children have to battle with difficulties of one kind, and older children with difficulties of another kind.

In the lower standards the overcoming of mechanical difficulties takes up a larger proportion of time. The forms of many words are still unfamiliar to our pupils and the sounding of them is still a cause of stumbling.

Familiarity with the forms of words results from meeting with them frequently in reading and writing. During reading lessons, then, we must see that our pupils get as much practice as we can give them. This must not only be practice in reading aloud; it must also be practice in reading alone. During simultaneous reading there is little real progress made in the recognition of words by individuals. The pace of the class reading sweeps them past the words they do not know without giving them time to look before saying them. Consequently they do not feel any more sure of them next time they meet with them. They do not even say them with any degree of correctness at the time, merely echoing what they think they have heard as they follow in the wake of the main body of the readers. Two separate faults which are enemies of good reading are therefore encouraged by simultaneous reading—the fault of not looking carefully and that of not saying correctly. A better way of increasing the admittedly short time for reading practice is to form the class into small groups for the purpose and to take each group in turn, setting the rest of the class to read silently. While this does not increase the amount in fact, it does in effect; for each of the children in any of the small groups will be able to read a long paragraph or several short ones in the course of a lesson, and to read a long paragraph once a week helps a child more with his reading, than to read a line or two every day.

While the sounding of words is not an essential part of reading,

it is a necessary accompaniment of school reading which has to be tested. Children, of course, could learn to read without ever reading aloud; but normal children are never likely to do so in schools. We can only judge of our pupils' progress in the art of reading when we hear them read aloud. Almost all their reading in the early stages, therefore, must be reading aloud, since we must see that they are improving from day to day. Nor is it only the need of testing, and aiding progress during learning that makes it desirable that they should learn to read aloud. Nearly everyone is called upon to read aloud at some time or other; and while, perhaps, not a large proportion of the children in any class will ever care to read aloud for their own pleasure, or need to do so for that of others, they should have opportunity of mastering an art which is capable of yielding so much.

As, then, reading aloud will always be required of school children, if only because it is the readiest means of proving that they are making progress, it follows that it should be as perfect as possible, neither sound nor sense being mutilated. We have now to consider how it is to be taught.

Good reading—like pleasant, forceful speech—demands the exercise of all the vocal organs: of the lungs no less than of the tongue, teeth, and lips. Such breathing and mouth exercises as have been suggested for use during the cultivation of speech must be continued throughout the teaching of reading. Breathing exercises should be practised regularly for two or three minutes before every lesson, and such mouth exercises as are seen to be necessary should be suggested for private practice by individual children. After the breathing exercises we should give two or three minutes' drill on sounds commonly mispronounced by our pupils. From among all which we have—or should have—noted in a list we should pick out two or three which recur in the lesson for the day. This drill may just as suitably follow the reading practice, being directed then to correcting faults which have been made.

When the vocal exercises for the day are over there should be some form of introduction to the chosen reading matter. In Sub-Standard classes no formal introduction to the lesson is necessary or advisable. The little books of fairy-tales having been passed to the children, it will be enough for us to say: "This morning we shall read the story of *Cinderella*," if that be the tale chosen; or, when the childen are familiar with the tales in the book, to ask: "What

story shall we read this morning?" Continuing: "Have you read—or heard—this story before? What is it about?" Then, having obtained a very broad outline of it, we may say: "Yes. Now find the page, and begin."

But something more than this is necessary for standard children—even for those of the lowest standard. Their first introduction to reading is over, and they should now be able to gain more of its benefits and be able to carry away from each lesson a distinct impression and understanding of the matter read. This should further enable them to give the gist of it in their own words, as well as to paraphrase intelligently chosen phrases. The substituting of one word for another is a much less valuable, as it is a much more difficult, exercise. There are few exact synonyms in English, and to ask for substitutes for single words is, frequently, to task the pupils too heavily. The exercise, indeed, is either too easy to be of value or too hard to be fair. On the other hand, the children, even at this early age, ought to be able to give a short phrase from the book in their own words without doing violence to the meaning.

Now, it will be much easier for the children to understand the various parts of the story—or other matter—read, if they have a general idea of the whole before they begin to read it. For this reason their minds should be prepared for the reading by some brief form of intelligent introduction. The nature of this will vary with the conditions under which the story is read. If it is a new story the title, or a picture in the book illustrating it, forms a natural and satisfactory method of approach. In using either we must, of course, refer it to something within the children's knowledge or experience. Let us suppose the story to be *Jack the Giant Killer*—not illustrated. It is generally better to let standard children discover the subject-matter of their lessons themselves by reading the title, than to tell it them. When they have read it, in this instance, we might ask:

"Have you ever heard of giants before? Were they pleasant people to meet? Would you care to meet one? What were they like? Tell me some of the cruel things they used to do. Then people would not care to have giants living near them, would they? If one did, they would be quite glad to hear that he was killed, and be very thankful to the person who killed him. But would it be an easy matter to kill a giant—to be a giant-killer—if he

was so big and fierce and carried such heavy weapons? Then the Jack who killed the giant must have been somebody very big and brave? Let us read and find out."

[Before the end of the lesson it will be discovered that Jack was not big at all: but only cunning and brave and very determined to get rid of the giant because he was such a nuisance to everybody. Perhaps the notion of hero might be suggested and the word given.]

Or let us suppose that we prefer to make our introduction through a picture illustrating the story to be read:

We may first tell the children to look at the picture silently for two or three minutes and at the end of that time ask them to tell us what they have found in the picture. If it is a good one, and a good illustration, most of them will have discovered those parts of it which bear directly on the story, and will come pretty near the truth in their answers if we ask them what they suppose the story is about. If they have missed the point of the picture we should try to direct them to it. If, for instance, the picture is of Cinderella before her godmother's visit and they describe her as a girl with a brush, we may ask where she is sitting. What are found in fireplaces? We may, then, tell them that this poor girl—"Look at her ragged clothes and her sad face"—having always to sit by herself in the kitchen, used to draw up her stool to the fireplace and sit with her feet among the cinders. For this she was called—"We will find out by whom as we read"—Cinderella. "We will find out, too, why she had to sit in the kitchen."

There must always be, in our picture introductions, this drawing away of the mind from the picture to the story which is to satisfy it still further. The picture, indeed, is in itself an intelligent introduction to the story—arousing interest, as ours must do, without satisfying it. That is the work of the story itself.

On the other hand, if the reading matter is a chapter of a continued story—and continued stories that carry the interest forward from day to day are growing in favour—the best introduction is a revision of the story as far as it has been read. It should, however, go a little farther and prepare the children for the happenings in the chapter for the day, showing how what has gone before necessarily leads up to what is coming—this again, of course, without

exhausting the interest that is to hold the children's attention as they read.

We shall need to remember always that introductions must be brief. Five minutes is the very most that we can afford to give to them.

The actual reading should follow. We should set the children to read silently a part—not usually less than a fair-sized paragraph—of the lesson. This is necessary in order that they may master both the words and the meaning of the passage before being called upon to read it aloud. It is better to prevent a bad habit than to cure it, and many children get into the habit of stumbling over words and reading inexpressively, because in their earliest reading lessons they have been required to read aloud passages which they have not had a chance of looking through beforehand. We cannot expect lower standard children to read a piece well at sight. Many of the words met with in their standard readers even, are still too unfamiliar for them to be able to gather their meaning quickly enough to render it justly. Unseen reading is a useful test to give to upper standard children occasionally, but even they should, as a rule, read aloud only after a preliminary study of the matter.

At the end of their silent reading of a passage our pupils should be able to give the substance of it at first in answer to questions but, later, continuously. While this task of gathering ideas from the printed page is new to them, we may help them by telling them beforehand what we wish them to find out or by asking one or two questions to be answered when they have read through the piece set. During or at the end of their silent reading, we should allow the children to ask the pronunciation of any words they do not know or the meaning of any phrase they cannot understand. This will remove difficulties before the reading aloud begins.

The reading aloud, as has been said, should almost invariably be by individuals and not by the class—or group—as a whole. We should not interrupt any child to make corrections, for the main effect of doing so will be to take his thoughts off the reading and so to lessen his chance of dealing justly with either the sound or the sense. Interrupted reading, very generally speaking, grows worse and worse as the reader proceeds. Errors should be noted as they occur and dealt with when the end of the passage is reached. Another reason for adopting this plan lies in the greater likelihood of

our gaining the attention of the whole of the class to the corrections made.

The mistakes made will fall into two groups—mistakes in saying the words and mistakes in giving the meaning. It is better to deal with the latter first; for when the meaning is grasped other mistakes tend to disappear. It is the mental act of reading—the gathering of ideas from the printed page, that should be brought into the foreground of our pupils' thoughts, for it is the power of doing this that we wish above all to cultivate. When we realise from a child's reading that he has mistaken the meaning of the passage, our first care must be to set him right. We may be able to do so by means of a question or two; we may need to appeal to the class for help, as, for instance, through another rendering; we may be reduced to telling the meaning, but this we should not do till other means have failed. When the reader sees the meaning clearly in the new light furnished, he should be told to read the passage again.

We may correct mistakes in pronunciation ourselves or may ask other pupils to do so. While the reading is in progress it will be enough for the child who has mispronounced a word to say it again correctly and then to read it in the phrase in which it occurs. But we should note the frequency with which any one error occurs, and at the end of the lesson or at the beginning of a subsequent one, should base a pronunciation drill upon those which are found to be common.

It is the practice in some schools to urge the pupils to be on the watch for mistakes in the reading of their class-fellows. It is doubtful whether this is likely to have a good effect on the natures of the children, and it is certain that it has a bad one on their reading. Being constantly on the look-out for faults in their neighbours' reading, they lose sight of what is of more importance—the meaning of the piece read, more especially since the faults they find are almost always slips or mispronunciations. Errors of expression usually pass unnoticed.

In dealing with slips we must discriminate between those which are made by even good readers from time to time, those which are due to nervousness, and those which are unmistakeably careless. The first may be disregarded. To correct the second we must try to put the reader at his ease. In the case of the third we shall be justified in requiring the offender to read again after the class has been dismissed.

From the very beginning expressiveness in reading must be cultivated. "Expression" is not a thing to be postponed until our pupils have reached a certain point in the mastering of mechanical difficulties. The very first sentence they read must be uttered expressively; and it will be if they understand and have some interest in expressing it. The word-by-word sounding which is so often heard in Sub-Standard classes is not reading and should not be allowed from reading books. Whatever is necessary in the way of preliminary work to enable our pupils to grasp and render the meaning of a whole phrase at a time, should be done in the form of blackboard exercises before reading books are given to them. There is no need that the phrases should be long ones. Many single words form, the subject being understood, a sentence by themselves, and the children can learn to *read* them—not simply to sound them, that is, but to give them expression as they look at their printed forms. Thus the word "*Sit*" may be read, and later other words may be added and expression change with each addition: "*Sit down*," "I *will* sit down." What we must lead the children to see is that in reading it is not the word but the thought that is the unit of expression.

When we all discover—as we may do by listening to the speech of children whenever they are giving unstudied expression to their feelings—how little need they have to be taught to render expressively any sentiment they understand and feel, the method of trying to secure just expression in class reading will be altered. Rules and the patterning of short phrases will be given up and the furnishing of reading matter that they can understand and enjoy will take their place. This done, the problem of how to secure expressive reading is almost solved; for there is no need "to set about teaching a child how to inflect his voice when he pities a dead robin, or when he exclaims at a flash of lightning, or shudders or claps his hands over the thunder." He knows how quite as well as we do; and he is able, through the intensity of his young feelings and the flexibility of his young voice, to do it much better.

What will still be necessary, however, is to create, or to keep alive, when, more happily, it exists, a keen feeling of the pleasure that is to be gained from the reading of books. The tales told to Sub-Standard classes were told with this as one of the ends in view; and children who, as infants, have felt the spell of the story-weaver will generally turn gladly to books. Even in these cases, however,

there is much, where a number of children are gathered together, to tempt their eyes and their thoughts from the printed page; and without attention there cannot be understanding or, without understanding, enjoyment. We shall need the power to keep the attention of our pupils on what they read until they reach the point at which the reading itself enchains it. This will be much sooner in the case of books—and there are many of them published nowadays—which make a real appeal to the known interests of children. The old infant primer failed through its attempt to employ short regular words; the old standard reader failed through being too informative. What is wanted in school books is matter that the children will really enjoy; and this must be borne in mind in choosing them. During their reading they must be able to escape on the wings of words with their underlying meanings from the dry matter-of-fact world of dull "lessons" into the realm of fancy and feeling.

This points to the place for pattern reading. It has been suggested that the patterning of each short phrase of the lesson for the unthinking mimicry of the class, must be given up in the interests of real expressiveness. Our model, however, may and should be one of the surest aids of our pupils in their efforts to render sound and sense perfectly. It will never be more fittingly employed than in reading with smoothness and ease, pleasant intonation and due emphasis, one of the tales of old delight that set fancy free; or in giving fervent expression to some poem that wakes a sleeping emotion. It is for such uses as these that it must be reserved.

We come now to the last stage of the lesson—the questioning which closes it. The purpose of this questioning is not primarily to discover whether the children have been attending. It has a more important aim—the quickening of their intelligent appreciation of what has been read. Throughout the lesson they should have been permitted—more than that, encouraged—to ask what questions they would. At the close of the lesson comes our turn to question. It would be strange, indeed, if we saw in the matter read no more than the children are able to see; and the aim of our questioning should be to suggest new ideas and new reasons for enjoyment. There should be also, even at this early stage, an attempt to induce a critical tendency in the children, although at first it will not go much further than deciding which parts of the story they like best and whether they have enjoyed it as much as

others read previously. The supporting of their choice by reasons is an exercise for older children, but it is one to which all early lessons should lead up.

Lessons to upper standard children must undergo some modification in view of the fact that these pupils have made considerable headway against the mechanical difficulties of learning to read. Reading aloud should give place more and more to silent reading ; and additional practice in what will be their usual form of reading and their chief means of education on leaving school be given in connection with other subjects of the school curriculum. In history, in nature study and in geography there should be fewer oral lessons and more private reading.

Less time should be spent over pronunciation drills, though these should not be give up entirely. Distinctness and purity of utterance are every whit as essential ; no amount of light and shade in expression can be made to do duty for them. Clearness is the very foundation of all good reading and all higher qualities must be built on it. But the four years in which reading aloud has been a daily exercise should have gone a long way towards mastering faults of articulation, and the intellectual side of reading should begin to engage attention to a greater and greater extent. Our pupils' intellectual grasp of any matter read must find expression through certain devices for conveying meaning and emotion—modulation, emphasis, pace, pause, and gesture—and it is the right use of these that must chiefly engage attention during upper standard reading lessons.

Gesture need not detain us ; in reading it is almost negligible, though sometimes we may see a child's dramatic sense express itself by this means—in a movement of the hand or head or some feature of the face—as he gathers and translates thought from the printed page.

In the matter of modulation—the rising and falling of the voice in pitch—children, as has been said, through the greater flexibility of their voices, have very much the advantage of us. Theirs is the time of life when the voice "is particularly sweet, pathetic, and convincing"—the natural voice, that is. Unhappily, a variety of causes—nervousness, shyness, sullenness, passion, boredom—frequently combine, even during infancy, to muffle the naturally beautiful child tones. If, however, our pupils come to us young, we may do much to recover for them the tones and inflections they have lost.

But this is all we must attempt—to help them to recover the

natural flexibility of their voices and their responsiveness to feeling. Any hint of artificiality resulting from attention to rules is worse than the monotony we wish to vary. What we attempt, therefore, must not be done so much directly in connection with any particular passage to be read, as indirectly through vocal drill on the one side and, on the other, the cultivation of sympathetic understanding and emotion.

The flexibility which is necessary for easy modulation should have been under cultivation from the time that systematic speech practice began in the lowest class. Changes of pitch in the speaking voice—a spoken modulator practice—should be required in the saying of chosen sentences. The younger the children, the less will be the difficulty, as a rule, in securing these; but in Sub-Standard classes we should put fun into the practice. This will be very easy, for example, in connection with the story of "Golden Hair and the Three Bears." The children will be delighted to imitate the deep growl of the Big Bear and the high squeak of the Little Bear, but will return with relief to the natural pitch of the Middle Bear's voice, which level their own voices should keep during the greater part of their speech and reading. For the lower standards we might choose some one particular sentence for this modulator practice, taking for example the line: "Roll on, thou deep and dark blue ocean, roll," and requiring the children, as one exercise, to begin on a very low note and rise tone by tone to a fairly high one on the last word. As another exercise, we might tell them to begin on a high note and drop tone by tone to a low one. At first the exercises should be taken slowly, but speed should be increased later, and the exercises varied in the attempt to get the children's voices to move easily and rapidly from tone to tone. We might get our pupils, too, to see the use of a change of pitch in expressing meaning from examples such as "You were there" and "You were there?" in which the question is indicated simply by the rising inflection at the end. It is in this way that we shall make the best preparation for the modulation which should be looked for in the reading of upper standard children. We should never give our pupils instructions beforehand to "change their voices nicely" in reading. When they have read we may, if necessary, tell them that they don't "seem to mean" what they have been reading, and by questioning help them to see why their rendering was faulty. But lower standard children are not capable of entering very far into the feelings of other people,

and our best work will be done by cultivating their own feelings—using, for the purpose, not their stories and verses only, but also daily happenings which come within their own experience or which we may think it advisable to bring to their notice. All generous and compassionate feelings which are within the range of their emotions should be cultivated. Modulation will follow, but for the time being it will be modulation of the speaking voice, and for the time being we must be content with that.

Upper standard children are very much better able to enter into the feelings of other people and very much more interested in doing so. From the age of thirteen or so they will have little difficulty in appreciating such emotions as they are called upon to express. They must be helped, however, to realise the circumstances that gave rise to such emotions. The means that offers is conversation. By talking over before the reading begins any situation which it depicts, we can help them to *see* and *feel*, and so enable them to express an emotion as if it were their own. Reading under these conditions is not likely, where vocal drill has made modulation easy, to lack this form of expression.

Children use emphasis so freely in their own speech, and hear it so frequently in that of others, that we shall have little need to point out to them its importance as a means of expression. At the same time, faults in emphasis will be common in their reading, and we shall need to deal with them. We shall be wise, however, to wait for the occurrence of faults and then to show in what respect the emphasis is faulty, rather than to attempt to give rules beforehand. As in the case of modulation, what is wanted is that our pupils gain a real insight into the passage they are trying to express; and, seeing or feeling with the author, give the emphasis required to bring out his meaning. Again, therefore, conversation about the piece to be read and a discussion of the rendering given, will be our best means of helping them to give due emphasis in reading.

The form of emphasis most commonly used is that of putting a greater degree of force on the words it is desired to emphasize. The fact that emphasis may be given by reading certain phrases more slowly and placing a slight emphasis on each word may need pointing out to our pupils. Another way of emphasizing that they are probably even less familiar with, is that of saying more softly the words to be emphasized.

The difference between accent and emphasis should be shown. Accent is a fixed, mechanical stress given to syllables and placed always on the same syllable in any given word. Emphasis, on the other hand, is given to words, and as the placing of it is ruled entirely by the meaning the sentence is meant to convey, intelligence must be brought to bear on the act. The placing of accent has to do with pronunciation ; the placing of emphasis, with expression.

Pace, or rate of speed, must generally be slow in reading in order that utterance may be distinct. It has a value also as a form of emphasis and, therefore, as a part of expression. But, whatever the necessity for emphasis, the rate of speed in reading must never be increased beyond the point at which it is possible to sound every syllable distinctly. A sufficiently slow rate of speed is one of the essential qualities of good reading difficult to obtain from school children. Some of them gabble through sheer nervousness, some from slovenliness of utterance, and some again because they make the mistake of confusing quick reading with fluent reading and fancy that, by racing ahead, they are proving what good readers they are. Whatever the cause of their hurrying we must check it until every word that they utter is distinct.

More important than any other device to make reading intelligible is phrasing. In recognition of this, pauses for punctuation are, as a rule, so carefully indicated by writers that their observance by readers tends to become mechanical. While for ordinary reading practice the writer's punctuation may usefully serve as a guide, we should guard our pupils from the absurdity of "stopping at a comma and saying *One*," with no thought at all for the reason. This we may do by writing on the blackboard from time to time a fairly long paragraph, or the verse of a poem, without entering any punctuation marks, and inviting the children to decide for themselves where the pauses should come. To help them we may, contrary to our usual practice, give them a rule beforehand: *Stop when you see a picture.* They will have little difficulty, then, in deciding where to pause in such a passage as, for example, the first verse of Longfellow's poem, *The Slave's Dream :*

"Beside the ungathered rice | he lay |
His sickle in his hand ‖
His breast was bare | his matted hair |
Was buried in the sand |||
Again | in the mist and shadow of sleep |
He saw ‖ his native land."

If, as our pupils give us the successive phrases, we mark them off by vertical lines we shall be able afterwards to discuss the length of the pauses, and being told that it should vary, indicate this by doubling, or even trebling, certain of the division lines. Further discussion should make clear that the reason for the variation lies in the fact that the different pictures are not linked together with equal closeness. The first two lines draw pictures in bold outline ; the next two add detail. A pause is natural before we turn from the prone figure of the reaper sickle in hand, to note the more detailed drawing of the succeeding pictures. The change from what we see to what the slave sees occasions another pause, the longest, at *sand*. The foregoing pictures are very loosely connected with the following ones.

Some special points should be noticed. Difference of opinion may be felt by the children as to the number and length of the pauses. Some children may feel that the first picture is not completed until the figure of the reaper is seen on the ground ; others may think that the plantation of ungathered rice constitutes a picture in itself. Again, to some it will seem that where the subject of the fourth sentence ends the third line the voice should be hurried forward without pause, while others hold that the end of every line in poetry should be marked by a pause, though it will be barely perceptible where the meaning reaches forward. These various opinions should be discussed ; not with the idea of " quashing " any ; but for the interest of the discussion and in the interests of expression. Different renderings of poems read or learnt in class are to be encouraged, for hard and fast rules make for mechanical practice. While almost all the children will feel the necessity for a pause after *Again*, they may not see the reason in the light of the rule given, for the word raises no picture before the mind's eye. It must be pointed out that it creates a separate mental impression, and must therefore be marked off. The fact that the pause after *saw* is a pause for the sake of emphasis should be noted.

Occasional class practice of this sort will lead to intelligent phrasing which shows clear understanding of the construction of any piece read.

Upper standard reading lessons should not invariably close with questioning, and even when they do, care should be taken to keep the questions free from any tendency to degenerate into mere

examining. Throughout the reading our aim should have been to wake a sense of companionship in a pleasurable exercise; and this effect should not be spoiled at the end. A discussion of the piece read, an inviting of free expressions of opinion on it, the connecting of it with some other with which it has points of similarity or contrast, the reading of another piece which it recalls, an attempt to arouse interest in its author—any one of these may be made to close the lesson in a way that makes the children look forward with eager pleasure to the time of the next lesson. In any discussion of a passage following on the reading of it, the need to develop, and at the same time direct, our pupils' critical powers should be borne in mind. The ability to discriminate between what is good, what is mediocre, and what is bad, and the wisdom to choose the good in literature depend on critical power, and the main purpose of our reading lessons is unfulfilled if our pupils have it not before they leave school for good.

There is one branch of reading which should be practised in schools, and especially in upper standard classes, much more than it is—the reading of poetry. Most standard readers contain pieces of poetry, and of late years these have improved in quality so that they will generally be found to repay a close study and a careful rendering. Yet they are generally treated unjustly in one of two ways. Either they are neglected or they are read without any more preparation being given to them than is given to a prose passage. The reading of poetry should not be neglected, because poetry is the highest form of the writer's art, and it is our business to acquaint our pupils with "the best" that is attainable in every branch of their work. It should not be attempted without the most careful preparation, because in the absence of such preparation the poem is not read; it is *murdered*.

It has been very well said that "the business of appreciating the inmost spirit of the greatest verse is tremendous and lifelong." So much the more reason for beginning it early. While, therefore, verse-reading is an exercise specially suited to upper standard classes, Standard II is not too early to make a start. There is another reason for beginning early. We teach—or should teach—reading as "a pastime and a happiness"; and once a reader has accustomed himself to verse, it will make a more pleasurable pastime and give a keener happiness than the reading of the finest prose.

If "the business of appreciating the inmost spirit of the greatest verse is tremendous and lifelong," we shall find our powers sufficiently tasked in learning to render and teaching our pupils to render any poem of merit. Very sound and practical suggestions that may help us in the necessary preliminary of learning to like poetry are made in the chapter on Verse in Arnold Bennett's *Literary Taste—and how to form it.* They should be studied.

Then, when we turn to the task of teaching, we should remember that it is more important that our pupils should love and be moved by poetry, than that they should be very learned concerning it, for :

> "God sent His Singers upon earth
> With songs of sadness and of mirth,
> That they might *touch the hearts* of men."

The poems we should choose for reading, then, are those which make their appeal through a sense of rhythm, harmony, and beauty, to the emotions rather than to the intelligence.

The steps in a recitation lesson are the same as those in a reading lesson. A passage for recitation demands fuller treatment; but it is treatment on similar lines. There is, of course, one new difficulty—the learning of the words "by heart." Let us now consider the steps in the lesson in turn.

Preparation for the lesson should generally take the form of a short discussion on the title. During this, knowing the nature—merry or tender or stirring or sad—of the poem or passage to be learnt, we should try to bring our pupils into sympathy with it, striking, as it were, the keynote with which they must be in tune before they can render the sentiment properly. We should then read—or, better, say—the whole recitation as clearly and expressively as we can. At the close of this reading we should see that our listeners have grasped the meaning of the whole passage and of particular phrases. After this, a blackboard on which the portion of the recitation for the day's lesson has been written without punctuation marks, should be turned towards the children. Books containing the recitation are desirable, but the use of them should be postponed until punctuation marks, decided upon by teacher and class together, have been entered.

The children should next be told to read through the verse—

or other portion—on the blackboard, *slowly*. During this first reading, attention should be given mainly to securing accuracy of pronunciation, that is, to hearing that the consonants are distinct and the vowels pure.

When pronunciation is satisfactory we should go through the passage with the children for the purpose of discovering where pauses should be made and emphasis placed. Further opportunity of rendering the meaning clear will occur while this is being done.

The children should have had practice during reading lessons in phrasing according to the mind pictures raised by printed words. Vertical lines may be used to separate these, and they should at this point, be entered in the passage on the board.

When phrasing or emphasis is wrong, the children should not merely be told so, but should be shown why.

Various devices may be used for indicating emphasis. Accent marks form a simple and satisfactory one. Being small they do not interfere with the look of the passage; and they can easily be increased to show that a greater degree of emphasis is required.

The securing of suitable modulation must be our next concern. As has been said earlier, conversation which brings out meaning and stirs feeling will be most effective in this.

The rise and fall of the voice, which is one means of expression, may be graphically represented for the children by re-writing the words of the passage higher and lower like *sol-fa* syllables on a modulator.

In older classes the metre should receive considerable attention, but little should be attempted in this matter in the lower standards. Still, even young children can realise that the stress falls regularly in poetry. While short and long vowel sounds may represent graphically the weak and strong accents, the use of them should be postponed till the higher standards are reached. It will be quite enough for the children in the lower standards to tap strongly and weakly for the accents with two fingers. Accent and emphasis are often opposed to each other in poetry. Neither must be allowed to destroy the other. Any tendency to sing-song intonation—up and down, up and down—must be checked.

After this, it will be time to get the children (individually, NOT simultaneously) to combine all their foregoing efforts in an attempt

to render the passage justly. Jerkiness of utterance must be stopped and a smooth flow of the words obtained. Full musical tone is secured by opening and rounding the mouth, and dwelling on the vowel sounds. At each step opportunities for making the meaning clearer will have occurred, and sound and sense should now be linked up in a way that brings home to the children the full meaning of the passage, and enables them to convey it to their hearers.

There remains still the memorising of the words. As will be seen, however, the passage has been read through six or seven times in the course of the suggested treatment. Moreover the words of good poetry require little memorising—"almost singing themselves they run"—and there will only be one or two children who have not got them "by heart" without any effort of mechanical memorising. At this point the relational words in the passage should be erased, the notional ones being left a little longer to suggest the full text. After two or three more—individual—repetitions some of the notional words should be erased, leaving only the chief or "key" words. Finally these, too, should be erased and volunteers should be asked to come out and recite the whole passage to the class.

The same steps may be taken with advantage during the *reading* of poetry, though the last one of course is unnecessary.

It will not be possible to treat more than four or eight lines of poetry so fully as is suggested above in the course of a half-hour's lesson. Still at this rate a poem of from twelve to twenty-four lines could be mastered in less than a month, so that twelve such poems could be learnt in a year. We should not be satisfied if much less than that is accomplished. Syllabus requirements demand a minimum, and children are certainly capable of learning much more than the amount set, which is insufficient to create a taste for learning by heart good poetry or prose.

The value of such a systematic treatment of a passage for recitation goes beyond the actual improvement in delivery. Half unconsciously our pupils will begin to realise during their progress through the standards that in voice and language they possess an instrument of rare beauty and power. They will then think it worth while to take trouble over a piece of reading or recitation, and thus find in it more than they had suspected. With the

gaining of the ability to appreciate beautiful poetry and fine prose, they make a real advance in education.

The almost invariable choice of poetry for recitation, to the exclusion of prose, is to be regretted. There are many prose selections suitable for the purpose, and we should use them to make our pupils acquainted with the qualities of good prose. For the lower standards many of the well-known fables, dealing as they so often do with animal nature which is always interesting to children, will be found suitable.

It may be well to say a word or two about the kinds of reading book most suitable for the different standards. The reader for Standard I should contain a good proportion of fairy-tales, together with some of the legends of Greece, Rome, and the Norseland, and descriptions of things in nature. Supplementary readers may be chosen from among the many excellent series published of late years. As most of them are quite cheap, it should not be impossible to obtain class copies of two or three of them for use during the year.

Fairy-tales, legends, and nature stories are suitable for Standard II also; but to these should be added a collection of stories from history and another of descriptions of far-off lands and their people. Supplementary readers should be provided as for Standard I, and a poetry reader should be introduced.

In Standard III one of the readers should be a continuous story. A school edition of *Alice in Wonderland* or *The Water Babies* would be very suitable. A more advanced book of history stories or one of the new geographical readers—both, if possible—should be provided. The use of the poetry reader begun in Standard II should be continued.

For Standards IV and V the literary reader might be a school edition of some classic in which there are child characters. There should be in use also a historical and a geographical reader. Care should be given at the time of choosing to seeing that they are well written. A poetry reader will also be needed.

As in Standards VI and VII reading and recitation merge into the study of literature several readers are necessary. A collection of short biographies will be useful for reading about the lives of the writers of the prose or poetical pieces chosen for study.

In selecting poetry for these standards, the choice should fall

upon such as require a special exposition of the main idea. In the earlier standards it will have sufficed if the poems chosen for reading and recitation have given the pupils some appreciation of the beauties of language and of the uses to which it can be put in awakening emotion. But when the years of childhood are past, the mind needs other training. It is essential that critical power shall be exercised, and wisely exercised, to prevent its becoming a merely destructive faculty that finds its pleasure in deriding and decrying all that it finds itself unable to appreciate.

In providing this training an effort should be made so to grade the literature course that our pupils make a gradual ascent of the hill of difficulty, being provided in successive lessons with successive definite points of literary style and device for criticism and appreciation. Thus, for example, pieces of narrative prose or poetry might be followed by others of descriptive matter and later by some which are reflective in character.

Another leading feature of the more systematic work of these standards should be the attempt to make the course representative of as many forms of literature as possible—thus the selections of poetry should number among them examples of epic, lyric and dramatic work, while in prose reading the pupils should be made acquainted not only with the novel and the essay but also with biography and history.

With regard to the various forms of prose literature, the readers for the two years might be chosen with a view to familiarising the pupils with them. Thus in Standard VI a school edition of one of Dickens' novels might be read, with a biography of some favourite author or historical character, while on the poetical side descriptive and lyrical poetry might be dealt with. The following year a collection of essays, and selections from some standard historian—Gibbon, Hume, Macaulay, Motley—might succeed them, epic and dramatic poetry being taken on the poetical side.

In both standards the use of illustrative material should be increased, and we should set ourselves to fill portfolios with such pictures, portraits, literary facsimiles and documents as we can secure. The value of contemporary documents—letters, diaries, &c.—for purposes of illustrating should not be overlooked.

Some suggestions as to suitable readers for the upper standards may be gathered from the foregoing pages. For supplementary readers the later books of the series recommended for the lower

standards should be obtained. These contain extracts from or abridgments of the novels of standard authors. Prose versions of some of Shakespeare's plays should also be read, and in Standard VII, at least, one of the plays in its dramatic form.

It is not essential that there should be a copy of all these books for each child. A single library copy will be sufficient; for, when children can read with fair ease, fluency and expression, and without stumbling—as they should certainly be able to do in Standard VI—it is not only unnecessary that the members of the class should each hold a copy of the reading-book in front of them during lessons, but a positive advantage when they do not do so. The reader then feels the need of making himself heard, as he does not do when he knows that his listeners have a copy of the book in their hands; and the listeners are better able to fix their thoughts on what is being read than when they are following the words.

All schools should have a good library for the use of their pupils; and this should not be a lending library merely, from which the children may take, or forget to take, a book home on Friday afternoons. It should be open every day for purposes of reference and for private reading in school. Where the size of the school admits of it, it is well to have a certain number of the library books apportioned as class libraries to which the members of the different classes have easier access. It is important, too, that the librarian should be an enthusiast, as this increases the number not only of books lent but also of books read and enjoyed. In larger schools a member of the staff should be made librarian or, perhaps, librarian-in-chief with an assistant chosen from among the scholars; but in single-teacher schools the busy "Head" may well be glad to entrust to two of the pupils the work of lending books and recording loans. It is only from familiarity with books that love of them springs, and to teach our pupils to love good books is one of the first duties we owe them. "A little library growing larger every year is an honourable part of [a school's] history. It is [its] duty to have books. A library is not a luxury but one of the necessaries of [school] life."

FOR FURTHER STUDY

[Books marked with an asterisk are specially recommended]

Notes on the Teaching of English Reading and *Further Notes.* Nellie Dale. (2*s.* 6*d.* each. Dent.)

De Klank-methode voor Hollands en Engels. Van Oostrum. (1*s.* 6*d.*)

*Clear Speaking and Good Reading.** Arthur Burrell. (2*s.* 6*d.* Longmans.)

*A Child's Garden of Verses.** R. L. Stevenson. (2*s.* 6*d.* net. Longmans.)

English Poems for South African Schools. H. J. Anderson. (Part I, 1*s.*; Parts I and II, together, 1*s.* 9*d.* Longmans.)

The Golden Staircase. Louey Chisholm. (Books I to IX, 3*d.* each. Jack.)

School Poetry Book. W. Peterson. (Junior, 1*s.* 6*d.*; Senior, 2*s.* 6*d.* Complete, 3*s.* 6*d.* Longmans.)

*A Treasury of Prose and Poetry.** Amy Barter. (6 Books, 5*d.* to 8*d.* each. Harrap.)

*Children's Treasury of Prose and Poetry.** (In two parts, 1*s.* each. Harrap.)

A Book of Verse for Boys and Girls. J. C. Smith. (2*s.* Oxford Press.)

A Treasury of Verse for Little Ones. Alethea Chaplin. (1*s.* Harrap.)

*A Treasury of Verse.** Selected by M. S. Edgar. (7 parts, 8*d.* to 1*s.* Harrap.)

The South African Book of English Verse. J. Purves. (3*s.* 6*d.* Longmans.)

The Teaching of English. Roberts and Barter. (Blackie. 2*s.* 6*d.*)

*Principles and Methods of Teaching.** J. Welton. (4*s.* 6*d.* University Tutorial Press.)

*The Primary Curriculum.** P. H. Hayward. (5*s.* Ralph, Holland and Co.)

*The Art of Teaching.** D. Salmon. (3*s.* 6*d.* Longmans.)

Note.—For Fairy-tale, Supplementary and Continuous Readers, the catalogues of various publishing firms should be consulted. Excellent series are published by Messrs. Arnold, Bell, Blackie, Charles & Dible, Dent, Harrap, Horace Marshall, Longmans, Nelson, and the Oxford Press. Most if not all of these series are stocked by Messrs. Darter Bros., Juta & Maskew Miller, and lists can be consulted in their catalogues. It is advisable, however, to obtain specimens or specimen pages before ordering. Good series for the school library are Macmillan's *Children's Classics*; Harrap's *All Time Tales* and *Told through the Ages*; Jack's *Told to the Children* and *The Children's Heroes;* and Longmans' *Class-books of English Literature.* **Messrs. Longmans make a special feature of South African Readers and Text-books, and their full catalogue should be consulted.**

CHAPTER VI

A. THE TEACHING OF WRITING

"'I say, Daddy, it's an awful nuisance that you and I don't know how to write, isn't it? If we did we could send a message for the new spear.'

"'Taffy,' said Tegumai, 'how often have I told you not to use slang? "Awful" isn't a pretty word,—but it would be a convenience, now you mention it, if we could write home.'"

—*The First Letter: "Just So Stories,"* RUDYARD KIPLING.

"Writing should be to the child what it is in ordinary life to the adult, one of the ways of expressing thought and not a merely formal copy-book exercise."—H. THISELTON MARK.

Very early in life children become familiarised with writing as a means of expressing and communicating thought. Letters come to the house from distant friends and are written to members of the household absent on a visit. This stirs the imitative instinct to exercise itself in a new direction, and a child of four or five will beg paper and pencil that he may write a letter. A little later he goes to school, where he is taught, among other things, to write.

The foregoing suggests the purpose for which we teach writing. It is as a means of communicating thought in special circumstances that the subject must be regarded. The mechanical act of forming and combining symbols must never be looked upon as an end in itself.

Yet that the early mechanical stage of instruction in writing is important, is made clear by a glance at the "letter" of an untaught child. The maze of scribbles covering the page is unintelligible. As writing fails of its purpose if what is written cannot be read, a preliminary stage of instruction and mechanical effort is necessary that the symbols used in writing may be taught and learnt. If,

however, we keep in our minds the memory of the eager little "letter-writer" who, possessing his thought or feeling, fancies that he needs only paper and pencil for the expressing of it, we shall not keep him longer than needful forming elements, letters, or even words and sentences that have nothing to do with self-expression. There is no reason why he should be kept from enjoying the fruits of his endeavours until he reaches the standard in which written composition is first demanded by the elementary school course. Yet that is commonly done. The mechanical stage of writing is regarded as a separate subject and far too much importance is attached to mechanical perfection—during the half-hours given to copy-writing, that is. On the other hand, when it is being used instrumentally—during dictation and other test-writing—neatness and legibility tend to disappear; not so much sacrificed to speed, as felt by the writer not to be demanded by the exercise. Yet the whole purpose of his practice in the mechanical art of writing is to secure these two qualities in conjunction with speed, so that, when he wishes to use writing as a means of expression, he may be able to produce quickly a "hand" that is easy to read and does not distract and annoy the reader by its blemishes and blunders. It cannot be too strongly emphasized that the production of perfect handwriting is not an end in itself. We do not want to paper walls with our specimens, nor to have them framed to take the place of pictures. We wish to give our pupils a new means of thought expression. Regarding writing, thus, as an instrumental art, we must at all times keep in view the forming of the children's ordinary running hand and endeavour to combine in it the three necessary qualities of legibility, neatness, and speed. In endeavouring to do this, we must bear in mind that there are, in learning to write, two distinct processes—the muscular act of learning to hold and control whatever instruments are used, and the mental effort of learning to recognise, form, and remember the symbols. As in all else, following nature's way, we must see that the muscle work precedes the mind work.

Formal lessons in writing should come fairly late in the infant school, but easy printed letter forms—in sand and with chalk or crayon—may be attempted among other forms by the youngest children during drawing practice. With the printed forms, which are written singly, there will be no need to insist on the letters being begun at any particular point, as is necessary later for the

formation of a running script; and the children gain a useful familiarity with the forms without undue strain. At this stage the use of materials will be helpful in training muscular skill. Suitable materials at first are either the solid or outline forms of triangles, squares and other geometrical figures, to be followed later by letter forms made in cardboard, wood, or metal. The following account is one written of a school (Dr. Maria Montessori's "Casa dei Bambini" in Rome) in which children use such materials with results that prove their usefulness:

"The child traces the outline of these and is then given a coloured pencil of large size to fill them in. No directions as to manner of holding the pencil or of making the marks are given to the child. His movements are left free and unconstrained. At first, naturally, the filling is irregular, often exceeding the outline or failing to touch it at every point, but the children enjoy playing with these coloured forms and gradually the strokes become even and the space is accurately filled in. When this happens the child is ready for the next step, but a week is usually allowed to elapse before it is taken. Script letters of large size cut from fine emery paper are pasted upon squares of cardboard, the vowels being light-coloured on a dark background and the consonants dark on a light background. . . . The child is given a letter, a vowel first, and told to touch it. Being already expert in this sort of exercise he usually does it correctly; but if need be the teacher takes his hand and directs the first and the middle fingers properly about the form of the letter and at the same time says, 'This is *a*.' . . . The child is usually interested in this and repeats it by himself, in some cases many times. The next step is to teach him to recognise the letter when he hears the sound corresponding to it, so the teacher says to him, 'Give me *a*' or whatever the letter is. And the third step, after the letter has been lying on the table for some minutes, is to test the memory and recognition, and the teacher asks the child, 'What is this?' . . . The vowels are usually taught first and the consonants next; but there is no established order, as often the interest of the child in certain words or letters will determine the progress. . . . Besides the individual letters, words are given in the same way. For instance, the word *mano*. The teacher says to the child, 'Give me *m*,' and so on with the other letters . . . finally pronouncing the word, the child tracing it

with the fingers. . . . Some day, when the child has become familiar with the vowels and a part of the consonants, for it is not considered always necessary that the entire alphabet should be learnt before he begins to write, he is given a piece of chalk and . . . suddenly finds himself in possession of a new power. . . . For a few days this acquisition becomes an absorbing occupation. . . . No child is ever told that a letter is faulty; but the practice in tracing the sandpaper letters with the fingers is kept up long after the children are able to write, and in fact they write more by muscular sense than by sight, and if a child is in doubt as to the next letter that he wants to write, instead of looking at the letter he runs his fingers over the cardboard model, so that muscular training is continued." (*The Montessori System*, by Theodate L. Smith. Harper.)

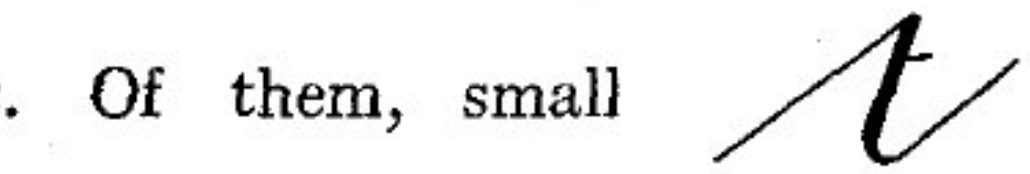
As soon, however, as children are introduced to speech symbols for reading, formal writing lessons should begin. At first these should be confined to the printed characters, the children being shown how to copy, in a subsequent writing lesson, some letter or letters which they have mastered as speech symbols in an earlier reading lesson. We must, however, remember in transcribing these from book to blackboard for the children to copy, that the printed characters will only be used by our pupils during the short time that they are learning to associate them with the script forms, and from the beginning we should modify them slightly to emphasize the resemblance between the printed and written characters.

Letter groups for writing are, of course, not the same as letter groups for reading—reading groups being classified on sound and writing groups on form. Consultation of different handbooks on the teaching of writing will show that difference of opinion exists, among teachers of the subject, as to the best classification of letter forms and, of course, the alphabet having been formed without any thought of the difficulty of teaching infants to write, we may expect to encounter irregularities which make a perfect classification impossible. Moreover the slight difference of form which letters take in different styles of writing as, for instance, the "Vere Foster," Longmans' Copy Books for South Africa and "Ramage's Systematic," affect this grouping. It is, therefore, better for us to make our own groups in accordance with the style of writing

we teach, or to take them from a special handbook advocating it; and it will be sufficient to indicate here the principles which should govern such grouping:

Every group of letters should have a common base-form, and there should be in one group as little variation from the base-form as is possible without unduly multiplying the number of groups. The base-forms should be taught in order of simplicity. We may now see how these two principles may be made to apply in the first letter-group. The simplest letter of the alphabet in form is the

small letter . It consists, as will be seen, of an initial straight link, a short downstroke, a bottom curve, and a final straight link, and is furnished with a dot above. These four elements, then, together make the base-form of the i-group of



letters. Of them, small consists of the same elements, but owing to its longer downstroke requires the initial straight link to be taken higher. A short cross stroke takes the

place of the dot of the *i*. Small has, after the downstroke of the *i*, a bottom curve running into an upstroke followed by a second short downstroke and terminating like the *i*

with a bottom curve and straight link. Small and

capital

and

are included in this group. The first introduces, in addition to the elements mentioned, a top curve; while the second finishes with a crotchet. The capital letters have these additional elements as well as their greater height to increase their difficulty. We should not, however, think it necessary to teach them all in a single lesson,

but only to teach them, with perhaps the exception of the capitals, before passing to other letters with a new base-form.

Two other distinctive base-forms are the *loop* under and upper, the latter being simply an inversion of the former and the .

In the *loop-group* may be included *e* (short) and *l b h k j f y z Y Z;* in the *o-group, o a d g q c A C.* It will now be seen how ill-advised it would be to attempt to teach the letters of a reading group in a single writing lesson. Let us take, for example, Group 1, including short vowel *a* with the consonants *p b ; t d ; c k q* and *g*. There are in this reading group, letters from no less than three writing groups : *p* and *t* from the *i-group, b* and *k* from the *loop-group,* and *a d c q* and *g* from the *o-group.* To set the children to copy so many different base-forms in one lesson would be to invite the result of having no one of them mastered.

In deciding—if the decision is not made for us by some higher authority—what style of writing we will teach to our pupils, we should bear certain guiding principles in mind. The most important are: (1) That each letter is made according to a fixed design which need only in exceptional cases be modified in order to form a junction with any other letter. (2) That this design be as simple as possible in order that children may not be discouraged in learning the forms. (3) That needless multiplicity of design be avoided, that is to say, that when a good capital form may be made as in the case of *a, c, u* and *w* simply by enlarging the small forms, this should be done in preference to selecting an entirely new one.

A favourite style of writing is that known as the Semi-Upright. In it, it is possible to combine easily legibility and speed. We can write more quickly when the letters slope forward a little (the correct slope is about 18° or 20°) than when they are quite upright. There is, moreover, less likelihood of the loops of one line entangling with the tails of the line above. Against these advantages it is urged that all writing that is not upright tends to induce a strain on the eyes ; as, in order to see that the slope is parallel, the head

must be tilted into a position that exercises them unequally. It is, however, possible to keep a parallel slope when sitting square to the desk with the head bent slightly forward and downward—a position which is not injurious to eyesight.

The system to be adopted having been chosen, it must be decided whether slates or paper, pencils or pens are to be used. Slates are still in use to a large extent in this country ; but it is to be hoped that before long paper will everywhere be substituted for them. To begin with, slates do a good deal to increase the noise and disorder of a class. Another objection to them is, that unless supervision is of the strictest, they are a positive encouragement to an uncleanly and unhealthy habit. From the point of view of work, the objections to them are as great. They lend themselves to easy erasing, thus encouraging carelessness; and they are seldom ruled well enough to permit of really satisfactory work. Even where the lines are well ruled at first they often become invisible in a few weeks' time, giving the owner an excuse for not guiding his writing by them ; while it is rarely that children's pencils are sufficiently long and pointed for their purpose. Even when they are, the use of them is not a good preparation for holding a pen.

It cannot be reasonably urged that slates are much cheaper than paper is. The initial cost of them is more than that of a good substantial exercise-book—which would last a considerable part of a year—and they are always liable to be broken by a fall.

Throughout the Sub-Standards and Standard I lead pencils and not pens should be used. There is, however, a tendency to exaggerate the difficulty of writing with pens and keeping the paper free from smudges and blots. Quite young children can be taught to do both, and once all the letters and combinations of letters are mastered, the sooner they begin to practise using the commonest instrument for written communications in practical life, the better.

We now approach the subject of actual teaching. The first thing to be emphasized is the need for us to be able to use the blackboard. The days are gone in which it was thought sufficient to put a perfect copy in front of the children and expect them to reproduce it. It is now recognised that children must be *taught* writing, and that the best results are obtained when the copy is written in front of the class. All manner of faults may be expected where this is not done ; for a copy previously engraved or written

gives the children no help in the matter of beginning, forming and joining letters—or, at least, though it can be made to do so by tracing over, it does not do so in such a *living* way as the copy written before the children's eyes. The writing of a good blackboard copy in the course of a lesson demands some skill; but such skill as is needed may be acquired by all who make steady and persevering effort, and present-day training puts it within the reach of all. Work among student-teachers shows that the number of them who cannot acquire in a year a sufficiently good blackboard "hand" for the purpose of teaching writing is small, and nothing but perseverance is required to make it still better.

In addition to preventing errors in the way of beginning, forming and joining letters, the writing of blackboard copies in front of the class has other advantages. It allows of collective teaching and collective correction. When children are set to write from copy-books with headlines it is a difficult matter to keep them all writing the same word at the same time, and, when they do not do so, they make individual faults which, requiring individual correction, cause waste of time. The use of blackboard copies, again, enables us to grade difficulties according to the needs of our own pupils in a way which is impossible in the case of copy-books with headlines.

In writing as in reading words may be taught as wholes, or built up by putting together their elements which have been taught separately. Thus, for example, in reading we may teach our pupils to *look* at the word cat and to *say* it by one effort of seeing and sounding, or may teach them its parts c-a-t, successively, and afterwards require them to put these together to form the whole word. Similarly in teaching writing, we may put the whole word *it* before the class as a copy, or we may teach the letters—or even the elements composing the letters—successively, and later combine them to form the word.

There are certain advantages claimed for each of these methods respectively, by those who advocate the use of them, and they are advantages which must be admitted by impartial critics. On behalf of the method of teaching whole words it is urged justly that it is both more natural (that is to say, it follows more closely the way of learning to speak) and more interesting—words having more interest, because more meaning, for the children than letters, and letters than elements. But while it is necessary that our methods

shall be as natural and as interesting as possible, it is also necessary for us to bear in mind that little fingers must have simple tasks. The children's eyes, too, at this early age are unable to see a number of parts in their relation to each other.

This advantage of a simplicity suited to the children's age, is rightly claimed for the method which builds up words letter by letter; but its opponents argue, with some show of reason, that the elements of words can have no possible interest for children, as they can have no possible meaning. Well, if little children were always interested in meanings alone, we should have to admit the contention; but we know, from our own experience of them, that they are often very little interested in meanings. We frequently hear them shout some jingle of meaningless sounds for half an hour together, with every appearance of absorbing enjoyment. At such times they are interested, not in meaning but in action; and so, when they are being taught the elements of letters in order that they may concentrate muscle and mind on single, simple forms, they *are* interested—not certainly in the meaning, but in the making of them.

In the case of writing as in the case of reading, we may admit the natural method to be the better under ideal conditions; but where the conditions are not ideal—where the teacher fails in skill or power of discipline, or the children have been badly taught in infant classes and first standard—writing, like reading, may suffer, if the method adopted for teaching does not lay sufficient emphasis on the elements of which letters and words are composed.

A good plan for a Sub-Standard or Standard I class is to begin by setting for copy, if not whole words, at any rate whole letters. Then, if there are found in the class children who are unable to reproduce well as much as was set at first, to separate them from the rest and give them systematic practice in elements, combining these by degrees until the children have passed the point of difficulty and are able to rejoin the class. If the class to be taught is higher than Standard I or II and is found to be a class of bad writers, it will be better to put them back, with perhaps a few exceptions, to drill on the elements as the quickest and surest way of correcting faults of construction. With an average class, of whatever standard, it should be possible to set copies of whole letters, words, or sentences as a general rule, reverting to

the elements of them whenever some particular form proves a stumbling-block. In short, a judicious combination of the two methods, as conditions dictate, is likely to have better results than the use of either exclusively.

There is, perhaps, no other school subject for the teaching and practice of which right physical conditions are of such vital importance. If the conditions of lighting and position are wrong, eyesight, spine, and lungs may all be permanently injured during school years. This will be easily understood when it is considered how much time school children spend, particularly in the higher standards, in the act of writing—not that given to copy writing alone; but to the writing of compositions, of much of their arithmetic, and to test writing in all subjects. In all this writing our pupils will tend to take and keep the position which became habitual in their first writing lessons. Again, if the light is insufficient, or the children are badly placed with regard to it, there may be constant eye-strain. We thus see how very important it is that attention be given to these two matters of lighting and position.

While the amount of light in a school or classroom is largely a matter of architecture for which the builders are responsible, we can ourselves regulate its direction with regard to the children when writing. It should come from the left rear of the children—over their left shoulder—and the desks should, therefore, be placed to the right of the main windows, each row a little in advance of that through which the chief light comes to it. There should then be a gangway on the left in order that the end children on that side do not sit in the shadow of the wall. A supplementary window higher in the wall at the back of the class would increase the light without any danger of causing a marked shadow and so injuring the children's eyesight.

While absolute uniformity of position should not be insisted on in a class, as the children will differ considerably in size and build, we must see that no child assumes a position which is slovenly or awkward or likely to prove, if persisted in, injurious to health and growth.

To protect the chest and spine it will be necessary first to see that the desks are suited to the size of the children using them. They must not be too high, or the children will be strained in reaching them. They must not be too low, or they will sit in a

hunched position with cramped chest. They must not all be of the same height, as the children in a class vary much in size. They should slope at an angle of fifteen degrees. These conditions being fulfilled, we must then, to guard against a twisted position which may induce curvature of the spine, see that the children sit square to the desks. Their feet must be placed firmly on the floor or foot-rest, while their left forearms lie horizontally along the bottom edge of the desk. We shall need to check the strong tendency the children show to move the elbow upwards till it points at last to the top of the desk, the forearm then lying obliquely instead of horizontally—a position which strains the back and side.

To protect the eyesight we must see that the pupils' heads are not inclined sideways to the desk, but bent slightly forward and downward. The best corrective for the wrong position is to insist on their papers being straight in front of them. Their eyes should not approach within twelve inches of papers or books."

The matter of pen-holding is also important. In the very early stages nothing need be said to the children about the way they hold their "*instruments.*" These will at first be chalks, crayons or pencils, which children do not as a rule hold awkwardly. Even in the beginning, however, they may learn that for writing, in which the strokes of the pencil must be firmer and steadier, the hand needs more support than in drawing, and that to give this in the best way they must rest the point of the little finger and the part of the hand near the wrist on the table or desk. A step towards later correct pen-holding has been made when this position of the hand becomes habitual in writing.

In Standard I—or at least Standard II—when the pen supersedes the pencil, more strict injunctions will be necessary to teach the correct manipulation of the two-pronged nib, as the need for equal pressure on both prongs demands a careful holding of the pen. This is secured by placing it between the stretched thumb and forefinger of the right hand, and then, bending the thumb, curving slightly the forefinger and bringing up the second finger to support it on the side opposite the thumb. The proper way of supporting the hand having been learnt, the children will not find much difficulty in maintaining this position of the fingers, as they seem to close naturally round the pen, giving it the firmness of a triangular support.

Standard I (at least in the latter half of the year) and Standard II children should have practice in this method of pen-holding by means of some form of drill, not merely for the sake of saving time and securing uniformity of action, but because they are entering upon the stage of growth in which drill methods play a necessary part in their development.

The pen on being passed should be placed in the groove of the desk, with its handle towards the left. Some such drill as the following should then, after being carefully taught, be given without variation at each lesson:

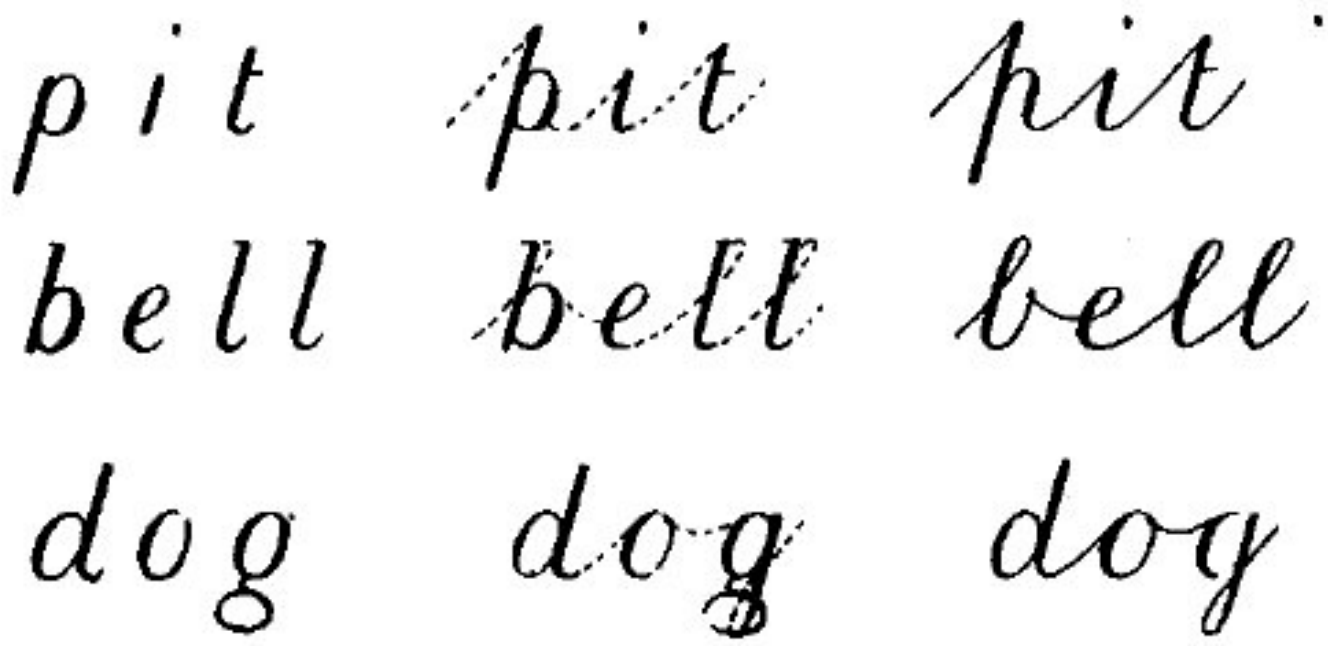
Command.	*Meaning.*
One	Lift pen between left thumb and forefinger, holding it near the top of the handle. Transfer pen to position between right thumb and forefinger—the thumb pressing the left side, the forefinger resting on top. Get pen and fingers into right position for writing. Place the second finger beside the forefinger, pressing the right side of the pen about an inch from the end.
Two	Place yourselves in position—feet on floor, chest square to the desk, left forearm lying horizontally along the bottom edge—and look at the blackboard.
Three	Dip pens in ink and—bending head slightly forward and downward—begin to write.

One more point remains to be dealt with before returning to the matter of the development of formal writing lessons—the question of size of writing. For young children "large hand" is easier than "small," and they will get their best practice through a script a little larger than text-hand, written between clearly marked lines. This size should be the one required of them through the Sub-Standard and Standard I years. In Standard II the size may diminish to be written between half-text—$\frac{1}{4}$ inch—ruling. In Standard III the ruling should be narrower again, small hand—$\frac{1}{3}$ of text $= \frac{1}{8}$ inch—being suitable, and from time to time the children should be practised writing this size on single lines, while text-hand copies should be given occasionally, but not more than

occasionally. In Standard IV and above the writing should never —except during the still more occasional practice of text-hand— be between double lines, and the pupils should write frequently on unlined paper.

We may now return to the development throughout the standards of the formal lessons in writing. They begin, as has been said, with lists of single words copied in printed characters from blackboard or reading sheet, and a little later from reading books. The use of coloured crayons will, at this time, increase the children's pleasure in the task of transcribing, and may be continued so long as the printed characters are copied. When, however, the children pass on to combining script letters into words it would spoil their joinings and retard speed to keep to it longer.

Following the lists of words in printed characters comes, as soon as a sufficient number of letter groups has been mastered, the making of parallel columns of words, in which the script form is written to the right of the printed one, thus :



A little later the printed characters should be dropped altogether, and then, as soon as possible, the children should be advanced to the writing of sentences—not sentences from their reader or from our blackboard model, but sentences of their own composing. For instance, we might ask : " Which children would like to tell mother in a little letter what they have done at school to-day ? " The response would be very general, so we might continue : " Very well; but we have done many things. Which of them shall we tell? What do you say, Susie ?—Willie ?—Fanny ? " continuing until we have got a decisive vote for one activity, as, for example, for *at school to-day we read about three bears*. Though this sentence draws its letters from five writing groups, we shall be surprised to

find how soon and with what ease the children will transcribe it and other similar sentences with the interest of "writing to mother" to help them. So, in a few weeks at most, they find themselves able to write a letter—though a very short one. When a letter has been written the children who tried very hard should be allowed to "post" their exercise book in their school bag and "deliver" it to mother, who will, of course, return it next day.

The figures to 10 should be taught in the writing—not arithmetic—lessons of the Sub-Standard years.

Capitals are not required of infant class children, and without them a letter cannot assume its proper form. My own experience, however, is that children in their last infant year master capital forms very readily, especially when these are only the small forms enlarged to double size. As it is by going on that children are helped to go further, there seems no reason why the delight of writing "a real letter" should be deferred until the standards. When one or two capitals have been mastered there is no great difficulty attending the writing of such a letter as follows:

At School,
Monday.

Dear Mother,—This morning we began a new song about a lamb. When we have learnt it all, I will sing it to you.

Your loving
Jack.

No instructions, of course, as to the form of letters would be given. The children would simply be told when to begin a new line and when to use capitals. They would then, through practising the right form, learn at an early age to avoid mistakes which, at present, are sometimes found in the letters of upper standard children.

Another reason for teaching capitals as soon as a class—irrespective of standard—has mastered the small forms, is that children are always eager to write their own names, and these, of course, require capitals.

Still this may rightly be regarded as *Standard* work, and we must always be guided by circumstances. If the children seem unable to keep this pace we must slacken it. The making and

use, in sentences and letter, of capital forms might then be the distinctive work of Standard I.

Whether capitals are taught in the Sub-Standards or in Standard I, such lessons in which whole sentences are written in "real letters" must alternate with others in which the children go at a much slower pace. One lesson should be given—except in the case of a few really excellent writers—to the practice of elements or letters, another to the combining of letters into words, and only every third lesson at this stage to the application of the practical skill thus acquired, to what is its true purpose—self-expression. In all early lessons we must have two aims—the one to increase mechanical skill in writing, the other to sustain and sharpen interest in its instrumental use.

While, till the end of the Standard I year, self-expression should only be expected on matters of general interest to the children, their parents, friends and teacher, in Standard II there should be a little development in the direction of concentrating thought on some particular subject—as, for example, nature studies or lessons in geography.

Here again the mechanical and expressive sides of writing should share between them the time given to the subject at this stage, dividing it equally. In mechanical writing greater perfection of form should be looked for; in expressive writing greater speed without deterioration of form. Standard II children should be able to fill a page of their exercise books with their own thoughts in half an hour without any carelessness as to shape of letters becoming apparent.

The main development expected in Standard III should be greater speed—and therefore quantity—in expressive writing, occasional practice in text-hand, and some practice in writing on single lines. The value of text-hand practice at this stage is, that it revises and impresses, by its greater size, the form and proportions of elements and letters at a time when children are giving up frequent mechanical practice for a further use of expressive writing which may lead them to disregard these features. It also checks the tendency to write a small, cramped hand, which is often seen when children are no longer required to write between lines.

In writing text-hand children often fail to space the lines properly, so spoiling the look of their pages. A very simple in-

junction will overcome this spacing difficulty: "Write on every third line." All children will understand this to mean that the short letters must rest on every third line, loops and tails reaching above and below it; and, if in their early lessons they are reminded of the rule every time they begin a new line, and are made to count down to each successive third, unequal spacing will soon disappear.

With expressive writing the children should still be able to fill a page of their exercise books in a half hour, though this, owing to the smaller lines and spaces of Standard III books, demands a fair rate of speed.

By the end of the Standard III year writing as a mechanical art should be mastered, its further use, except for very occasional revisionary lessons in text and "cursive," that is "running," or ordinary speed writing, being entirely expressive. From this point exercise books should be single lined, and frequent practice in writing on unlined papers should make the children independent of any guide lines. From one to two pages—according to standard—of expressive writing may reasonably be required of them at this stage, for children should be able easily to fill a page with writing matter which they have no need to think out, in a quarter of an hour.

While lessons to increase mechanical skill are being almost given up, the children must not simply be left to fill so many pages in so many minutes. There is still work for us to do. This lies in the direction of improving their current or running hand. As the training of good *cursive* writing has been much neglected in our schools, suggestions for treating a writing lesson with this aim, at this stage, are given below.

SUBJECT.—*Cursive Writing.*

CLASS.—*Any Standard from IV upwards.*

When materials have been distributed and passed turn towards the class a blackboard on which is written a passage of from twelve to twenty lines—or as a variation choose a paragraph of this length from one of their readers—and allow the children seven or eight minutes in which to copy it at ordinary writing speed. While this is being done, pass round the class, making mental notes of the general faults observed.

Return to the front of the class, and, calling for attention, begin to criticise the writing done under the following heads :

(1) *Speed.* Children who have written too quickly—as shown by careless formations—must be reproved.

Note.—No speed is too great unless it results in this carelessness of form. The quicker the better from every other point of view ; but very quick writers must always be kept occupied by some means till the rest are finished.

Those children who have been too slow must be reminded that speed is necessary as well as legibility and neatness.

(2) *Position and Pen-holding.* Any wide departure from rule must be commented on.

(3) *Legibility.* Remind the children whose writing cannot be read at a glance that legibility is the first quality of all good writing, and that it is a quality which all children may acquire. Point out the chief causes of the illegibility.

(4) *Slope.* The worst fault in this particular is the habit of backward sloping. It is ugly, and tends to make writing illegible. Irregular slope also makes the reading of script difficult, and spoils the look of it. Upright writing retards speed and causes entangling of loops and tails. Remind offenders in any of these directions of the correct slope, and illustrate it on the blackboard (*a*) in proximity to a vertical line and (*b*) in a word.

(5) *Roundness.* Express the opinion that angular writing is less pleasing to the eye than a rounded hand, while it also retards speed.

(6) *Proportion.* The marked tendency to equalise the heights of all letters must be reproved. Some children when writing quickly are apt to shorten the long letters till they hardly reach above the short ones and render the writing illegible. The opposite fault of over-long loops and tails must also be corrected, and the fact that maintaining the right proportion of the letters improves both the clearness and appearance of the writing must be emphasized.

(7) *Joinings.* Any faults in the junction of letters must be pointed out and corrected. The chief are the want of any, *i.e.* discontinuity, or too long or too sharp joinings. Irregular turnings, now long and now short, spoil the appearance of writing.

(8) *Spacing.* This must be corrected where irregular or otherwise faulty. The general rule that word-spacing must be twice letter-spacing should be emphasized.

Note that no reference has been made to fineness or thickness of upstrokes and downstrokes. This is immaterial in a running hand.

Have the paragraph, or a portion of it, rewritten. Choose the papers of individual pupils whose faults were most noticeable the first time, and note whether improvement has been made. If not, have the writing re-copied in their leisure time.

The treatment of writing in this chapter differs in some respects from the method of teaching and practice advocated in special manuals on the subject. This is because the specialist in writing is apt to look at his subject as isolated from all others, and to emphasize particularly the need for mechanical perfection. We, as class teachers, cannot afford to do this, but must regard writing first and foremost as an expressive subject which, by reason of its use in testing, is closely interwoven with all others. Having as class teachers the responsibility for all class subjects we must, though striving for the highest possible degree of mechanical skill, give our main efforts to cultivating it as an instrumental and expressive art.

B. THE TEACHING OF SPELLING

It is customary to treat spelling as though it were a separate subject by itself; but a little reflection will show that it is a necessary accompaniment of all the branches of intelligent writing (as opposed to penmanship) namely, transcription, dictation and composition, and that it has no use apart from these.

For what is spelling? Think for a moment of a language which has never been written down; as, for example, the Bushman speech. There is no need of spelling so far as that language is concerned. It is only when a language passes into the written stage that the need arises. With the representation of sounds by forms, rules come into being. A code of signs must be agreed upon and kept to by all writers of the language, or readers will have difficulty in understanding. Anyone who wishes to write the language must know all the forms or signs which represent spoken sounds, and be able to combine them in correct order. He must, in short, be able to spell. *Real* spelling consists in writing the words down. In real spelling we deal with sounds and forms only. The ***names*** of

letters have nothing to do with it. How is it, then, that these are so much used in the usual spelling lessons in schools? Because of the wish to save time. Real spelling—the writing down of letters in correct order to form words—takes a considerable time; the naming of the letters merely, takes much less. In order, therefore, to find out speedily whether pupils *can* spell the words of a test, the quicker naming of the letters is commonly resorted to. From this practice has arisen the use of the term spelling for the process of saying the names of the letters in order, but it must be remembered that this is simply a quick way of testing the power to spell.

Perhaps you feel that there is no difference. It is, however, of great importance that we should distinguish between the two processes, because errors of method in teaching and learning will arise from our not doing so. If we see no distinction between naming letters and real spelling we shall get the idea that the former is a quicker way of learning to spell, just as it is a quicker way of testing the power to do it. As a matter of fact, it is a very slow and laborious way, and should be given up to a great extent. This will be done as soon as it is realised that spelling is concerned with the form of words, and must, therefore, be mastered chiefly through the eye—not mainly by the ear through the mechanical repetition of sounds.

Let us go back again. After a language had passed into the written stage, would most people learn to read or to spell first? To read, of course. This should be our guide in teaching in the early stages of our language work. At first it will be well in passing from speech to confine attention to reading—to giving sound to form. The reverse process of giving form to sound should not be begun till later. As a general rule it is not wise to begin it as a memory test until the second Sub-Standard year, any writing (or printing) of forms before that time being from copy. The strengthening of association between sound and form gained in this way is of more value than the satisfaction of seeing what the children can do.

When once the mechanical art of writing has been mastered, the power to read any word should be a guarantee of the power to spell it. If, however, children during their reading lessons look about and, instead of *reading* the words with their eyes and their thoughts fixed upon them as they say them, merely catch up the sounds of them from their teacher or from other children, they will not learn either to read or to spell. The practice of keep-

ing a class of children reading all the year round from a single standard reader tends, by familiarising them with the order of words in the different lessons, to make such a mechanical repetition of them possible. The speed with which young children, particularly, learn by heart the words of their readers, is a fact which has not been brought home to many a young teacher who listens with pride to their fluent "reading." But if we watch any class up to say Standard III, we shall find that there are a number of children who can read (?) quite as fluently with their eyes wandering about the room. Such children, we must remember, make absolutely no progress in either reading or spelling while reading any lesson the words of which they have learnt by heart.

The words which a child should learn to spell first are those which he uses in ordinary speech, in order that later he may be able to write them correctly when he passes from oral to written composition. The reports of inspectors show that the day is not far distant when the spelling test will be taken not from the reading book, but from the child's ordinary speech. In the lower standards, where oral composition is required, the natural test will be the writing down at dictation of a number of sentences previously given to the inspector by the children, or a number of words chosen from them. So far as it is necessary to test the spelling of upper standards pupils, beyond the limits of their composition exercises, the test will be an unseen one comprising words which in the examiner's opinion should form part of their vocabulary.

Spelling should be taught incidentally, of course, during every reading lesson, for the words in a suitable reader will not differ widely from those which are, or ought to be, in use among children who have been taught to speak on the lines laid down in an earlier chapter. But this training in the habit of examining and noting the forms of words should be a very different thing from the drudgery of learning them by mechanical repetition. Let us see how we may set about it.

Words which are "regular" may be left, when sound drills are given in connection with reading, to take care of themselves. Through constant attention to sounds and the symbols representing them, the children will soon acquire the power of building any such words. "Irregular" words, on the other hand, will need special attention. In preparing any reading lesson we should bear spelling in mind. By the time we have read through the

lesson we should know what spelling difficulties recur most frequently in it, and these should form part of the spelling exercise for the day. It should occupy a full twenty minutes, ten minutes or even five being sufficient for a test on what has been taught. It should be taken before the reading lesson, as then the greater number of the mechanical difficulties of reading will be disposed of before that lesson begins, and teacher and children will be able to give more attention to meaning and expression.

In addition to such treatment of words occurring in readers, we should make use in formal spelling exercises of a variety of methods, so as to ensure every child's finding one which is to him, personally, the easiest. While spelling should be much more a matter of learning through the eye than it is, there are children who are more ear-minded than eye-minded, and others who are muscle-minded—that is to say, we shall find in every class some who learn to spell more readily by sounding than by seeing, and some who learn more readily by writing down the words than by any other method. To give equal opportunity to all these types of children it will be necessary, while remembering that the eye should play the chief part in learning to spell, to make use of other methods, including learning by heart, transcribing, word-building and word-grouping.

As it is necessary to give some definite idea of what should be attempted in each standard, suitable exercises are suggested below. In the second Sub-Standard year, as has been said, the great necessity is to impress the right forms of such words as the children are in the habit of using. The best and most suitable way of doing this will be by means of transcription exercises. These should be given frequently—no day passing without one—while dictation exercises, for testing the power gained, should be correspondingly infrequent, one each week being all that is necessary.

It might seem, on first thoughts, that a transcription exercise would yield an opportunity of attending to some necessary preparation or correction; but in reality such lessons require just as careful and constant supervision as any. This, of course, is more particularly true when young children are transcribing. Every error made will be likely to yield a plentiful crop of future mistakes, so that the greatest care must be exercised to prevent them.

The meaning of the sentence given for transcription should either be self-evident or the exercise should follow a reading lesson in which it has been explained, for to set children to write what they do not understand is to encourage unintelligent habits of work. The sentence should also have some point or meaning in itself. A line of verse is suitable for Sub-Standard or Standard I children; as, for instance, "*He who lies late will never be wise.*"

A short sentence is the best exercise in lower standards, and it should be one which will help to carry out both the main and the minor purposes of transcription, namely, to improve spelling and writing, to convey information, and to cultivate style. The sentence given above fulfils all these conditions. As a spelling exercise it teaches—through *lies* and *wise*—two ways of representing $i + s$ (voiced), and impresses the form of the irregular word *who;* as a writing exercise it gives practice in forming looped letters; the matter is valuable as a proverb, and the form is pleasing through alliteration.

In Standard I the transcription exercises should be supplemented by word-building exercises and lessons dealing with peculiarities in the spelling of common words. Lessons should not be longer than fifteen or twenty minutes, the remaining ten or five being used for the purpose of testing by a short dictation exercise what has been taught. A short test following a lesson will be more valuable than a long one—say on a page learnt as homework—in which dictation and correction take up the whole half-hour. The aim of a dictation test is to find what words have not been mastered; but it has to be remembered that every time a wrong form is written, it tends to impress itself on the mind and to increase the likelihood of the mistake being repeated. For this reason it is bad policy to let the children see their mistakes, and there is much to be said for the practice of having dictation tests written on loose papers which are passed in and *not returned* after marking, the children being told what words require correction. If it is preferred to have the tests in an exercise book kept by the children, words wrongly spelt should not be underlined when marked, but left with nothing to draw attention to them, the correct form being written above the incorrect, or in the margin, in letters of such size or colour that the eye is immediately caught by them. It is for the same reason that most dictation tests should follow preparation.

In Standard II sufficient progress will be made if the transcription, word-building, word-grouping and dictation exercises are continued and developed. Longer dictation tests—occupying 15 or 20 minutes—may now be given, say every other day or twice a week. They must, however, almost always follow preparation, The manner of preparation should vary from time to time, being made in any one of the following ways—during a reading lesson, by transcription, in a spelling lesson, as homework or immediately before the test.

In addition to transcription and word-building exercises and dictation tests attention should be given in Standard III to common irregularities, as, for example, in the use of *g* and *h*, so frequently silent at the beginning and in the middle of words.

In all these lower standards the children should be gaining familiarity with the use of common words which may be confused: those which are spelt differently but pronounced alike, e.g. *blue, blew;* those spelt alike but pronounced differently, e.g. *tear* (= water drop from eye), *tear* (rend); and those distinguished in pronunciation though the difference is slight, e.g. *where, wear, were.* They should be taught intelligently in sentences given for the purpose, and as they are met with in speech and reading. The attempt to teach them mechanically in a long list will only end in failure.

A suitable development in Standard IV, combining as it does spelling and grammar, is word-building by the adiditon of grammatical suffixes, *e.g.*

tap	tap′p′ed	tap′p′ing	rob	rob′b′ed	rob′b′ing
net	net′t′ed	net′t′ing	sun	sun′n′ed	sun′n′ing
whip	whip′p′ed	whip′p′ing	run	*ran*	run′n′ing

Rule (obtained—at any rate in crude form—from children).—When we add "ed" or "ing" to *words of* one *syllable* ending in a single consonant with a single short vowel in front of it, we must double the consonant at the end of the word.

Note.—A sufficient number of examples—never less than three, and more if time permits—must be supplied before any attempt is made to obtain the rule. When this is being formed we may help by pointing out in order the facts that influence it—in the case above that the original words are one-syllabled, have

a single consonant at the end, and a single short vowel in front.

Words with more than one syllable with various endings should be treated similarly. Any good spelling book will give the rules, but these should always be discovered by our pupils from examples supplied.

From Standard V upwards our pupils should be making acquaintance with common roots of Saxon, Latin and Greek origin, and some of the spelling exercises should be based on this work. A number of words may be transcribed in a column, and then divided into their parts—prefix, roots and suffix—the language to which each belongs being written above.

Our knowledge of child nature tells us that mechanical and drill methods of learning are naturally distasteful to pupils of upper standard years, and we must therefore be careful at this stage to present all matter in a manner that appeals to their interest and intelligence. One of the best ways of making senior spelling lessons interesting is to combine them with history.

In Standard V, where the Norman Conquest forms part of the syllabus, a spelling lesson contrasting Norman with Saxon words will help to show how language was affected. The following passage, taken from Chapter I of Sir Walter Scott's *Ivanhoe*, provides a very suitable exercise. All the words in italics are of Anglo-Saxon origin, and it should be pointed out that they are mainly little words denoting common objects and actions—"homely" words, as we say. The Norman words, on the other hand, suggest the experience of a people of higher culture and civilisation:

"'*Why, how call you those grunting* brutes *running about on their* four *legs?*' demanded Wamba.

"'*Swine*, fool, *swine*,' *said the herd*, '*every* fool *knows that.*'

"'*And swine is good Saxon*,' *said the* Jester; '*but how call you the sow when she is flayed and drawn and* quartered, *and swung up by the heels, like a* traitor?'

"'Pork,' *answered the swineherd.*

"'*I am* very *glad every* fool *knows that too*,' *said* Wamba, '*and* pork *I think is good* Norman-French; *and so when the* brute *lives, and is in the* charge *of a Saxon* slave, *she goes by her Saxon* name; *but becomes a* Norman, *and is called* pork, *when she is* carried *to the* Castle-*hall to* feast *among the* nobles; *what dost thou think of this, friend* Gurth, ha?'"

Further lessons should show how other elements entered the language—the adoption of Latin words, for instance, through Roman occupation and the introduction of Christianity; of later French, through the long intercourse between the two nations through landownership and consequent quarrels and warfare from Norman to Napoleonic times, and since, through travel and culture; of Greek—frequently in a Latinised form because of the earlier use of that language—through the spread of Greek literature and learning after 1453.

The history of the higher standards will likewise yield openings for other spelling lessons with an historical interest, as, for example, one to show how the development of science caused further additions from Latin and Greek—the *learned* languages; and another to show how Italian words are mostly connected with music and painting, in which arts the Italian masters were our teachers from the fifteenth century. South African children should have a special interest in being taught the words of Dutch origin—connected with landscape and portrait-painting and seamanship—which point to a time when England learnt these arts from the Low Countries. A lesson on Spanish words will go fitly with the history of Elizabethan times, when England met her great enemy on the Spanish Main. Portuguese, Russian and Turkish words have been gathered through commerce and colonisation in the East. Those of Malayan origin have a special interest in this country. Another lesson might be given on words gained through colonisation and commerce in the West.

Of course such spelling lessons would fail altogether to inspire interest if all that was done was to provide lists of words and to tell their origin and the date at which they were borrowed. There must always be a connection, existing or made before the lesson is given, between the matter of it and some previous knowledge or experience possessed by the children, and the new matter must be presented in such a way that it vivifies history while introducing words in connection with facts that lend them interest.

More advanced lessons in word-building or word-formation should be given with the aim of improving not spelling alone, but grammar and composition. It will therefore be possible to take them alternately in the time allotted to any one of these.

The following suggestive exercises are taken from *Exercises*

in English Word-Formation and Derivation (Frank Ritchie. Swan Sonnenschein):

(1) Give adjectives derived from the following nouns. Example: valour—valorous.

(2) Form verbs from the following nouns. Example: light—lighten.

(3) Form diminutives from the following. Example: river—rivulet.

(4) From what words are the following frequentatives formed? Example: straddle—stride.

(5) Form by adding or changing prefixes words having contrary meanings to the following. Example: agreeable—disagreeable.

(6) Add from among these suffixes—*ar*, *er*, *or*, *re*—the proper terminations to the following. Example: doct + or.

In these upper standards silent dictation should occasionally be substituted for the more ordinary test. For this we should place a blackboard before the class, and calling attention to it write on it a word, phrase or sentence. After allowing a minute or two for silent study of the words written, we should cover the writing, or turn the board, and tell our pupils to write them from memory.

FOR FURTHER STUDY.

[Books marked with an asterisk are specially recommended]

*Textbook of Systematic Handwriting.** Ramage. (1*s.* 3*d.* Darter.)
Longmans' Copy Books for South Africa. 12 Books, each 2*d.*
Longmans' Schrijfbocken von Zuid-Afrika. 5 Books, each 2*d.* Other sets.
Words: Their Origin and Use. Chambers and Ker. (Books I and II, 8*d.* each, and Teachers' Books, 1*s.* each. Blackie.)
1000 *Everyday Words commonly Mis-spelt.** (3 series, A. B. C., 1*d.* each. Dawson, Watson & Co., Manchester.)

CHAPTER VII

THE TEACHING OF GRAMMAR

"All language, both learned and mother tongues, be gotten only by imitation. For as ye use to hear, so ye learn to speak: if ye hear no other, ye speak not yourself: and whom ye only hear, of them ye only learn. And, therefore, if ye would speak as the best and wisest do, ye must be conversant where the best and wisest are; but if ye be born and brought up in a rude country, ye shall not choose but speak rudely: the rudest man of all knoweth this to be true."—ROGER ASCHAM (1570).

[Spelling modernised.]

GRAMMAR has not in the past been a very popular subject either with teachers or with children. Many causes have contributed to the dislike of it. Its purposes as a subject of school instruction have been to some extent misunderstood; and, where rightly understood, have not always been achieved. The teaching of it has been of too formal a nature, and the reasoning demanded by it too abstract. The difficulty of getting children to grasp its principles, rules, and definitions has led to their being set to be memorised from blackboard or text-book, and the fear of the examination has confirmed teachers in this mistaken method of treating the subject.

Teachers who have expected their pupils to learn to speak and write correctly as a result of their grammar lessons, may well regard them with all the dislike born of disappointment. Grammar lessons do not help them much in this particular. Speaking and writing are not learnt by rule; but by imitation and practice. "All languages, both learned and mother tongue, be gotten only by imitation. For as ye use to hear, so ye learn to speak." If any proof of this is wanted it is to be found in the differences in the speech of individual children in a class which has had the same grammar lessons from Standard III upwards. The home influence generally outweighs that of any instruction given. Of course, there is, too, a heavy time handicap to be taken into account. Even if

rules played a much larger part in learning to speak than they do, the two half-hour grammar lessons a week could not be expected to keep pace with the twelve-hours' pattern and practice daily, which the children's out-of-school life affords them.

Nor is it a chief function of grammar to add to the number of words which the pupils can use in speech and writing. Their ordinary vocabulary will not be much enriched by the study of it. New words are adopted when they are heard or seen or practised frequently. It is from conversational, reading and composition lessons in school, and from reading, friendships and business relations out of it, that additions to the vocabulary will come. In grammar lessons the pupils' thoughts should not be directed chiefly to the new words occurring in the given exercises; but to the relations existing between words, and the changes that they undergo. Of course, a little can be done incidentally with this aim in view, and we may from time to time introduce into our chosen sentences (in such connections that they cannot fail to be understood) new words which we desire our pupils to use. We must not expect, however, to accomplish much in this direction.

But even where the purpose of grammar teaching has been understood the results have still been disappointing. This is because the conditions under which children can be led to think have not been supplied by the teacher. Possibly they have not been understood. The first indispensable condition is interest. This has to be cultivated. Children's interest in words grows with their power to use them in speech and written composition, and at first will not be found apart from this power. Early grammar lessons, then, must keep close to the work in composition. Just so far as they fail to do this, and concern themselves instead with mechanical memorising of rules and definitions, they will fail to inspire interest and so be barren of result. The formal, scientific study of grammar, while it can be made to yield interest and stimulating exercise to older pupils, is too much a matter of abstract reasoning to be successful in the case of young children. What they need is to have the knowledge of words which they have already gained, extended by exercises and tests. Grammar in the lower standards should be an examination of the words the children themselves use, of the work these words do and of the changes they undergo. When we recognise this and give our pupils the kind of lessons they need, the subject speedily becomes a favourite one: "It becomes

for them a living subject, so soon as they begin to realise how much the loss of any one of the chief parts of speech would affect their power of expressing their thoughts." From this point rules and definitions are no longer memorised without being understood; but are readily formed, learned and remembered because understood. Elementary school courses make it easily possible for grammar to be taught on these lines; for nothing in the nature of formal parsing or analysis is required of junior pupils. In the upper standards temptation to save time by having rules, definitions and lists unintelligently memorised, may be greater. But here, as elsewhere, two considerations must be borne in mind—one, that the children's needs go beyond the examination room, and the other, that even this narrow examination end is best served indirectly—not by giving to be mechanically worked innumerable exercises which imitate as closely as possible likely examination ones, but by developing power to deal with any exercise.

Having taken this glance at the mistakes and misunderstandings connected with grammar teaching in the past, we must consider in more detail the method to be adopted in future.

Grammar teaching in the lower standards should be simply an examination of the sentences made in oral composition. It is, indeed, a part of the intelligent teaching of that subject and it should be quite informal. "Until a child has learnt to think consecutively, and to express his thoughts clearly, he has no basis for that more formal study of language which is called Grammar." The teaching of grammatical terms takes the attention of both teacher and pupils from what is much more important at this stage —practice in the use of good English or Dutch. At the same time the beginnings of grammar teaching may be made here—the recognising of various kinds of words by the work which they do and the learning of simple names by which they may be distinguished; the division of sentences; the gaining of such practical knowledge of concord, comparison, &c., as may reveal the conditions of clear and correct speech.

The inductive method must from the outset be used in teaching. Examples of the kind of word under examination must be supplied in sentences, the children discovering from these the truth it is desired to teach. Afterwards they should state, as well as they are able, the discovered truth. It is only at a later stage, when they are left to work an exercise or answer a test question, that the de-

ductive method, which argues from the general rule to the particular example, should be used.

Even in Standard I children are quite able to recognise that the words in sentences given during oral composition or met with in reading have different work to do. It will be sufficient if here they learn to pick out in any reading lesson or oral sentence the nouns and verbs. These should be spoken of for some time as *naming-words* and *saying-words*. The grammatical terms should not be introduced till later.

Proper names will be the most easily recognised as names by children. The word "proper" need not be used till a considerably later stage, but, if we bear in mind the fact that it is derived from the L. *proprius* = one's own, and distinguish between a person's, place's or thing's own name and that which belongs to a whole class, we shall be preparing the way for its intelligent introduction when the time for it comes.

No set grammar "lessons" should be given at this early stage. A few minutes taken at the end of the reading or oral composition lesson—sentences from the book or blackboard being used as the starting point—will be all that is necessary. The first talk may suitably follow a lesson in which a number of children's names have occurred. Having drawn attention to these words and been told by the children what they are we might proceed as follows :

(1) *Questioning to obtain a number of Proper Names :*

What is your name? Your sister's name? Your brother's name? The name of the girl next you? Of the boy at the top of the class? At the bottom of it? Of the girl nearest to me?

The names, as given, should be written one under the other, on the blackboard.

(2) *Requiring of a given number of such names :*

Give me the names of three boys in the class. Of three girls. Of three children you have heard or read about in a story (Cinderella, Jack Horner, Tom Thumb).

These also should be written on the blackboard.

(3) *Furnishing of sentences containing such names :*

Writing on the blackboard such sentences as :

Milly stands next to me, and Janie next to her.
Jack, Tom, Edward, and Willie sit together.
Mary and Fanny are talking to each other.

We may ask the children to pick out the names in these sentences. They should be written under the others.

(4) *Giving of Test from Readers :*

Asking individual children round the class to pick out from a chosen page in their readers such names as occur, we should add these also to the blackboard list. We should *not*, in an endeavour to help them, suggest that they look for words beginning with a capital letter. The capital initials will be noted later in a proper time and way.

(5) *Systematising :*

Calling for attention, we may point to the column of names on the blackboard, and tell the children that all the words written on it are names and are therefore called *name-* (or *naming*) *words*. We should then have them read through ; should bid the children look at the first letter of each ; ask what kind of letter it is, and tell that a girl's or boy's own name is always written with a capital letter. Finally, we should bid the class repeat :

Many words are name-words.
A boy's or girl's own name is written with a capital.

Later, common nouns must be dealt with. It must be shown that there are names which do not belong only to one person, place or thing. The transition may be made very easily from the names of individuals to the common names boy, girl, teacher, father, mother. Abstract nouns, which would give more difficulty to young children, need not be introduced at this stage, for no one will expect such young children to be able to classify all nouns. It will be enough if they realise that among the many words used in speech some are name-words. If, however, it is thought advisable to deal with them the use of the word quality, which can have no meaning for the children, must be avoided, *e.g.* in " He was tempted by the

sweetness of the fruit" we should rather say that *sweetness* is the name of that which makes the fruit pleasant to taste.

The verb, as the *saying-word*, should be taught in a similar inductive manner, the children being led to discover—through a sufficiency of examples—that in every completely expressed thought they speak or read, there is one word at least which *says* what some person or thing does or is. Distinctions need not be pursued further at this point, except to show reason for changes of form actually occurring in examples. Such concord as exists between verbs and their subjects must be taught at this stage through use without attempt at explanation. Vulgarisms as, for example, "*He done it*," "*She come with me*," must simply be corrected every time they occur.

Accompanying these talks on the work of words should be others on the parts of the sentence. The children should learn to distinguish the naming part and the saying part, and in the latter to separate the verb from the words completing its meaning. They might then have exercises in picking out subject-nouns and object-nouns, though these terms should not be used. "The noun in the naming part" and "the noun in the saying part" will serve instead.

If by the end of the second standard year the children have learnt to recognise nouns and verbs in a sentence and become familiar with the practical use of these two parts of speech we may be well satisfied.

Pronouns (personal), as words used to avoid the repeating of nouns; adjectives, in conjunction with nouns, and adverbs, in conjunction with verbs, should be the new parts of speech dealt with in Standard III. While the learning of the table of personal pronouns is too often an exercise without interest or value, this part of speech yields opportunity for enjoyable lessons, by the inductive method, *after* which the children will be able to write out the pronouns in tabular form for themselves and find pleasure in doing so.

A first lesson should be given to show the reason for the name pronoun. Suggestions follow:

I. *Examples:*

Write on the blackboard a paragraph of six or eight lines in which—no pronouns being used—the same nouns recur with irritating frequency. Bid the class read it. Ask if

the paragraph sounds well. What is wrong with it? How may it be put right?

In response to the children's suggestions draw a chalk line through the too frequently repeated nouns, writing the correct pronouns above. Bid the children re-read the sentence.

II. *Examination:*

Lead the children to see that in each case another—generally speaking, a smaller—word has been used for a name. We might call these words *for-names*. We don't do that, but we call them *pro-nouns*, which means exactly the same thing. Tell that the word pronoun is taken from the Latin language, which was at one time very largely used by English people.

III. *Exercises:*

Give exercises such as the following:

(1) To find and write down the pronouns in a number of sentences written on the blackboard.

(2) To tell the pronouns in a number of prose and verse passages and to name the nouns for which they stand.

(3) To write down the pronouns from a given passage in the standard reader, writing after each the noun for which it stands.

In a second lesson the children should be led to notice the varying forms of pronouns and discover what governs the change of form. The lesson may be taken somewhat as follows:

Write on the blackboard some such incomplete sentence as:

—— came to school yesterday and —— sister came with ——.

Ask Tom (or some other boy) to read the sentence, putting in the pronouns that stand for his own name (when he is speaking) before *came* and *sister* and after *with*. Ask Mary to do the same.

(1) *Tom* } *I* came to school yesterday and *my* sister came
Mary } with *me*.

Then bid one child tell Tom what he and his sister did yesterday and another tell Mary.

(2) *Fanny to Tom* / *Jack to Mary* } *You* came to school yesterday and *your* sister came with *you.*

Bid one child tell the class what Tom and his sister and a second what Mary and her sister did yesterday, while a third tells the same thing of Tom's dog, using *master* for *sister.*

(3) *Susie of Tom* } *He* came to school yesterday and *his* sister came with *him.*

Willie of Mary } *She* came to school yesterday and *her* sister came with *her.*

Jim of Tom's dog } *It* came to school yesterday and *its* master came with *it.*

Write the sentences on the blackboard, as given, underlining the pronouns.

Point out that in (1) the pronouns were used for the names of Tom and Mary, who were the persons speaking. Tell that the person speaking is called the *First Person*, and write the pronouns as below. Similarly, point out that the pronouns in (2) were used for the names of Tom and Mary when they were *spoken to* by Jack and Fanny. Tell that the person spoken to is called the *Second Person*, and copy the three forms into the table under those of the 1st person.

Point out further that the pronouns in (3) were used of Tom and Mary and of Tom's dog when they were the persons and animal *spoken about.* Tell that the persons (animals or things) spoken about are said to be the *Third Person.* Bid the children notice that in the 3rd person the pronoun takes different forms when used for Tom's, Mary's, and the dog's names respectively. Tell that this is because Tom is a boy, Mary a girl, and the dog not a person at all, but an animal. Bid them notice that it is only in the 3rd person that any change is made.

		In the Naming Part.	*Before a Noun.*[1]	*In the Saying Part.*
First (or 1st) Person—		I	my	me
Second (or 2nd) Person—		you	your	you
Third (or 3rd) Person—	(*a*)	he	his	him
	(*b*)	she	her	her
	(*c*)	it	its	it

[1] For the sake of brevity. In the lesson itself we should explain that this noun is the name of some thing belonging to the person (animal or thing) for whom (or which) the pronoun in the naming part stands.

Call the attention of the children to the table written during the lesson. Bid them notice the changes of form.

Close the lesson with a few oral exercises in telling—or supplying—pronouns in the 1st, 2nd, and 3rd person, in the naming part, before a noun, and in the saying part.

A third lesson should deal with the plural forms similarly. Numerous exercises on both singular and plural forms should then be given both orally and in written form.

The adjective should next be taught, always in close connection with the noun, its *function*, not its form, being especially insisted on. When numerous sentences have been dealt with orally and on the blackboard, the children should be set to pick out adjectives from their readers, telling in the case of each what work they do. A lesson should be given to distinguishing *predicative* and *epithetical* adjectives.[1]

Teaching on the adverb, (in conjunction, of course, with the verb) should follow, function again being emphasized. The adverbial phrase developed from the adverb—e.g. *immediately*, *at once*, *at that very moment*—should receive preliminary oral treatment.

Previous teaching on the noun should be extended; the kinds of nouns, just touched upon in the earlier standards, being fully treated. Later they should be picked out of actual sentences made in oral composition lessons or met with in reading.

In sentence work the relations between the parts—the naming part, the saying part, and the completion and extension of the saying part—should be brought out more clearly. For convenience' sake the terms *subject*, *predicate*, *object*, and *extension* should now be introduced, the children by this time being old enough to discard the easier but more roundabout expressions. Different forms taken by the subject and object should also now be studied, the chief word in each, round which the other words group themselves, being always discovered and distinguished as the *subject word* and *object word* respectively.

[1] The new terminology—from the Report of the Joint Committee on Grammatical Terminology—is used throughout this chapter because, however great the trouble of making the change, the necessity for uniformity demands that it shall be made. The pamphlet (price 9*d.*) on the subject should be bought and studied and the suggested terms brought into use as quickly as possible. Grammar books which use it exclusively are now obtainable. Among these may be mentioned *The Beginner's English Grammar*, F. W. and E. Harrison (1*s.* 6*d.* Longmans).

In Standard IV the more formal study of grammar should begin and the syllabus of work be considerably extended. Of this class the full analysis and parsing of simple sentences should be required. This will necessitate the recognition of adverb phrases which extend the predicate. The preliminary oral work in adverb phrases in Standard III will have prepared the children for this advance.

In all teaching and testing of analysis it will be necessary for us to bear in mind, that it is not as a formal exercise valuable in itself, that it finds a place in the elementary school course. Its value lies in its enabling the children to gain such insight into the construction of sentences as will help them to see the meaning of passages where it has become obscured through a departure from the usual order of sentence parts. Such passages will be fairly common in the more advanced prose and poetry which, as upper standard children, they will be expected to read with the expression which shows understanding. We shall be well advised, therefore, if, instead of making up sentences for analysis or taking isolated passages from grammar books for the purpose, we look through the literary readers of the class, and choose from them such sentences as will be made clearer by analysis.

The remaining parts of speech to be dealt with are the preposition, conjunction, and interjection. The last, of course, as its name implies, is not a part of speech in the same sense as the others are. Its use in expressing emotion must be pointed out and the fact that this is its only function be emphasized, by showing that it may be taken from the sentence without interfering in any degree with the sense. The fact that some interjections (*e.g.* Alas !=How sorry I am !) compress a whole sentence into one word should be pointed out.

The work of conjunctions will be readily understood, though the tendency to confuse them with adverbs must be guarded against. The use in the new terminology of the term connective or link for all words—whether pronouns, adjectives, adverbs or conjunctions—used to connect clauses or sentences should be noted.

Most of what our pupils need to know about prepositions, they will have learnt from their use of them in speech and writing. The function of this part of speech is not easy to *explain* to children, yet some attempt to explain it must be made to avoid the alternative of giving them lists of prepositions to learn, in order that they may be able subsequently to recognise them in parsing. The

objections to the latter plan are that it makes *form* the ground of distinction between one part of speech and another instead of *function*, and that it tends to substitute mechanical methods for intelligent ones. The difficulty of the former is that it necessitates the use of the phrase "express the relation between," which will not have much meaning for the pupils. However, Standard IV children should be able partly to understand abstract expression. If they are puzzled we must help them by reference to some better known example of "relationship."

Further knowledge of the grammar of noun (and pronoun), verb, adjective and adverb will be required now, and lessons on the following should be given:

Noun and Pronoun.—Inflexion—number and case; relative pronouns; common mistakes in the use of pronouns.

Verb.—Used transitively and intransitively; infinitive mood; passive voice (preliminary treatment); tense—present and past; different forms of the predicate, *e.g.:*

(1) Part of the verb to be + noun or adjective.
The stranger *was a young girl.*
The river *is muddy.*

(2) Verb used intransitively.
The man in the doorway *rose.*

(3) Verb used transitively + objects.
I have *finished my course.*
He *gave me the apple.*

(4) Verb in passive voice + adverb equivalent.

Correct use of *shall* and *will*, *should* and *would*; common mistakes in sequence.

Adjective.—Comparison; adjectival clause.

Adverb.—Adverbial phrase and clause, the types of clause being classified according to the new terminology.

While full parsing of all parts of speech may be required of Standard IV children, it should be borne in mind that it is not in the making or remembering of minute classifications that the exercise has its value. Written parsing of words, when the details of their classification are so well known as to be set down mechanically, is sheer waste of time that should be given to other work. Only consider how much time is spent, for example, by a class of children

parsing the word *the* which occurs in almost every sentence. Once children can parse the various parts of speech, the parsing of whole sentences should be stopped, and the only words given to be parsed should be those which have something unusual in their structure or function. Other useful exercises are such as direct attention to some particular point—requiring the pupils, for example, to pick out from a given page, and parse, some one part of speech alone. This will prevent merely mechanical work.

The parts of speech and parts of the sentence having all been dealt with before the end of the Standard IV year, the work of the upper standards will be to go more fully into what has been previously taught—to study the more difficult uses of some special forms of speech ; to complete the study of clauses begun in Standard IV ; to learn to distinguish between *complex* and *double* and *multiple* sentences ; to distinguish also co-ordinating and subordinating conjunctions, and to take up and pursue that interesting branch of grammatical study which is concerned with word derivation.

For instance, the inflexions of the noun have been taught in Standards III and IV. In Standard V a lesson on the disappearance of case-endings in English and Dutch will be a suitable development.

Formal lessons on the adjective and adverb phrase and clause should have been given in Standard IV. In Standard V lessons on the noun phrase and clause should follow. In preparation for these lessons we shall naturally refer back to our earlier ones on the enlargement of the subject and object, and in the course of them will need to deal with and distinguish between the verb infinite and the infinitive mood, the gerund (verb-noun) and participle (verb-adjective).

A lesson on subordinate clauses in general, considered functionally, should follow.

A lesson on the uses of *that* will serve to bring together and systematise all that the pupils have learnt of these uses from time to time, as the different parts of speech have been dealt with.

The further work on verbs will demand lessons on tense, especially as tenses are used differently in Dutch and English. The tenses of the indicative (as given on p. 28 of the pamphlet on the new terminology) should be taught. "Voice" should now receive fuller and more formal treatment than in Standard IV.

Word derivation is as much a subject for the upper standard

spelling lessons as for the grammar lessons, and suggestions have been made—in Chapter VI—as to the nature of the lessons required and the time at which they should be given.

It may be said here that the small word-work handbooks which many educational firms publish will be found extremely useful in the teaching of prefixes, roots, and word-derivation generally, if thay are well-chosen and properly used. With regard to their choice, those which furnish lists of words merely, should be rejected in favour of such as treat them intelligently. With regard to their use, it must be borne in mind that the memorising of lists should always follow—never precede—the teaching which makes them intelligible.

Standards VI and VII may be considered one class for this as for most other subjects. In analysis the pupils have studied the different parts of a sentence and the different kinds of phrases and clauses which go to make up sentences. They have still to learn to distinguish the different kinds of sentence which result from the combining of phrases and clauses.

Under the new terminology previously referred to, these are classified as follows :

(1) Simple Sentences—those containing only one predication.

(2) Complex Sentences—those containing one main predication and one or more subordinate predications. (*Note :* These, in teaching, may be likened to a single tree with its branches, or a river with its tributaries—a whole with parts of relative importance interdependent upon each other.)

(3) Double Sentences—those which consist of two co-ordinate parts.

Multiple Sentences—those which consist of more than two co-ordinate parts. (*Note :* These again, hitherto called "compound" sentences, may be likened to an avenue of trees—a whole composed of independent parts.)

In connection with this classification of sentences lessons will be needed on the subordinating and co-ordinating conjunctions.

At this stage the analysis of a fairly difficult passage, *e.g. Milton's Sonnet on His Blindness*, should not be beyond our pupils. We should work out a number of such passages with them, that they

may learn how to examine them with a view to discovering the relation of the various clauses in each sentence, before they are left to work such exercises by themselves.

Types of sentences classified in accordance with the new terminology—viz.: (*a*) Statements. (*b*) Questions. (*c*) Desires, including Commands, Requests, Entreaties, Wishes—should be dealt with in these last years, and noun clauses classified on the same principle.

A lesson on noun, adjective and adverb clauses should bring into relation at this point former separate lessons on the three.

Work on the parts of speech should be developed on similar lines. Lessons should be given on the

Noun—Cases in English and Dutch—Nom., Voc., Acc., Dat., and Gen.
Order of words as distinguishing case.
The retained accusative.
The noun absolute.
Verb—Ordinary and continuous forms in English and Dutch.
Sequence of tenses.
Subjunctive equivalents.

In grammar, as in other language subjects, South African teachers meet with special difficulties owing to the fact that both English and Dutch are spoken in the country. For this reason, the grammatical analysis of speech is of special importance, since there is a strong tendency on the part of the pupils, as has been said in an earlier chapter, to misapply the usages of one language to the other. In this there lies a serious danger for both—a danger that neither may be accurately spoken. The danger exists in all bilingual countries. To guard against it constant attention must be given to seeing that idiom is kept pure in each language, and teachers in South Africa need, therefore, a thorough knowledge of the idioms of English and Dutch. We must know precisely where the idioms and constructions of the two languages differ, and so be able to give our pupils the necessary warnings and guidance at these points. But it is not enough that we should be aware of incorrect uses. As teachers we must try to systematize our knowledge in order that we may know the best way to combat such uses in the speech and writing of our pupils.

The matter should receive the special attention necessary, both in grammar and composition lessons. The mistakes made will naturally be discovered in the pupils' composition both oral and written, and for this reason should be systematically treated during correction of this. That part of the work, therefore, may be left for discussion in the following chapter. But grammar and composition are closely connected ; for, as has been suggested earlier in this chapter, grammar lessons should be chiefly given (especially in the case of the lower standards) to examining the children's ordinary speech, and the sentences they make in oral and written compositions. During this examination a sharp look-out must be kept for errors resulting from the influence of the one language on the other—as, for example, the use of "is" with both singular and plural nouns owing to the fact that in Afrikaans there is only one form (*is*) for the two—and for misuse of auxiliaries (as in "He *can* be killed" when *may* or *might* should be used) and prepositions (as in "I am going home. Will you come *with ?*" where in English the pronoun "me" must follow the preposition. While, in class, correction of common errors in composition is directed to showing *how* they are wrong and *how* they may be put right, in grammar lessons the aim should be more especially to show *why* they are wrong, the reason being made apparent by reference to rules previously discovered by the pupils themselves.

Thus the teaching both of grammar and composition will fulfil the purpose for which the subjects find a place in the curriculum—the former giving, through actual example, knowledge of the conditions of clear and correct speech, and the latter affording practice in the use of language orally and in writing.

FOR FURTHER STUDY.

[Books marked with an asterisk are specially recommended]

*Report of the Joint Committee on Grammatical Terminology.** (6*d.* Murray.)

Senior English Grammar. Mason, edited by Ashton. (3*s.* 6*d.* Bell.)

*The Mother Tongue.** Arnold, Kittredge, Adamson. (Book I, 1*s.* 6*d* ; Book II, 3*s.* ; Book III, 4*s.* 6*d.* Ginn & Co.)

*The Beginner's English Grammar.** F. W. and E. Harrison. (1*s.* 6*d.* Longmans.)

*The King's English.** School Edition. (1*s.* 6*d.* Oxford Press.)

*Words and Places.** I. Taylor. (1*s.* Macmillan.)

Longmans' Junior School Grammar. D. Salmon. (Price 1*s.*)

Longmans' School Grammar. D. Salmon. (Price 2*s.* 6*d.*)

English Grammar and Composition. H. M. Williams. (4*s.* 6*d.* Longmans.)

*The English Language.** Pearsall Smith. Home University Library. (1*s.* Williams & Norgate.)

*On the Study of Words.** R. C. Trench. Revised Edition. (2*s.* 6*d.* Routledge.)

*Suggestions for the Consideration of Teachers.** English Board of Education.

Memorandum on the Teaching of English. Scottish Education Department.

CHAPTER VIII

THE TEACHING OF COMPOSITION

"Reading maketh a full man; conference a ready man; and writing an exact man. And therefore if a man write little, he had need have a great memory."—BACON.

"Children should be made often to tell a story of anything they know, and when they can tell stories pretty well, write them."—LOCKE.

"I urge, then, as the most pressing need of our schools in this matter, that a fairly good and appropriate style of composition be insisted upon in connection with all subjects, arithmetic, science, history, geography and the rest. Styles may differ; condensation and precision may be cultivated in arithmetic and science; copiousness and vividness in history and geography; but we have no right whatever to accept really bad composition in any single subject. . . .

"No number of specific lessons are sufficient to make children compose well. There must be a wealth of ideas linked to wealth of words, and this is scarcely possible except through copious reading. Once again, impression must precede expression. It is one thing 'to have to say something' and another 'to have something to say.'"—F. H. HAYWARD.

IN school usage the word composition has a narrowed meaning which is explained by its history as a school subject. For many years composition was not taught in public elementary schools till Standard V, in which class it began with the written reproduction by the pupils of a story read to them, and led up to essay and letter-writing in the higher standards. Thus, for some years, all school composition was written, and so the application of the word came to be restricted to the *written* reproduction of a story and to essay *writing*.

When the subject was begun so late, little headway could be made in the remaining years of school life, and when the necessity of training children in the power of self-expression began to be more generally recognised, sentence building in the lower standards was

introduced as a preparatory exercise. As young children write very laboriously, it was felt that more good would be done by their acquiring ease in speaking through much practice than by requiring them to write down the sentences built.

Oral composition, so far as it means the early training of the power of speech, which must at first precede and afterwards keep pace with the teaching of reading, has been dealt with in Chapter IV. Here, it will be regarded more particularly as an exercise preparatory to the written composition of the later standards, though even in the highest standard it should not be entirely given up. Its aim is to secure correct writing by first securing correct speaking—to secure grammatical and fluent composition through correct and easy speech.

In order to do this we must continue the all-important work of relating observation and expression—seeing and saying—getting children to look carefully at objects and pictures both in and out of school, and to talk about them informally whenever opportunity occurs or can be made. From this it will appear that the teaching of composition must not be rigidly kept to cetain fixed half-hours marked on a time-table. There is, indeed, no subject of the school course which suffers more from such treatment. The reason is not far to seek. In language subjects generally, and in this expressional one in particular, school and home influences are often at variance. The school work of one day is undone out of school before the next. Slipshod pronunciation, slovenly habits of speech, ugly and ungrammatical forms of expression are heard and copied at home and in the street, much more quickly than they can be corrected in class during the short half-hour or two in the week which the time-table allots to composition. In order to counteract the out-of-school tendency to faulty speech, where it exists, every lesson must be to some extent a composition lesson, and all possible aid must be got from such closely allied subjects as speech, reading, writing and grammar.

But while it is customary now to take oral composition in the lower standards and written in the upper, we must be on our guard against thinking of them as two separate subjects. They are not two subjects, but one, and the only reason for making such a division between them lies in the fact that, while the exercise must begin with the beginning of school life, if any ease in speech and writing is to be gained before school life is over, writing, as has been

said, is a very laborious matter for young children, who would make little progress if they had to write down all the sentences they composed.

How much the later written work is dependent on the earlier oral exercises for its success, finds very remarkable proof in the recent reports of inspectors. One after another bears testimony to the great improvement in upper standard composition since the introduction of oral sentence-building into the syllabus of the lower standards.

But in one particular it is recognised that there is a danger of the oral exercises failing to prepare the children for their later task of writing compositions. Unless the sentence-forming of the children is supplemented by blackboard work on the part of the teacher, the sentences will tend to be very disconnected, while in the upper standards *continuous* composition is required. The scheme of oral composition adopted in the lower standards must make provision for the bridging of this gulf, or its full value will not be felt. In Germany, France and America it is a common practice to call upon some pupil to come out at the beginning of a lesson and give a continuous account of the last lesson in the same subject. In these countries, we are told, children are taught to "think and speak on their feet without losing their heads"; and, consequently, they speak with a freedom and correctness which the children in our schools often lack. Another exercise directed to the same purpose is to give the children a story to read by themselves and next day to ask one of them to tell it in his own words, and by the help of others in the class to get the whole story told in continuous narrative. Yet another plan is to make subjects taken from home and school life furnish material for oral and written composition. Thus in one school a boy described the woodwork and other exercises of the manual department, and at the close of the term gave a summary of the whole, illustrated by drawings. Nature-study and history may be largely drawn upon for subjects for oral composition, the themes being discussed in class with the aim of obtaining oral fluency in simple narrative and description. Where history is taken for the material, a topic rather than a page or a chapter should be set for preparation—the object being "not information but training in self-instruction," which may have its effect in improved self-expression.

Oral composition, thus used, forms a link between private study

and the written exercise which follows it as a test. In study the mind of the child is employed in trying to make things clear to himself, while in written reproduction he must address himself to the task of making his thoughts clear to someone else. In oral composition the child may be helped to convey his ideas more clearly by having them made clearer to himself. By making him follow a line of thought which we have previously laid down, we may keep him from wandering from the point and get him to fix his mind on what is essential to the subject.

We must never forget that in composition, which is the continuous expression of thought in words, the thought expressed is to be the child's own—not ours, and not that of some model child existing in our own mind. Subjects must be sought, then, in the realm of his interests. We have already found that these are so wide that no lack of topics need be feared. In the Sub-Standards, as has been said, the subjects of conversation should be present before the class in the form of animals, objects or pictures, and this stimulation of thought by sight should be continued from time to time, as opportunity can be made, in the lower standards.

The work is of two kinds—informal and formal. That which is informal is connected with the greetings between us and our pupils; with our orders, which should always be carefully and correctly worded; with answers to questions, which must always be complete; and with the ordinary courtesies of school life. In particular it bears upon reading and recitation lessons, the children being required to talk about stories and poems they have read, to answer questions on meanings, and to give, at the end of it, in continuous narrative, an account of a lesson read. Such informal work should be continued throughout the school course, from the Sub-Standards to the highest class. Of senior pupils a paraphrase of matter read should occasionally be required.

The formal work should deal with both oral and written composition even in the lower standards. In junior classes the oral work should include talks about familiar things, about the objects used in observation lessons and others in the classroom or seen from it, and about the children's homes and doings. It should include, also, talks about unfamiliar things, pictures being used in this branch of the work as an aid to conversation. Use should be made of stories in two ways. They should be told by the teacher and retold by the children, and they should also be read by the

children and then told in their own words. Nursery tales will be most suitable for this purpose in the Sub-Standards and Standard I. In Standards II and III stories which bring in descriptions of distant lands and their inhabitants, and others about famous men and women in history should take their place. In choosing the latter, care must be exercised and the children's interests studied. Such characters as Richard the Lion-Heart, Joan of Arc, and Piet Uys are suitable at this stage. Such as Henry II and Becket, Wolsey, William of Orange and Sir George Grey should be left till later years.

Occasionally the finishing of an incomplete story should be asked of the children, as the cultivation of originality is one of our aims.

Written work in these classes should reproduce the sentences formed orally. In connection with this, lessons on punctuation will be necessary. The use of capitals, full stop, comma, quotation and question marks should be mastered by the children before the end of Standard III.

In senior classes the talks on familiar and unfamiliar things should be given up in favour of others about the pupils' experiences —as, for instance, an excursion, a holiday journey or visit, life on a farm and in a town. Continuous narrative, giving an account of something read in literary or historical readers, or learnt in geography or nature lessons ; or of something studied, as, for example, a picture, should be required. Private reading and current events should also be made to afford material for continuous oral narrative, and later, written compositions. Lessons on the choice of the right word, and on the use of simile and metaphor, should be given.

Written work should include letter-writing, which will necessitate lessons on arrangement ; narrative, story or description, demanding teaching on paragraphs and on direct and indirect forms, and essay-writing requiring the study of structure. Two valuable forms of exercise at this period are the summarising of passages, chapters or narratives, and the expansion of brief accounts.

Further lessons will be required—on the remaining punctuation marks, on connections and relatives, and on spelling.

The preceding paragraphs briefly outline a course of composition for junior and senior scholars respectively. It will be advisable now, to see how this scheme may be fitted to the requirements for the various standards, and to give such suggestions for the carrying out of it as may seem necessary.

Sub-Standards : The repetition of suitable nursery rhymes and recitation of children's poems; easy oral exercises; talks about familiar things (including natural objects); children's stories from Grimm and Hans Andersen.

All this work has been dealt with in sufficient detail in the chapter on the cultivation of speech.

Standard I : Easy oral exercises as in the Sub-Standards, with the addition of talks about unfamiliar things :

Writing of short sentences made in oral work.
Teaching on the use of capitals and the full stop.

The following are suitable exercises :

A. The forming of short sentences each expressing one single idea :

(1) *On familiar things* : The children's books, slates and pencils, things used at table, and the toys they play with, are suitable subjects.

(2) *On unfamiliar things* : Occasionally it may be found necessary to prompt the children's thoughts by means of questions. This should not, however, always be done, and not, as a rule, till the children's thoughts seem exhausted. A customary stimulation soon fails to have any result. Questioning is sometimes useful as a guide to the order of the spoken thoughts. As the children are learning to see and say, some training in seeing and saying *in order* is needed.

In the same way lessons should be taken, with occasional writing of sentences, on nature subjects, pictures, playthings and games. The method has been sufficiently indicated in Chapter IV. Some development in the direction of formalising the children's sentences should here be seen, the lesson being not so much in the nature of an informal unbroken talk. The sentences, at this stage, should receive separate consideration and be "arranged"—the arrangement, as has been said, being given form on the blackboard. The sentences written should be occasionally copied by the children.

B. The telling of a story in continuous oral narrative :

Note : Occasionally, again, parts of the story should be written, for the necessary merging of oral into written composition at a later stage, must be constantly kept in view. In this written work some knowledge of punctuation will be needed.

Earlier writing lessons will have familiarised the children with the use of full stops and capital letters; but there will have been no attempt, hitherto, to teach the rules governing their use. This teaching should now be given with regard to (1) the formation of a sentence; (2) the use of the full stop, and of a capital letter after it.

Use of the full stop:

An oral lesson on this sign might open with an informal talk on use, rule, custom, for punctuation marks are the *customary* signs *used* in writing to make it easy to read what has been written. When a few common customs have been cited, reference should be made to the customs observed in writing, the word *rule* being brought in at this point. The *rules*, or *customs*, of good writing are not easy to remember, so that it is necessary to pay great attention to what is said about them, and to be very careful to practise them in every written exercise.

Enumerate some of the customs of writing. The use, for example, of capital I and the beginning of the names of the days of the week with a capital letter. Ask the children to mention others. Earlier lessons should have familiarised them with the use of capitals for the initial letters of personal and place names, etc.

Turn towards the children the side of a blackboard on which you have previously copied clearly a passage from a book without putting in any stops. Bid the children read the passage. They will no doubt only succeed in stumbling through it. Ask them why they find it harder to read than a piece from their books. You will probably be told: "Because there are no stops," for the children, at this age, will know the name given to the little marks which divide up reading matter. Show how the absence of these stops makes it difficult to see the meaning of what was written. Next bid the children find out where stops are most badly needed, and mark the divisions by vertical lines. Bid them examine the passage again, and notice where these occur—*at the end of each complete sentence*. Point out that the vertical lines took some time to draw and, where not carefully made, spoilt the look of the writing. For this reason sentences are not separated by vertical lines in writing and printing, but by a mark that can be made more quickly and perfectly. Ask a child to come and make the *customary* mark on the blackboard. *Ask* what it is called—for the children, of course, know. Help them to see why it is called a *full stop*.

Direct attention again to the passage on the blackboard where, although the full stops have been entered, the initial letters of the words following them are "small" and not "capital." Ask the children—again their experience of reading books will enable them to answer—if the passage looks right. Why not? Then, having received the correct answer, state that it is *customary*, or a rule, in writing to begin every word that follows a full stop with a capital letter. In other words: Every sentence should begin with a capital letter.

Other uses of capitals should be discovered by the children through the examination of sentences which contain examples of such uses; as, for instance, for the first word of every line of poetry (which may be pointed out during the reading or saying of poetry); for the first letter of titles; for the first word of every direct quotation—taught in connection with quotation marks; for the word "O" standing alone, and for proper nouns.

It is assumed that the need for capitals in the case of personal and family names, of the days of the week and the months of the year, and of place names, will have been discovered incidentally in the course of reading and writing lessons. The frequency of their recurrence in these cases should impress them on the mind.

The need for capitals in all these cases will require emphasizing again and again. It is one thing to know the rules sufficiently to be able to answer correctly about them, as many children can and do, and quite another for the knowledge to have merged into a habit of writing them, where required, without any need for stopping to think. The omission or misuse of capitals is a marked feature of the writing of South African pupils and students, and it is time that the reproach was rolled away. Both faults, of course, are owing in part to a difference of usage in English and Dutch (for example, the "proper" adjective is written with a capital in English, but not in Dutch (cp. "English language" with "*engelse taal*"), but it is owing also in part to the fact that correct usage has not been systematically taught in either language.

Standard II.—Oral exercises as in Standard I, but using stories read in class or by the children privately; short descriptions in connection with geography lessons and nature work.

Written work as in Standard I.

Teaching on the use of the comma and quotation marks.

Use of quotation marks.—The fact that quotation marks are used to enclose every unbroken "direct" quotation and every part of a broken one, may be taught through some poem or prose passages containing many. The children should be asked such questions as "Who is speaking?" "What does he say?" "What is the first word he says?" "Which is the last?" They might then be told to copy the speech, from book or board, carefully entering all marks or signs made near the words, and so on throughout the poem. At the end the rule should be discovered, namely, that when the exact words of any one speaking are told, the words are enclosed in commas—two before the first one, and two after the last one. (The use of single inverted commas, to mark a quotation within a quotation, will not be taught till met with in the children's reading, nor will the use of quotation marks where the quotation runs through several paragraphs.) The children will be interested in discovering that the first two are turned upside down, but the name of inverted commas should not be given till much later—say Standard IV. An exercise might then be given, in another poem or prose passage, the children being set first to study the quotation marks (though this name for them need not be used), then to copy the passage without them, and finally to enter them from memory.

Broken quotations might be treated separately, a conversational prose passage from one of the *Just So Stories*, *Water Babies*, or *Alice in Wonderland* being used to exemplify them.

Note: Excellent illustrative examples of all this work are given in *The Mother Tongue*, Book I—American authors, Arnold and Kittredge—adapted for use in English schools, by J. W. Adamson. Publishers: Ginn & Company. An appendix gives in brief form rules for the use of punctuation marks and capital letters. These will be found very useful for reference, but for the children's study and practice, the method indicated should be followed. They should not be required to memorise the summary.

Standard III.—Oral exercises as in Standard II, with reproductions also, of a story read by the teacher, and of short descriptions of things seen or observed.

Writing of sentences made orally, and of simple letters.
Teaching on the use of question marks and notes of exclamation.

Suitable exercises for this division are—

A. The continuous, oral narrating of a story told or read; the recapitulating of a lesson previously given; the describing of an experiment performed or a scene witnessed.

B. The writing of (1) *short, simple, one-paragraph stories* (*told by the teacher*), *including stories of great men.* (Historical pictures to be used occasionally.) (2) *Short, original, one-paragraph stories.*

Narrative is the easiest form of continuous composition and, therefore, the one with which that exercise should begin. We shall find the average Standard III child quite capable of reproducing short, one-paragraph stories that have been read or told him. This is partly because there is in most anecdotes a picture element which is an aid to memory, but chiefly because the incident unfolds itself in a way that arranges for the writer the order of its reproduction. Children have great difficulty in giving a well-ordered account of anything. Their thoughts are fragmentary and confused, and their speech and writing, therefore, cannot be connected and clear. Thus the short story which carries its own order with it solves for young people the problem of what to tell next.

There is an objection to the *reading* of stories for reproduction. Children are apt to pay too much attention to the words of the book; and, in the effort to remember these for reproduction, forget to follow the story itself. The objection tends to disappear when the story is *told*, for the words are usually altered in the second telling. It is advisable, therefore, to give up reading in favour of telling stories for reproduction as soon as we have trained ourselves to tell them clearly. Meanwhile it will be better to let the children hear a story some little time before they have to reproduce it; and always at the time of reading it to warn them to listen to the story and not to the words.

While invention demands more than narrative, the writer having to supply both matter and words, this is not an extra difficulty to children of inventive mind. Some children are naturally inventive, and these generally show the power of story-weaving, when opportunity is given them, at a very early age, for imagina-

tion is then very vivid. Mrs. Bryant, in her book of *Stories to Tell to Children*, quotes one made up by a "very little boy":

"Once upon a time there was a little boy, and he wanted to be a cock-a-doo-dle-doo. So he was a cock-a-doo-dle-doo. And he wanted to fly up into the sky. So he did fly up into the sky. And he wanted to get wings and a tail. So he did get some wings and a tail."

Invention, then, is quite a suitable exercise for young children, and the writing of short original stories may be asked of Standard III. The response will be best when the children have read and heard and told many stories, and have had good training in oral composition in Standards I and II. Where these conditions do not exist we shall have to be prepared to give help at first. We might do so by telling the children stories which we ourselves have made up; and encouraging them to make an attempt themselves after hearing these. We might also let them have suggestive picture cards in front of them while thinking out a story.

C. The writing of a short, simple letter

Letter-writing, at this stage, will differ somewhat from that suggested in the chapter on writing. There the purpose of the exercise was simply to emphasize the fact that writing is a means of communicating thought. Here, it is to improve the matter and style of communication. As a writing exercise, therefore, the letter might be copied or written without such particular attention to idea and form of expressions as must be given to these when it is dealt with as a composition exercise.

Suggestions for treatment follow:

The lesson proper may be led up to by conversations—in which the children's own knowledge is utilised—on the post office and the postal service—mail trains, post carts, postmen and postage stamps. One of the children, for example, may be asked to describe orally the post office in his own town or village—its situation and the building itself. Others in turn may be asked whether they have ever posted a letter? How they did it? Whether they ever received a letter? How it came to them? Whether the sender pays anything and how? How much must be paid for sending a letter from Capetown to Pretoria? How the letter goes?

Before the next lesson an imagined, model letter from one child to another should be written on the blackboard, and at the beginning of the lesson put before the class, the children being told to copy it carefully into their composition books. As soon as the letter is copied the children should be told to read it through, and then be asked to tell what news it carries from the sender to the receiver.

A third lesson should give the formal teaching necessary at this stage. The children should have their books open at the page on which they copied the letter and the blackboard copy should be before them again for reference. It might be taken as follows:

Ask the children the purpose of a letter—To carry news or messages from the writer to someone else. Tell them that every letter should show: (1) Where it was written, (2) when it was written, (3) to whom it was written, and (4) by whom it was written. Direct them to study the letter in front of them, and find out these particulars from it.

Then tell that letters are generally written in the same form, their parts being arranged according to rule; and direct them once more to study this form and these parts in the letter before them.

Tell that the first part of the letter, which tells where and when it was written, is known as *the Heading*. Draw attention to the position of the heading in their model letter and to the insetting to the right of each successive line of it. Having noted the way in which the date is expressed, point out the advantage of 8th March 1913 over March 8th, 1913, where the figures marking the day and those marking the year come together and are consequently less easy to read.

Tell that the second part of the letter, which tells to whom it was written, is called *the Greeting*. Tell also that it changes with the nature of the letter and with the relation existing between sender and receiver. While in business letters or letters to strangers it is formal and dignified, in social letters, like the one before them, it is friendly and informal.

Tell that the main part of the letter, which conveys the news or message, is called *the Body of the Letter*, and that the rules for writing this must be learnt gradually from the study and writing of many letters.

Tell that the last parts of a letter are *the Ending* and *the Signature*, which show the relation between the writer and the

person written to, and give the name of the former. Bid the children note the form of the Ending and Signature in their model letter, and how, as in the Heading, the successive lines are inset to the right. Tell that it is customary in business and other important communications to write the name and address of the person to whom the letter is written.

Ask what must be done with a letter before it is posted. It must be folded and put in an envelope, which must be addressed in a clear handwriting. Draw the shape of an envelope on the blackboard, and write a name and address within it, pointing out that, again, as in the Heading and the Ending, and Signature, each successive line is inset a little to the right. Tell that the address should neither be written right up in the left top corner, nor right down in the right bottom corner, nor spread all over the envelope. Show that none of these errors of style are seen in the model envelope you have addressed for them.

Note: In a subsequent lesson distribute letter-paper and envelopes, and give the children practice in folding the one to a convenient size and addressing the other. Later, children should be allowed to write "real" letters in school, and, after addressing the envelope, to seal, stamp and post them.

Blackboard Scheme

Letter-writing

A letter has several parts:

1. *The Heading*—showing where and when it was written.
2. *The Greeting*—showing to whom it was written.
3. *The Body of the Letter*—conveying news or messages.
4. *The Ending and Signature*—showing the name of the writer and his relation to the person written to.

Use of question marks.—The substitution of the question mark for a full stop at the end of a sentence which, instead of making a statement, asks a question, should be taught through a number of examples found in the class readers. Attention should be drawn to the ear-like shape of this mark, and several children be brought out to make it on the blackboard. The children should then be told to ask questions and afterwards to write them. Later a "question game" might be devised. For example, a child might

be brought out and told to think of some object in the room. He should tell the children that he has done so, and bid them write on their slates a question asking what he has thought of—*e.g.* Is it the door? Is it the floor? Is it the table? In every case the note of interrogation must close the question. When the "thinker" goes round the class to read the questions, he should give no mark to those who have forgotten it.

Use of the exclamation mark.—From a number of examples, again, it should be found that this is used after words, phrases or sentences which express some sudden feeling, such as pleasure, anger, sorrow, fear, surprise, &c. Further examples should be given for study, and—after practice in making the mark—others, again, be required of the children. It should be pointed out, too, that where the exclamation is a word or phrase, the sentence in which it occurs ends with a full stop or question mark, as required, the exclamation mark being put where the exclamation ends. This must, not, however, be told, but *shown* in a sufficient number of examples.

Standard IV.—Oral exercises as in Standard III, but more stories of great men (using historical pictures occasionally); and more use of stories and other narratives read by the children themselves; the expansion or completion of an outline story.

Written reproduction of a short story, or description read by the teacher; simple letter-writing.

Teaching on "direct" and "indirect" narrative and simple paragraph.

Some of the stories chosen for reproduction by this class may very suitably be taken from classical fiction in which incidents in childhood occur—stories of Tom and little Ellie, for instance, from *Water Babies*, of Alice in Wonderland, of Tom and Maggie Tulliver from *The Mill on the Floss*, of Little Nell from *The Old Curiosity Shop*, of David Copperfield and of Oliver Twist. In addition, many fables may be used for the purpose, while a prose version of a poem such as *The Loss of the Royal George* or *The Inchcape Rock* may be asked for.

Suggestions for the treatment of such stories are given below.

Tell the story after having prepared it carefully with regard to choice of words and arrangement of sentences. Make your

narrative as vivid as possible in the effort to call up in the children's minds pictures of the various scenes and events of the story.

Discuss the story with the class, giving the children an opportunity both to ask questions about and to express their opinion on it.

Ask one of the children to tell the story in his own words. Interrupt him as little as possible, as he may lose the thread of his story. An easy flow of language in narration is required at this point. If you feel that it will be an advantage, ask another child to tell the story over again.

Require the story sentence by sentence of the members of the class. Subject such sentences as require it to discussion, then write on the blackboard the final form agreed upon as best. Rules of sentence-building and joining should be introduced incidentally at this point, if the sentences given exemplify or violate them. Give particular attention in this stage of the lesson to the combining of simple sentences into double and multiple or complex ones, pointing out where they may be used with advantage, and where, on the other hand—as, for instance, to give emphasis or express haste—a succession of short simple sentences is demanded.

Bid the children read through the completed story from the blackboard. Being the reproduction of many minds, it will probably not read very smoothly. Get the children to compare it with their remembrance of the story as told, and to try to express the difference between the two versions. Take their suggestions for removing any jerkiness of style that exists. Avoid formal grammatical expressions in this work, trusting to example rather than rule.

When several stories have been treated in this way help should be gradually withdrawn. The detailed blackboard treatment of sentences and subsequent re-reading and re-writing should be omitted first; then the oral reproduction by individuals and the general class discussion. Finally, the written reproduction by the children should follow straight upon the telling of the story.

Standard V.—Oral exercises on what the pupils have read, have heard read, or have experienced. Completion and expansion of story outlines.

Note.—Suitable material from historical, geographical and

nature-study readers, and from the pupils' private reading should be used for the purpose of these exercises.

Short written descriptions or letters based on the oral work; business letters.

Teaching on arrangement and paragraphing.

In this standard development will be expected both in form and matter—greater ease and refinement of style being required, and a wider range of subjects and exercises. The exercises suggested for Standards III and IV should be continued and developed as follows :

A. *In oral narrative,* greater fluency and nicety of expression applied to the description of a scene, picture or incident.

B. *In story-telling,* the reproduction of full narratives requiring more than one paragraph—that is, introducing and developing more than one idea ; the expanding of a given outline of a story ; the writing of an original ending to a story told " so far " ; the writing of a story suggested by another, *e.g.,* What would have happened if Tom in *Water Babies* had been caught in Ellie's room ; the development of a proverb into a story ; the writing of an original story of greater length.

C. *In letter-writing,* greater length, advance in subject matter in keeping with the children's mental development ; more graces of style. Call should now be made on the imagination in this exercise, and such letters as the following be asked for—a letter of complaint from a doll to her owner, from a pet to his master, from an animal in captivity to his keeper.

Description is less easy than narration because the order or arrangement of what is told is not decided for the writer as in story read or told, but has to be determined by himself. For this reason, and because it demands critical power in choosing and rejecting detail, descriptive writing of anything but the simplest " things seen " is a more suitable exercise for upper than for lower standard children. Preparatory exercises in description should, however, be given from Standard II upwards, beginning with short oral descriptions in connection with geography and nature study (Standard II) and passing, through short oral descriptions of things seen (Standard III), to written reproduction of descriptions read (Standard IV). In this last form of exercise the children are helped to overcome one of the chief difficulties by remembering the order of reading. It, therefore, keeps near narration although the

memory will be less vivid than in the case of a story. The first exercises in unaided descriptive writing should be given in Standard V, and even there we shall often find that our pupils do not know what to write "first" and "next." If the description is of a holiday or visit, there is the order of time to help them. If it is of a scene, the matter is more difficult. They may be helped by a suggestion that they try to remember what first caught their eye in looking at the scene, and then to recall the details of the scene in the order in which they noticed them. When they look at a scene or an object, they see the most striking features first and then the less striking, and they will give the best description when they keep to the order of seeing. When they are describing things experienced instead of things seen, they should, unless they give their description in order of time, write first of those things which made the deepest impression on them.

We should give one caution to our pupils when they are about to attempt description—the caution to avoid using what we may call "adjectives of opinion," such as "beautiful," "pretty," "nice," "horrible." Description should call up a clearly defined vision of the thing described, and these cannot do it, for they have no exact meaning. In description, "adjectives of fact" are wanted; as, for example, "black," "undulating," "feathery." Each of these raises an image which is the same for each person who reads. When writing descriptions, we should tell the children, they should aim at enabling their readers to *see*, and not try to tell them what they must *feel*.

Standard VI.—Oral exercises as in Standard V, more and more stress being laid on *continuous* oral expression; the summarising of a passage read by the children in class.

Written exercises (in the form of letters or otherwise) on the oral work, imaginative efforts being encouraged; summaries, with headings, of what has been read or studied.

Teaching on the colon and semi-colon.

When it is considered of what value, both from a business and social point of view, the power to write a good letter may prove, it will be readily allowed that a large part of the composition time of this senior standard should be given to cultivating it. The letters given to be written, as the form has been mastered earlier, should cover a wide range of subjects.

Occasional revisionary lessons on form should be given, however, with the object of securing good arrangement of the matter contained in letters.

The pupils, for instance, should be advised to jot down first, when practising letter-writing, the things that they wish to say; then, looking through these notes to decide on the order of topics, finding the best for opening and numbering it *one*, and putting the successive numbers against the rest in the order in which they will most naturally follow. When finished, this plan should be criticised—Is it the clearest possible from the standpoint of a person who does not know beforehand what the writer wishes to say?—for a letter should give the reader a clear idea of what the writer desires to convey and not be a mere jumble of statements without sequence or arrangement. If the plan, upon being subjected to criticism, does not give satisfaction, it should be altered before the letter itself is begun.

To emphasize this need for arrangement a letter written without any thought being given to it should be put before the pupils, who should be told to arrange the matter and rewrite the letter.

Standard VII.—Oral exercises as in Standard VI; discussions on matters of current interest; expansion of a brief outline—as, for example, of a proverb or short poem, to show the full meaning.

Written work as in Standard VI; with, also, occasional essays in subjects within the pupils' capacity; *précis*[1] of given matter with suitable headings and arrangement.

Teaching on the remaining punctuation marks, and on the choice of words, including a lesson on simile and metaphor.

Paraphrasing as an exercise in composition has, not without reason, fallen into disfavour of late years. When school children were set to put into their own words one of the finest passages of the great masters, the exercise naturally resulted in what had been expressed beautifully being expressed badly, or at least baldly; and it was felt that better means might be devised for seeing that they had grasped the meaning of such passages.

There is, however, a variation of the exercise which may be made extremely useful. A piece of good prose may be put in front of the children, blanks being left in the place of some of the most telling words and phrases. The children may then be told to fill

[1] From Fr. précis, L. præcisus (præ = before; cædere = to cut)—a precise or abridged statement; an abstract or summary.

in these blanks with words of their own. The chief value of the exercise lies in the subsequent comparison of the substitutions with the original and the discussion that should follow it.

The exercise may also be used as a means of making our pupils familiar with the use of figures of speech, a very necessary form of instruction for upper classes. The reading of an average set of Seventh Standard essays often fails to reveal a single example of figurative expression. As a great "enlivening" of their composition would result from a use of simile and metaphor, something should certainly be done to get our pupils to introduce these figures. The writings of Rudyard Kipling are especially rich in both simile and metaphor, and if a dozen or more sentences from one of his children's books (say, *Puck of Pook's Hill*) were used as suggested above, we should be almost sure to find the result in the next set of compositions.

Essay writing is the last and most difficult form of composition, and is rightly left for the Seventh Standard; but the word "essay" is so loosely used in connection with school composition, being applied to any form of it that is not a story or a letter, that the children gain no insight into its special characteristics, and feel no humility about attempting this highest form of prose writing. This is not to be wondered at when they are told to "write essays" on subjects to which they are not likely to have given any thought.

Before our pupils are set to write essays they should be given a clear notion of the distinguishing features of this form of composition, and be taught in what respects it differs from other forms which they have previously attempted. There is no better way of gaining the necessary knowledge than by the study of suitable essays of good writers, and, as has been suggested, a collection of these should be among the reading books of Standards VI and VII. From the literary study of *Dream Children* the pupils may discover that an essay seeks to convey an impression of the writer's thoughts on some subject suggested, if not actually expressed, by the title; that it is not simple narrative, though it may introduce narrative; nor simple description, though that may be brought in to give beauty and richness to the treatment of the theme. Its distinctive feature is *reflection*. It may seem to deal with more than one topic; but examination shows that they are so closely related as merely to expand the main theme and never—in a well

constructed essay—to open up entirely new avenues of thought. In *Dream Children* the pupils have an example of the skill with which thought may be made to flow from one connected side-stream into another, yet return always to the main channel through which it reaches at last its predetermined end. If they are inspired to try to gain something of this skill, the study will be fulfilling its purpose.

But practice is needed as well as study. This should take the form of weaving double and multiple sentences into others which are complex, and noting how the change of construction gives a stronger impression of "unity"; Grammar lessons on the "connection" or "link" will have practical application in this work. By means of this part of speech sentence must be interwoven with sentence and paragraph with paragraph as the shuttle of thought passes back and forward, to and fro. Not all essays, however, need paragraph division. The essay of "Elia" on *Dream Children*, mentioned above, is written in one long paragraph of several pages, and the writer, with wonderful skill, makes the two words "here" and "then" serve for the dividing and uniting of his reverie. Study of this one essay alone will do much to quicken our pupils' appreciation of the originality of thought and the graces of style that must go to the writing of essays.

In letter-writing and essay-writing—the culmination of all the work in composition—the pupils will need to put into practice all that they have learnt of sentence-building and paragraph-formation. Concurrently with the further definite lessons on punctuation, on figures of speech and on more advanced grammatical rules, criticism of sentences taken from letters and essays written in class must go on with the aim of correcting faults of expression.

Punctuation (VI and VII): *Use of semi-colon*—to separate less entirely than the full stop a number of complete sentences of which the subjects are closely related, as, for example, successive parts of a description.

Use of colon—to prepare for a list or enumeration, and after such expressions as "namely," "the following." It is frequently followed by a dash.

Use of brackets or dashes—to separate certain words in a sentence from the rest, especially when a complete sentence has to be interrupted by way of explanation and modification. Such an interjected part is called a parenthesis.

Note: A warning against too frequent use of dashes, when comma or semi-colon might do the work, should be given.

For the majority of teachers the correction of exercises in composition is a matter of such difficulty that some advice on the subject is necessary. The correction of compositions, it is to be feared, runs away with much of the time which should be given to preparation. The whole subject is beset with difficulties. In no other school subject is the task of correcting so laborious, for in the case of dictation, arithmetic and grammar exercises, a part at least can be done by the pupils themselves, and tests in geography and history frequently admit of collective class corrections. In no other subject, either, is it so important, for if it is not thoroughly done, much of the value of the exercise is lost. The best method, undoubtedly, is for the teacher to go through each exercise with the writer of it, getting him to amend his faults orally; but time will not allow of this, many teachers being unable to find a free moment in school to give to this important side of the work.

Where a teacher out of school hours goes through each exercise, writing in corrections and suggestions, a whole night may slip away before even a third of the set has been corrected, and he has, all the time, the depressing consciousness that much of his labour is wasted.

In these circumstances it is very necessary for us to form or learn some practical rules by which our marking of exercises may be at once less time-devouring and more profitable. The following are suggested:

(1) Adopt a code of signs[1]—not too full, or it will defeat its purpose—for use in marking. For instance:

C. = Capital letter needed.
P. = Punctuation wrong.
O. = Omit.
N.C. = Not clear.
P.C. = Paragraph construction wrong.
S.C. = Sentence construction wrong.
R.W. = Re-write.

S.P. = Spelling wrong.
? Ex. = Questionable expression.
? St. = Questionable statement.
∧ = An omission.
⁞ = New paragraph needed.
"—" = Quotation marks needed.
1, 2, 3 = Order suggested.

This code must be copied by the children on to the front page of their exercise books—or on the inside of the cover—and referred to until known by heart.

[1] That given is a modification, made during the teaching of composition, of one in *The Teaching of English*—Roberts and Barter (Blackie).

(2) Choose out two or three exercises for detailed criticism in class from each set, and have these very carefully corrected by their writers—even entirely rewritten if necessary. Do not follow any regular order in selecting these, but keep a record to ensure each pupil's composition getting full criticism in turn.

(3) Try to go through one exercise *with* each pupil every term.

(4) Keep a notebook for jotting down the general errors in each set of exercises. This practice will result in the revealing of common weaknesses, and serve to direct the course of future lessons.

In the chapter on Grammar, reference was made to the necessity of dealing systematically with the errors of expression due to misapplication of idioms and constructions peculiar to one of the two languages spoken in the country. Suggestions will now be made with regard to the form such treatment should take, and examples will be given of some of the commonest errors.

In the systematic treatment of common errors in composition the preparation of wall charts will be found valuable. These composition charts should show not only the chief errors met with, but the correct constructions for which they are substituted. Then when pupils make any of the mistakes shown on the chart, they may at once be referred to the correct forms, and shown wherein those used are wrong. Although not strictly in place in a book on school method, a systematic analysis of the incorrect forms most commonly met with is given below, with the object of saving the time of students and teachers :

Analysis of Common Errors in English Composition

N.B. indicates that the error is very common.

Incorrect Forms	Correct Forms (with Remarks)
I. Nouns :	
The storm did *a* great damage to the crops.	Omit "a." (In Dutch the article is necessary, but not in English.)
N.B. The sceneries in South Africa are fine.	Use the singular (the noun, being used in a collective sense, has no plural form).
II. Pronouns :	
The horse in the cart *it* won a first prize.	Omit "it." (The pronoun is inserted frequently in Dutch and without exception in Bantu.)

N.B. Earthquakes do much harm to the place where *it* happens to come.

The bees *who* were in the hive are dead.

This is the man *what* I saw.

N.B. I bought *me* a horse.

N.B. He does not know how to behave *him*.

They never try to do *something*.

We should spend our time in doing *anything*.

N.B. After all *my* trouble which I have taken, the boy will fail.

I broke *my one leg*.

Some or other boy will know.

N.B. One enjoys *your*self if *he* is on a farm.

III. Verbs :

(1) *Wrong part of verb used :*

N.B. I have not *receive* it.

We *were finish* our work.

The book has *laid* on the floor.

(2) *Non-agreement of Subject and Verb :*

N.B. The cups and saucers *is* on the table.

N.B. By her speech Portia *show* what courage she *have*.

Write " they happen." (Mistake due to number of words between the pronoun and the noun it stands for.)

Write " which." (" Who " can refer only to persons.)

Write " whom." (Mistake due to " *wat* "—the only form of the relative—in Afrikaans.)

Write " myself." (The Dutch idiom omits " zelf " in such cases, " zelf " being very emphatic.)

Write " himself."

Write "anything." ("Something" is too definite.)

Write "something." ("Anything" is too vague. What is meant is " a certain thing, no matter what.")

Write " the." (With I following, " my " is unnecessary.)

Write " I broke one of my legs." (Mistake due to Dutch idiom.)

Write " Some boy or other." (Mistake due to Dutch idiom " een of ander.")

" One enjoys oneself if one is on a farm." (The pronouns must be all definite or all indefinite, and the same pronoun must be used throughout.)

Write " received." (" Have " must be followed by the past participle. Mistake possibly due to slovenly pronunciation.)

Write " had finished."

Write " lain." (" Laid " is from the transitive verb; *e.g.* " the hen has *laid* two eggs.")

(Mistakes largely due to the fact that in Afrikaans there is no distinction in verb forms between singular and plural, nor, generally speaking, between indicative and infinitive.)

Write "are" for " is." (This error is specially common when a number of words separate subject and verb.)

Write " shows " and " has."

Hamlet's mother *say* she thought Ophelia should have *be* Hamlet's bride.

(3) *Infinitive for Gerund :*

Write " said;" and " been " (for " be," compare " receive " under (1).)

N.B. You are capable *to do* better.

(English often prefers the gerund, or a preposition with the gerund, where Dutch would use the infinitive.)

Birds are clever *to build* their nests.

Write " of doing."

Men are fond *to go* out hunting.

Write " at building."

He practises *to shoot.*

Write " of going."

N.B. He succeeded *to pass.*

Write " shooting."

I have pleasure *to accept* your invitation.

Write " in passing."

Write " in accepting."

The stones hinder the roots *to spread.*

Write " from spreading."

(4) *Wrong Tenses :*

(Especially with adverbs and adverbial phrases of time.)

A. In Simple Sentences :

N.B. The streets *are running* with water.

Write " run." (The English progressive form suggests that something is actually being done at the very moment referred to.)

N.B. I *am* (staying) here *since* three weeks.

Write " have been " and " for." (In English the perfect is used when some action (say) continues from some point in the past right down to the present.)

N.B. The town *has been* flooded last year.

Write " was flooded." (An action which is over and done with is expressed by the past tense in English.)

I *have come* back a week ago.

Write " came."

I never told you yet.

" I have not yet told you." (The fact of my not telling you still continues; hence *perfect* in English. Wrong sequence of tenses specially common with dependent statements.)

B. In Complex Sentences :

N.B. I have not been well since I *am* here.

Write " have been " (The illness has lasted from the time of coming till now ; hence *perfect* in English. " Since " must never be used with a present tense.)

N.B. He said that he *will* take three times his money.

Write " would." (The rule in English is that a past tense in the subordinate clause must follow a past tense in the principal clause. There are very few exceptions.)

I heard that a man *has* been killed.

Write " had."

N.B. He worked hard so that he *may* pass his examination.	Write "might."
I hope to receive a letter from you so that I *might* know your intention.	Write "may." (The opposite error to that in the previous sentence. Specially common with the auxiliaries "might," "should," "would.")
When I came here I *see* him striking the horse.	Write "saw." (The action is over and past, hence past *past tense.*
(5) *Wrong Use of Auxiliary Verbs :*	
You *can* be thankful that you escaped.	Write "may." (In English, when it is a matter of what is permissible, "may" must be used, not "can," which always contains its orginial idea of "what I am able to do." *Cf.* the following correct uses. "May I go home now ?" "Yes, you may." "Which of you *can* add one cubit to his stature ?"
You *could* have been drowned.	Write "might."
He *did tell* me.	Write "told," unless great emphasis is required. (The *present tense* of the auxiliary "do" (on the other hand) is not at all emphatic.)
	[The misuse of "shall," "will," "should," and "would" is very common, and by no means confined to South Africa.)
IV. Adverbs :	
(1) *Misuse :*	
N.B. He died some time ago *already.*	Omit "already." (The word is wholly unnecessary. In English it should only be used when something is done before a specified time, *e.g.* "I have already finished my lessons"—*i.e.* sooner than I was expected to.")
N.B. He was *very* amazed at what he saw.	Write "much." ("Very" must not be used with participles, unless they have become real adjectives. It may be used before "much" to intensify the meaning, "very much amazed.")
N.B. Come and sit on the stoep *so long.*	Write "meantime" or "for a while."
(2) *Misplacing :*	(An adverb should be close to the word or phrase it modifies.)
N.B. We *nearly* climbed to the top.	Write "We climbed nearly to the top."
I never remember having seen him before.	Write "I do not remember ever having seen him before."

(3) *Omission of —ly at end :*

N.B. I am yours *affectionate.*
I am *exceeding* sorry this has occurred.

(Partly the result of indistinct pronunciation.)
Write " affectionately."
Write " exceedingly."

V. Prepositions :

(Mistakes in their use are very frequent and are mainly due to the influence of Afrikaans idiom upon English. Only a few of the commonest mistakes are here given.)

N.B. I travel *with* the train.

Write " by " (" With " = " along with.")

We walked *with* our wet clothes to the farm.

Write " in."

He succeeded *to pass with his examination.*

Write " in passing his examination."

N.B. May I come *with ?*

Write " With you." (" With " must never be used as an adverb or with its object omitted.)

N.B. The examination begins *with* the 5th of this month.

Write " on."

A boy *with* the age of twelve.

Write " of."

Have pity *with* me.

Write " on."

I congratulate you *with* your birthday.

Write " on."

N.B. I jumped *in* the water.

Write " into." (" Into " must be used when *motion* towards something is meant.)

We drove them *in* a corner.
Write " into."

I was staying *by* my friend.
Write " with."

He came *by* our house.
Write " to."

N.B. We went and sat *by* the stoep.
Write " on."

Note, also, the following. (The correct form is given in each case in brackets.)

I am afraid *for* (" of ") the dog. Be careful *for* (" of ") the snakes. I am studying *for* (" to become ") a teacher. *To* (" at ") whom are you laughing ? She is angry *at* (" with ") me. He set the place *to* (" on ") fire. I will wait *on* (" for ") you. He *only* came *after* two weeks. (He came two weeks " late.")

VI. Miscellaneous Errors :

(1) *Confusion of Words :* (due largely to lack of reading and failure to study the precise use of words. The correct word is given in each case in brackets.)

We arrived at our destiny (" destination "). The oak-trees give it a fine sight (" appearance "). The heat is intensive (" intense "). I went to my room to *lay* (" lie ") down. [Lay is a transitive verb.] You will *loose* (" lose ") your train.

(2) *Confusion of Ideas :*

By doing so (" If you do so," or " By *your* doing so ") I shall be much obliged. He *returned back* (" returned " or " came back ") for me later. I *forgot* my book *at home*. (" I forgot my book " or " I left my book at home "—a confusion of the two forms.)

(3) *General.* (Not easy to classify ; but practically all due to the influence of Afrikaans. The correct form is given in brackets.)

I will not give you more *as* (" than ") you require. (" As " is due to the influence of Dutch " als.") One does not get so tired in travelling with train *than* (" as ") with cart. (The opposite fault to the last. *With* is also wrongly used (for " in ") as in the above example.) He plays *like* I do (" as "—a mistake not confined to South Africa). *Here* (" there ") are many books of travel in the library. (" Daar " in Dutch serves for both words.) The father *puts* (sets) a good example to his children. (Such idiomatic phrases should be carefully studied and memorised.) I was so *aggravated* (" annoyed " or " provoked ") that I nearly struck him. (To " aggravate " means to make worse, *e.g.* His sufferings were *aggravated* by the cold.) He has *made* ("passed") his matriculation. (A very common error.) The farmers are trying to *ruin out* (" destroy ") the locusts. (Apparently from the Dutch " uitroeien "). He is doing his *utmost best* (" very best "). There is *nearly* no (" almost " or " scarcely any ") food left. Will you *please be so kind* as to send me the book ? (Omit either " please " or " be so kind.") He is in the habit *to swim* (" of swimming." *Cf. III* (3) above.) Of " not so ?" " This is a flower—' not so ' ? " (*Cf.* English idiom " Is it not ? ")

VII. Slang and Vulgarisms : Slang exists in every language ; but specially common in South Africa is the excessive use of " absolutely," " lovely," " heaps," and " crowds " (instead of " a great deal ") also such expressions as : He thinks " a mighty lot " of himself, he is " on his own " now ; he tried " to do me down " ; there is " precious little " water here. A tendency to exaggerated intonation is also common—*e.g.* " absolútely," " fár fär away."

Among vulgarisms is the use of " man," *e.g.* " I say man ! Come and see this " ; of " eh ? " *e.g.* " Bring me the plate, ' eh ? ' " and the expression " Excuse ' me ' (' my ') saying so."

The tendency to use colloquial forms in serious writing should be striven against, *e.g.* " shan't," " haven't," " photo," &c. The appropriate language to use in different forms of letter-writing requires careful study.

VIII. Incorrect Spelling and Punctuation :—A specially common mistake in South Africa is the combination into one word of two that should remain separate—*e.g.* "alright," of which " all right " is the correct form, " afteral " (" after all "), " atonce " (" at once "), " anymore " (" any more."). The opposite mistake is seen in " some body " (" somebody ") and " all together " (" altogether.") Pairs of words of like sound are often confused—*e.g.* " there " (adverb) and " their " (pronoun) ; " were " (verb) and " where " (adverb) ; " practice " (noun) and " practise " (verb); "principal" (chief) and "principle" (rule of conduct). Small words which seem to give trouble are " too " (It is *to* (" too ") hot to work), " weird " (very often written *wierd*), " they " (appearing as " the "—a reflection of the way in which it is pronounced). Note also the following: *bycicle* (for " bicycle "), *donkies* and *vallies* (for " donkeys "

and "valleys"), *beautifull* (for "beautiful"). He was *lead* ("led") away; *fourty* ("forty"). That much misspelling is due to faulty pronunciation is beyond doubt, *e.g. moto-car* (due to slurring of the *r* of motor), doc*t*er (for "doctor"), accomm*i*dated (for "accommodated"). The misspelling of place names and the omission of capitals with proper nouns are other common errors.

The neglect of punctuation is very marked at the present time; the subject should be taught much more systematically. Very often a sentence has no "full stop" at the end, or a "comma" is made to separate the subject from the predicate in quite a short sentence. The misuse of the apostrophe also calls for attention—*e.g. its your's* (for "it's yours") and *your's* (for "yours") affectionately.

Systematic use of charts showing such characteristic errors and the correct forms which should be substituted for them will do much to lessen the number of mistakes with which compositions and examination papers are crowded. But such methods will only be applied throughout the country when student-teachers become used to them in training colleges and centres, learning to draw up and use the necessary charts during their school practice, and, after their training is over, making regular use of them in the schools to which they are appointed.

Such charts should, therefore, be made by all student-teachers during training. They should show errors (and the correct forms to be substituted) met with during school practice. The analysis of errors given in the foregoing pages will serve as a guide; but it is not meant to be slavishly copied without regard to the mistakes actually made by pupils.

FOR FURTHER STUDY.

Lectures on the Teaching of Composition. E. T. Campagnac. (1*s.* Constable.)
The Writing of English. Hartog. (2*s.* 6*d.* Clarendon Press.)
*The Problem of Elementary Composition.** Spalding. (1*s.* 6*d.* Heath & Co.)
*The Teaching of English.** Roberts and Barter. (2*s.* 6*d.* Blackie.)
The Teaching of English. C. L. Thomson. (6*d.* Horace Marshall.)
*The Teaching of English Composition.** E. G. Covernton. (2*s.* 6*d.* Dent.)
*Teaching Composition.** J. Eaton Feasey. (2*s.* 6*d.* Pitman.)
*Essay-Writing for Schools.** L. Cope Cornford. (4*s.* 6*d.* Murray.)
*Notes on the Teaching of English.** Batchelder. (2 vols. 1*s.* 6*d.* each. Macmillan.)

*Picture Composition.** Lewis Marsh. (3 Books, 6*d.* each. Blackie.)

A Preparatory Course of Literary Reading and Composition. Lewis Marsh. (1*s.* 6*d.* Blackie.)

A Combined Course of Literary Reading and Composition. Lewis Marsh. (2*s.* Blackie.)

*Picture Lessons in English.** (3 vols. 6*d.* each. Black.)

*Lessons in Composition.** G. Eaton Feasey. (3 vols. 5*d.* each. Pitman.)

Lessons in the Use of English. Mary F. Hyde. (Section I. Parts I, II, and III. 6*d.* each. Heath & Co.)

Language Training. (Junior and Senior Series, 3 Books each. 3*d.* to 7*d.* Teachers' Books, Junior and Senior, 1*s.* 6*d.* net each. Schofield & Sims, Huddersfield.)

*Selected English Letters.** H. J. Anderson. Class-books of English Literature Series. (1*s.* 6*d.* Longmans.)

Written English and the Way to Write. K. K. Moakes. (Pupils' Edition, 1*s.* 6*d.*; Teachers' Edition, 2*s.* Longmans.)

The Class-Teaching of English Composition. (2*s.* Longmans.)

Longmans' Junior School Composition. D. Salmon. (1*s.* Longmans.)

Longmans' School Composition. D. Salmon. (2*s.* 6*d.* Longmans.)

Suggestions for the Consideration of Teachers. English Board of Education.

Memorandum on the Teaching of English. Scottish Education Department.

Note.—If wall-pictures suitable for use in composition lessons are desired, the catalogues of different publishers should be consulted: *e,g.* Arnold (Leeds), W. & A. K. Johnston, Longmans, Nelson, Philip, Lawrence and Jellicoe (Pictures for the Kindergarten).

CHAPTER IX

THE TEACHING OF HISTORY

"What you have with you, and before you, daily, dearest to your sight and heart, *that*, by the magic . . . of your lips, you can gloriously express to others; and what you ought to have in your sight and heart,—what, if you have it not, nothing else can be truly seen or loved,—is the human life of your own people, understood in its history, and admired in its presence."—RUSKIN.

"Without history, citizenship has no root; without citizenship, history has no fruit."—J. R. SEELEY (paraphrased).

"Land of our birth, our faith, our pride,
For whose dear sake our fathers died;
O Motherland, we pledge to thee,
Head, heart, and hand through the years to be."

The Children's Song, RUDYARD KIPLING.

THERE is no school subject that should benefit more than history by the new movement and the new methods in education. The more clearly it is recognised by examiners and teachers that the storing of unrelated and undigested historical facts by the children, is of small value, while the effect of history teaching on their minds and on their life as members of a society or state, is of the greatest importance, the more will the way be cleared for history teaching of the right kind.

To point out the value of history teaching should be unnecessary. The children of to-day are the men and the women of to-morrow; and, when to-morrow comes, the government of the State to which they belong will be influenced—even controlled—by their judgments and their desires. Some knowledge of the story of the human race, and particularly of their own nation, with its warnings and its examples, will be needed to guide those judgments and govern those desires. Without much detailed knowledge of their own country—its laws, its institutions, its fame—

inspiration to enlightened citizenship and patriotism will be lacking.

This inspiration to enlightened citizenship and patriotism is of supreme importance in a state in which the power to vote is as widely extended as in the Union of South Africa, where it is conferred on all adult white males who have been resident in the country six months. Entrusting voting power to electors who are ignorant of the lessons of history, is like making engine-drivers of blind men.

"The right understanding of the history of the past is indispensable to the rational moulding of the history of the future. Political action unenlightened by history is either fumbling empiricism or the reckless enforcement of prejudice and self-interest. Patriotism unchastened by history is ignorant tribal arrogance." ("Kappa," in *Let Youth but Know*).

Very little, of course, towards the political education of future citizens can be accomplished in the short time at disposal for history teaching in elementary schools, and no instruction that is open to the slightest suspicion of party bias should ever be given in them. If there were no other reason to urge against such a course, there would be the fact that we cannot foresee the political questions that will exercise the citizenship of our pupils in ten years' time; for the political situation is constantly changing. What we owe them in this matter is a mind and character training, through the facts of history, that will enable them to approach whatever problem the politics of their own day may put before them, not only with honesty and intelligence, but also with a knowledge of the errors and the wisdom of centuries of politics and statesmanship.

But enlightened citizenship is the latest fruit of history teaching. In the schoolroom we must work for the fulfilment of this distant aim of all our teaching, through a nearer one that may be fulfilled in each lesson—the aim to interest our pupils.

There is something amazing in the fact that the subject is not found more generally interesting in schools. All children like stories, and like them none the less when they are true, and history is filled with true stories. As one of "the Little People" for whom *Jock of the Bushveld* was written, said of that book: "I love it because it's full of the things we know, and because it's a true story about our own country;" so for the same reasons all children

should love history, which, properly taught, will be seen to be "full of the things [they] know." In older pupils who have begun to be interested in personality history records the feelings, sayings, and doings of a great company of personages, gossip of a grand order—and quite harmless. It opens the fascinating pages of biography, inviting their attention at a time when their interest in conduct and motive and character is especially keen. Moreover, history, rightly taught, explains the causes and shows the beginnings of much that is matter of their everyday experience. From it we learn, too, how nations came to their present homes—what remote causes brought them by land and sea from far distant countries. To take only one example, it shows how, for the causes of European occupation of South Africa to-day, we must look back to the fifteenth century and the wars between the Crescent and the Cross. Finally—for history lessons should not deal only with national events and characters—it is the story of the human race, a more enthralling romance than has ever been imagined.

In spite of all this, comparatively few school children "like history" and, perhaps, comparatively few students. Several reasons can be found for this. The teaching of history in our schools is begun too late, and errors of teaching have grown out of a mistaken notion of what the syllabus requires, this leading in turn to an attempt to cover too much in a short space of time. As history is only begun in Standard V there is no possibility of teaching in any detail the whole of South African history, and, in English history, the period from the Norman Conquest to the Napoleonic Wars—a period crowded with figures and events—in the three years remaining before the school course ends. More especially is this so, now that it is recognised that this syllabus is absurdly inadequate in scope. Children must not be left in ignorance of all that happened in England before 1066, and they should know in addition to what they are at present taught something of Empire and of World History. It is quite obvious then that the necessary teaching can only be given in the broadest outline.

But the time at which history is introduced into our schools and the attempt to teach it in too much detail, are not the only reasons of its failure to interest. It has to be admitted that teachers, in many cases, have neither had sufficient knowledge of the subject nor known how to teach the little they knew. They have therefore been bound by the textbook in use in their class as regards both

matter and method; and very frequently their textbooks have consisted of scrappy uninviting paragraphs and long lists of dates and events, which they have set to be memorised without shedding a single ray of light upon their meaning, or vivifying them by a single human detail. They have looked upon history as something to be found in books and have not realised that traces of it may be seen in all our common ways. They have begun by talking about "Systems of Defence" and not about the soldier in garrison, the magistrate in the court-house, and the policeman on his beat; about "Systems of Communication" not about the arrival or departure of some big liner or the bustle that announces the coming of a mail train into some great railway terminus, or the postcart that journeys by lonely roads to far-scattered and thinly-peopled places; about the "System of Parliamentary Government" and not about the excitement of an election day and the battle of the posters. Can we wonder that school children, wandering in worlds not realised, have failed to find interest in history?

It is now generally recognised that while young children are unable to appreciate history in its formal aspect as a study of the sequence of lives and events that make up the national or world story, they will be found to listen eagerly to the true stories of long long ago.

As early as Standard I we may begin to lay a foundation on which to build in upper standard years a superstructure of that formal history which is closely linked together both in time and through cause and effect. The development through the lower standards of this early teaching by stories, which are not history but which lead up to history, will do something to make time for a better form of learning than the fevered memorising of bare facts and dates which has been too common in the upper standards. The congestion must then be further relieved by our giving up the attempt to teach the whole of the lives and events that fall within the periods set for formal study, choosing those only which have educative value for our pupils and rejecting much that is merely informative. Vivid presentment of the great events and movements that have influenced, materially or spiritually, our present-day life is much more important than a cursory treatment of many which have no other claim than that they are included in the text-book in use. History teaching in the past has been too much a matter of the lives of kings and of their ambitions and quarrels resulting in wars and

battles which have been memorised as mere names and dates. It must keep closer to the life of the people as a whole and to each vital aspect of that life. Their customs and their struggles for freedom and for better conditions of living, are now recognised to be true stuff of history.

Until recently, again, the learning of dates by mechanical repetition took up too much of the time given to the subject of history in schools. At present the tendency is just the other way, and dates are banished from many schemes of history teaching with almost worse effect. If, in the past, history to the school child meant little more than glibly giving a date to an event or putting an event to a date, at present it is often no more than a jumble of events to which they can assign no place in time at all. The earlier practice was wrong in two particulars—it taught too many dates and it taught them in too abstract a fashion. The mere memorising of them made far too great inroads on the time at disposal for this wide subject, while it furnished very little in the way of ideas. Present practice, though it endeavours to supply more ideas, leaves them vague in many cases, because it does almost nothing to fit the events of which it treats into their place in history. A middle way must be followed. Dates must be given a place because without them history has no perspective; things are not seen in their true relation to one another; background and foreground are indistinguishable. At the same time they must be kept within bounds and we must make all possible efforts to give graphic and concrete illustration of the flight of time. "Time-lines"—the use of which will be explained later—will show the lapse of time to the eye, while emphasis on the changes that have taken place—in dwellings, in dress, in weapons and warfare and in ways of living—will make it actual to the mind.

It is further recognised now, that while we must omit from our history lessons much uninteresting and unimportant detail we must furnish them with detail of another kind, going to original sources for those minute particulars of lives and events which make for vivid presentment. Until late years this has been almost impossible. "Source" books were voluminous and costly. The busy class-teacher had neither time nor money for them. But things are very different now. There are many books of extracts from historical sources—original documents, letters, and narratives written at the time of the events they describe.

"Everyman's" library and other cheap reprints have brought a number of books invaluable to history teachers within the reach of all. Books of collected poems furnish verse that commemorates stirring events and inspires enthusiasm for brave men and women to whatever nation they may belong. With such a store of illustrative material easy of access, the teacher who can add nothing to the meagre outlines of his class text-book, and who contents himself with hearing and explaining a chapter set for home study, is not worthy of his calling. He will never succeed in bringing the subject—as it can and must be brought—closely into touch with his pupils' own lives and presenting it to them as a drama in which they themselves have a part to play.

The writer who was quoted a page or two back impresses on us this view of history as "a strangely romantic adventure in which we are summoned to bear a part" . . .

"Out of the mists of the unfathomable past there crawls into our ken a being in whom we with difficulty, and not without horror, recognise our own form and lineaments. He is a comparatively weak animal among monsters such as now people our nightmares; but in his brain there lurks a cunning and in his hands a dexterity that are better than strength. His babblings, at first mere emotional and imitative noises, become gradually symbolic, and shape themselves into speech. He distinguishes between himself and the inexpressive animals around him, and calls himself Man. He covers himself with skins and seeks shelter in caves. Then he stumbles upon the secret of fire-making, fashions himself weapons and tools of wood and stone, and begins to subdue other animals to his uses. After a few ages he learns to wattle a hut on a defensible mound or to drive piles into shallow water and build his cabin upon them. The baking of clay and the smelting of metals are gradually mastered and art begins in the rude patterns which he scratches on his pots and weapons. Meanwhile the forces of Nature and the mysteries of life and death have been inspiring him with crude fancies, which, handed on with infinite variations from father to son, have grown into a body of grotesque myths clustering round a system of witchcraft and anti-witchcraft in which lies the germ of religion . . . Then in the teeming valleys of the great rivers of the East, enormous empires loom upon our view, in which myriads of men are held in servitude by a kingly or priestly caste.

They pile and hew great monuments, they invent hieroglyphs and letters, they war upon and devour each other from dynasty to dynasty. But meantime, in a little corner of mountainous country,[1] with a deeply indented coast line, an immigrant tribe has suddenly —in the course of a few centuries, that is to say—rushed through all the stages of barbarism, and stands, in some respects, on the very summit of civilisation. In sculpture and in one type of architecture it has reached the limit of conceivable perfection. It has laid the corner stones of the world's poetry and philosophy. It has gained signal victories against overwhelming odds in a life and death struggle with one of the giant empires of Asia; and it has sent forth a young warrior,[2] who has marched conquering from the Strymon to the Indus and has built a new empire out of the fragments of those he has shattered." ("Kappa," in *Let Youth but Know*.)

That is what history reveals of the beginnings of human story. Now let us read from its later records of South Africa.

"Away up on the shoulder of the Devil's Peak the old Block House stares into the face of the rising sun . . . It was at the Block House they kept watch for the raiding Hottentots; it was against that little breakwater that the waves from the ocean of barbarism used to thunder and break; it was from there that they sallied out on great hunting expeditions among the elephants and lions, giraffe and eland in the far hinterland of the Cape Flats (where the suburban trains take you now in fifteen minutes). In those days hippos were plentiful in Princess Vlei near the Wynberg Golf Links . . . Who will tell the story of the pioneers? Not one man or one woman, however willing; but many will be needed for the task—each to contribute his or her share, small or great, to preserving a record of which any country might be proud. No one person can do it or attempt it, for who are the pioneers? Look up again at the old Block House on the shoulder of Devil's Peak! They began there. Straight below it stands the monument to Rhodes, and two thousand miles north his body lies within a hundred yards of Alan Wilson's. A thousand miles still further north the pioneers are pressing in to-day; and west and east every mile has had its pioneer—men and women, Dutch and English—Our People

[1] Greece. [2] Alexander the Great.

who made Our Country . . . Is it not one country ! And ours ? "
(Sir Percy Fitzpatrick, in *The State*.)

One more passage and I must stop quoting, though the temptation to continue is almost irresistible.

" Blood River feeds the Buffalo, and the Buffalo the Tugela ; and the marks of history lie thick hereabouts. Forty years after the Boers crushed Dingaan, the British crushed Ketshwayo and finally broke the Zulu power, and all within a radius of a few miles. Isandhlwana, where the 24th Regiment was annihilated, lies only a little way to the left as we look from Verkykers Kop. Rorke's Drift, where Chard and Bromhead with some seventy men in a laager of biscuit tins and flour bags, beat off five thousand of Ketshwayo's best men fresh from the Isandhlwana victory, is no more than five miles from the spot where the Boer laager stood on Dingaan's Day. Kambula and Hlobane Mountain—so nearly another disaster—are close by : and further back to the left is Ulundi, where Ketshwayo learned from the British what Dingaan had learned from the Boers. It was at Hlobane that the second of the Piet Uys tragedies occurred. He with his five sons joined Sir Evelyn Wood, as is recorded, ' to take vengeance on the Zulus for the death of my father and brother.' Once more it was an ambush and a retreat, and once more it was a Piet Uys doing all that bravery could do to avert disaster ; but this time it was the father who went back hearing of his son's danger—and gave his life for his son. It was that same day that Colonel Weatherly, fighting off the foremost Zulus to give his thirteen-year-old boy a chance to escape, fell wounded, and as in the case of the first Piet Uys the gallant youngster went back and stood over his father until he too fell They found the boy's body lying across his father's."

It is history of this kind, the human life of our own people, " not the cold hard thing of facts and dates, of ink and parchment, but the life as it was lived with its joys and sorrows, its trials, triumphs and tragedies ; warm with the life-blood of those who lived and died for us to make Our Country and (though they knew it not) to make it one "—it is such history we must teach our pupils if we would have them love it and be eager to pursue the study of it.

Having noted some of the errors in teaching which have come between the pupils and their enjoyment of history, we must now decide what are the aims which should govern our teaching.

All South African boys and girls have, by virtue of their nationality, certain privileges and duties; and history, which shows the origin of these, can be made to inspire them with the desire to perform their duties in honourable payment for their privileges. Such matters cannot be treated in any fullness of detail in elementary schools, but even there children can be brought to see what a debt of practical gratitude they owe to the pioneers of the nation who have turned the country from what it was to what it is, and can be led to feel that true patriotism demands of them that they preserve and extend, for those that come after them, the benefits won by so much sacrifice on the part of their forefathers.

Their history lessons should also be the means of implanting in them a just pride in their South African nationality, and this should not interfere with, but rather encourage, the growth of a generous appreciation of the good qualities of other nations with whom they may come in contact or of whom they may read. They should be made aware of the characteristics which distinguish peoples from each other and must be saved from the mistake of believing that their own nation is, in all respects, better than any other.

We have now to consider both the matter and method of teaching in relation to the work of the standards. In doing so we must bear certain general principles in mind. These are: first, that in all stages of teaching both matter and method must be suited to the age of the children being taught; second, that they must be accompanied by as much concrete illustration—in the form of relics and records, prints and pictures and portraits—as can be provided, and third, that prose and poetry bearing on the subject of the lessons should be read or quoted by the teacher, and in some cases learnt by the children, whenever such extracts can be made to render the teaching more vivid.

History, as a formal subject, we have seen, should not begin until the fifth standard. In the lower standards, however, lessons leading up to history proper should prepare the way for it. Standard IV should be regarded as a transition year in which the nature of the lessons begins gradually to change, inclining more and more to the formal character demanded by senior standard work.

In the Sub-Standards stories should be drawn from various

sources and should include examples of the heroic literature of as many people as possible—"real" stories, for the greater part, as opposed to the fairy tales with which the teaching of literature begins. Those in the Bible deal with the life of the Hebrews. Kingsley's *Heroes* and Hawthorne's *Tanglewood Tales* furnish the legends of the Greeks in a form that needs little alteration to adapt them to the youngest classes. The Norse legends occur in the *Heroes of Asgard* and in Alice Zimmern's *Gods and Heroes of the North*, while Malory's *Morte D'Arthur* supplies Celtic examples. The *South African Fairy Tales* of Mrs. Bourhill and Mrs. Drake contain some native folk-lore tales, and in *Outa Karel's Stories* (contributed to various numbers of *The State* magazine), some Bushman and Hottentot folk-lore stories are charmingly told by S. Metelerkamp. Some of Rudyard Kipling's *Just So Stories*, which tell of "the beginnings of things in the high and far-off times," may also be made to help in the laying of historical foundations.

When the Sub-Standard years are over, more direct, though still informal, history-teaching should begin. In the standards the history-teaching has two main divisions, each with characteristic features of its own—the teaching for *younger* and for *older* scholars. Connecting these, as has been said, will be the transition teaching of the Standard IV year, which has something of the nature of both methods.

The history of the home country and people should be an inheritance of childhood, but, as in the lowest standard the method must still be that of illustrated story-telling, other lives and events than national ones should be drawn upon. Tales of the far-off days told in simple, vivid language and illustrated by pictures—brightly-coloured and not over-crowded with detail—and by blackboard sketches, are suitable for junior pupils. Pictures and sketches should lay stress on the *look* of people, houses, ships, weapons and tools, for at this stage the teaching must be as concrete as possible. No book need be used in the first two standards, but after these two years of story-telling a good historical-reader with simple, vivid narrative and copious, full-page and coloured illustrations (such as, for example, the *Highroads of History*, Nelson) should be brought into use in Standard III.

We may now consider the work of the three junior standards in greater detail.

In the first and second years the lives of famous men and women in general history should be told as vividly and picturesquely as possible, and an effort made to link their names to some heroic deed or impressive story. Such personal qualities of these heroes and heroines as the children can appreciate—courage, kindness, unselfishness, love of home and country—should be brought out, and the influence of their lives made clear. Pictorial illustrations, which should be freely used, should be bold in line and colouring, and the word-painting should have the same quality. The result of teaching at this stage depends on all impressions being made as vivid as possible, and it is better to tell a few stories in full detail than to deal cursorily with many. Occasionally, in place of the usual biographical story, some topic which connects history with geography might be chosen—as, for example, "Early Ways of Life"—hunting, pastoral, agricultural.

In Standard III the teaching of the lives of great men and women of South African, Empire and General History should be continued. In this standard there should be an attempt to make the children realise the passage of time between the life of one famous personage and another, or between two events. The use of lines of time which represent such intervals graphically, will be found helpful here. When the first story is told a vertical line to represent the period to be covered by the year's teaching should be drawn on the blackboard and divided into lengths representing ten, a hundred, or a thousand years, according to the length of the period. The dates of the "life" or event should then be entered as the lesson proceeds. The drawing of this line should be repeated every lesson, and dates entered for each person or topic treated. Gradually the children will come to realise the time-relation existing between one and another through the whole period. An example may be useful. Let us suppose that our Standard III class is learning the important "lives" in the period from the coming of the Romans to the coming of the Normans. The time-line for the period would be something as follows :

Time-Line.

B.C. 55 First Coming of the Romans (Invaders).
Julius Cæsar.
0. Birth of Jesus Christ.
A.D. Second Coming of the Romans (Conquerors, not Settlers).
100. Boadicea. Agricola.

200.

300.

400.
Coming of the English (Conquerors and Settlers).

500.

600. Penda. Oswald. Aidan.

700.

800.
Coming of the Danes (Raiders, Conquerors, Settlers).
900. Alfred the Great.

1000. Slaying of the Danes by Ethelred Redeless.
Sweyn, First Danish King of England. Canute.
Edward the Confessor. Harold. William of Normandy.
1100. Coming of the Normans (Conquerors, Rulers, Settlers).

If some such line of time is drawn repeatedly and filled in as the year's work proceeds the children will get from it a fuller sense of proportion and of relative duration than dates alone can give. This can be further strengthened by occasional questioning on the lapse of time between one "life" or event and another, and on the general changes that had taken place in the country during it. After a little practice the drawing of these lines of time during teaching comes quite naturally. When any one of them is completed it should be copied by the children into their note-books. Each division of history taught—national, imperial, general—calls for a separate one. In the higher standards the most important events in each of these should be entered on a longer line made for the purpose of giving a connected idea of world history.

Topical lessons in this year might depict the way of life of the people of Asia and Egypt, tracing their pastoral occupations to the semi-desert climate and the number of large mammals they were able to subdue to their service.

The stories taken with Standard III should in the first instance be told, and the telling should be made as vivid, picturesque and dramatic as possible. The same lessons should then be read by the children. The map of the country which was the scene of the life or event, should always be in front of the children at the time of their lesson, and pictorial illustrations, other than those in the reader, should be used to increase interest and aid understanding. These, however, will frequently need supplementing by blackboard plans, diagrams, and sketches, which may be made to bring out and emphasize certain points in the lesson. From time to time scholars should be asked to give in their own words the substance of the story told and read.

We have now in our consideration of a scheme for history teaching reached the fourth standard year which, as has been said, should be regarded and treated as a transition period between junior and senior work. Biographical and topical lessons should still be given as in the earlier standards, the formal study of events in their sequence being left till the following year ; but the method should gradually change, less emphasis being now laid on picturesque detail and descriptions of concrete things. These remain important for the purpose of making the instruction vivid, but the lasting results of the character and actions of the famous men and women whose lives are dealt with must now be brought out. The lives of Diaz, Columbus and da Gama, for instance, should be associated with the decline of the power of the Turk, the extending of trade, increase of commodities and enrichment of nations, which resulted from the voyages of those mariners. Luther's life and teaching should be connected with the religious changes they caused. The adventurous courage and hardihood of Drake, Raleigh and Grenville should be shown to have led to the defeat of Spain and the decline of the Roman Catholic power, and Pym and Hampden's sturdy independence of character to have brought about the downfall of Charles I and the gain of political freedom. The aim of the lessons, which has hitherto been to train the imagination—to enable the children to *see*—should now be to cultivate the intelligence—to help them to *understand*.

A more strictly chronological order should be followed in the choice of lessons. As European history in South Africa extends over a period of less than three hundred years—in contrast with the many centuries through which it can be traced in Europe—it should be possible in this year to go through the whole, in outline, from the first extension of the Cape Settlement soon after Van Riebeck's arrival as commander in 1652, to the Union of the four Provinces in 1910.

Hitherto, formal history has been taken up in Standard V without any preliminary leading up to it, and pupils have begun English History at the Norman Conquest without knowing anything about the earlier period or about the various peoples on the European mainland from which the Normans came. The fourth standard year is a good one for supplying this knowledge. In Standard III, as has been said, the children should have been interested in the ancient civilisations of Asia and Egypt, in their semi-desert climates and the number of their large mammals suited for domestication; in the resulting pastoral occupations and the beginnings of cultivation. From this point General History should be pursued in the story of the Phœnicians, Greeks, Carthaginians and Romans—nations which, owing to the beginnings of sea-faring on the Mediterranean, to the better waterways and larger amount of cultivable land, supplanted the older civilisations. From the government and later fall of the Roman Empire they should pass to the withdrawal of the Celt before the invading Teuton and onward again to the rise of modern nations. If such teaching, followed up to the time of the Norman Conquest, were given during the fourth standard year, Standard V would begin its formal study of history with the interest which comes of previous knowledge. The Roman occupation of Britain and the subsequent invasions by Angles, Saxons and Danes should precede the history of the Norman Conquest, and the first should receive special attention. Lessons on the great personalities during this period of English history—Cæsar, Agricola, Boadicea—should be adapted to the present age of the pupils and revised. Further lessons on the Saxon and Anglian invasions should show how Teutonic government began in England. Others should be given on Aidan and Bede and Cædmon in the Christianising period; and, later, on Alfred the Great and Ethelred Redeless, showing the effects of the policy they respectively adopted towards the

Danes in England. The lives of Godwin and Harold should also be revised to show the English in conflict with the Norman friends and relations of Edward the Confessor at the time of their first entry into England during the reign of that un-English king.

With the more formal and continuous teaching that must begin in the fifth standard the choice of a text-book different in character from the readers of the junior standards becomes necessary. On the choice and use of this book the "Suggestions" of the English Board of Education may be quoted as emphasizing what is needed:

"Oral teaching is still indispensable and should be regarded as of the first importance; but as the children grow older and become more capable of serious effort the oral lessons should be supplemented by the study of a continuous history book. As the subject of history offers exceptional opportunites for the training of children in the power of silent reading with intelligence and concentration, the selection of a good book is of great importance. The best students' text-books are too difficult for children at this stage, yet the books chosen for the higher classes should possess many of the good qualities of such text-books. Technical phraseology on the one hand and childish simplicity on the other must be avoided; the book should contain abundant sound historical matter and be free from padding, vagueness, or mere allusiveness; and while the more important personages and events are treated with greater fullness, the narrative should not be so fragmentary as to destroy the sense of continuity. Nor should the value of good illustrations be overlooked when the choice is made."

But, however excellent the text-book, it cannot take the place of oral lessons, and we must not delude ourselves by thinking that we are teaching history if we only set chapters—or, which is better, topics—to be studied at home, and spend subsequent lessons in questioning our pupils on their knowledge of them. Reading through the lessons with them in school, and explaining what seems necessary, comes little nearer to what is required. Well-planned, carefully prepared, vivid and vigorous oral teaching is absolutely necessary if our pupils are to gain full benefit from the subject. Reading with the class, with incidental questioning and exposition, if it is not allowed to usurp the place of oral teaching, is a very useful practice; properly done, it will show the children how to read privately. Oral questioning should follow the private study of any topic, but continuous oral narrative and written reproduction

should also be required as a test of knowledge and intelligent appreciation with the power of expression. The children's tendency to memorise the words of the text mechanically must be checked. Questions and tests which do not permit of answers in the words of the book, but demand an intelligent rearrangement of the matter, will be the best means of effecting this.

The question of finding time for preparing carefully a large number of oral lessons needs some consideration, since history is not the only subject which makes the demand. The busy class teacher who is responsible for all the subjects of school instruction, and perhaps for more than one class, may well wonder how he can do justice to his pupils without doing injustice to his own body and mind. In all subjects the ideal to be aimed at is one good oral lesson, at least, each week; but it may not be possible to accomplish so much at first. Most of us, however, teach for several years if not "for life," and school authorities will be satisfied and the pupils' interests well served if during the first year or two this ideal is only being approached. If all notes made are carefully kept (though they should not be used a second time without revision, since some virtue, which must be renewed, goes out of lesson notes at each using) it will in time be found possible to give the ideal number of prepared oral lessons. In the course of years the material for a full scheme will be in hand. Interest in the matter and power over the method of them will increase with the time spent on them; and they will be easily worked up, by additions, omissions and rearrangement, into better and better lessons as time goes on.

It is now generally agreed that pupils should receive their first knowledge of history through the story of their own people as they receive their first knowledge of geography through the place they live in, and their first knowledge of language through their mother tongue. It is not for patriotic reasons alone, or even chiefly, that this is urged. The aim of the teaching demands it, for it is only when history begins at home that we can make full use of concrete illustrations through which young children can be helped to understand it and so be interested. The teaching of world history, side by side with the story of their own nation, is coming to be recognised, more and more, as necessary to the intelligent understanding of the latter. For reasons similar to those which place national history first there should, in European schools, be more emphasis laid on General European history than on that of the world at large. In addition, some knowledge of the building

up of that great Empire, the rights, privileges and duties of which they inherit, and of the men and women whose lives and deeds are its lasting glory is, for South African children, a birthright of which they should not be deprived.

Some suggestions as to the treatment of the subject-matter falling within the various periods may be useful here.

The Norman period opens with the introduction into England from the Continent of the Feudal System of land letting and holding, and closes with the breakdown of this system through the slaying, in the Wars of the Roses, of almost all the great nobles. Clearly then the tracing of its rise, growth and fall must be made one of the main lines of treatment, and all that affected the system must be brought out in the course of the lessons.

Another feature of the period was the Crusades, in which we have the first and direct phase of the struggle for religious and commercial supremacy between the Christian and Moslem powers. The close of the period carries it forward to the year before the discovery of the Cape, through which the struggle entered on its second, indirect, commercial phase. The taking of Constantinople by the Turks is one of the most far-reaching events of the period, and as such must receive due emphasis, although its effects were not felt till the next period.

Special attention must also be given in this period to the rise of Parliament in England, for the "Mother of Parliaments" has influenced the constitutions of all Western nations and of South Africa.

Chronologically European history in South Africa does not begin till after the close of this period; and herein, as it extends over less than three hundred years, is an argument in favour of leaving the study of it from this standpoint until the sixth standard year, in which it may be treated with sufficient detail. If it has already been taken, biographically and topically, in Standards I to IV, as suggested, the pupils will not be ignorant of it. The fifth standard year will, for the purposes of South African history, be better spent in acquiring a knowledge of related events in Europe, and of the outstanding personalities of the three European peoples, French, Dutch and British, which form the main parent stock of the South African nation. From such a course of lessons the pupils will come to their South African history at the beginning of the next year with a knowledge of what lies behind it in the history of the nations which have made it what it is.

In Standard VI, therefore, they will have a much better chance of following with interest and understanding events from 1486 to the present day. The years of Portuguese exploration will not demand many lessons, though a few stories should be told of the explorers, adventurers and missionaries of the first European nation to set foot in the country. From the first Dutch occupation (1652) to the time of Union is a period of only two hundred and sixty years; and, as it is much less crowded with events and personalities than a similar period in European history, it should not be impossible to master, during the year, all in it that is inspiring and of historical value.

The period of European history 1485–1688 opens with the Age of Discovery. The exploration of the coast of Africa by the Portuguese, and the reaching of India by da Gama should be taken, as suggested above, as a part of South African history. The voyages of Columbus and the Cabots to the West are of equal importance. The small part taken by England at first should be noted, and the later encouragement given by Henry VII and all the Tudor sovereigns whose shrewdness was not long in realising the value and importance of these discoveries to the rulers under whose patronage they were made. The voyages of the great Elizabethan explorers provide fascinating subjects for oral lessons, and the children should be directed to contemporary accounts and to such books as Kingsley's *Westward Ho!* and such poems as Macaulay's *Spanish Armada*. The Armada itself demands full treatment because of its effect on world history. Other great movements of the period were the Renaissance and the Reformation. The progress of the latter movement should be traced from its beginnings in connection with the life and teachings of Wyclif in England, Huss in Switzerland, and Luther in Germany, to its spread through France, Holland and England—the countries most closely associated with South African history. Henry VIII's personal reasons for desiring to throw off the authority of the Pope should be brought out, and the course of the movement during the reigns of Edward and Elizabeth—with the intervening set-back in the half-Spanish Mary's time—should be followed. Special attention must be given to the colonising enterprise of the principal European nations in the seventeenth century and most emphasis laid again on that of Holland, France and England. The struggle between the Stuart kings and Parliament in England must be followed as one effect

of the rise of a wealthy commercial class in the Tudor period, and the opposition of its interests to those of the crown and court. The Civil War ending in the Puritan supremacy under Cromwell that did so much to change the face of "Merrie" England, need not be treated in any detail; but Cromwell's foreign policy and particularly the relations between English and Dutch at this time when Holland was trying to maintain and England to wrest from her the supremacy at sea with all that it meant in commercial advantage, are full of interest and instruction. The reaction that led to the recall of Charles II should be touched upon, and his callous self-interest and the folly and stupidity of James II be shown as the causes of the Revolution which closes the period.

Empire history of the time should deal with the planting of colonies on Newfoundland (Gilbert) and Roanoke Island (Raleigh); with the charter to the East India Company and the first British factory in India; with the founding of the New England and later American Colonies; with the attack on those of Spain and the taking of Jamaica.

In Standard VII, South African history taken up from the civic side, would give to pupils in their last school year a necessary knowledge of the growth of rights and privileges, of the constitution under which they are enjoyed, and of the duties inseparable from true citizenship. To this should be added, as needful for South African pupils, instruction on the duties attaching to the government of subject races.

The General History of the period will be specially concerned with colonial expansion, with the loss of the American Colonies and the relations between England and France in the eighteenth century, with the final establishment of Britain's supremacy at sea and her colonial and commercial expansion, with the French Revolution and Napoleonic Wars, and with the Industrial Revolution. The acceptance of the Crown of England by William of Orange—husband of Mary Stuart—as William III is of peculiar interest to South Africans, and the prosecution of his wars against Louis XIV forms an important part of the relations between England and France.

Many of these subjects may seem remote from the children's interests and experience. When, however, the children have been prepared through the lower standards, by teachers who themselves feel the interest and value of history, for the formal lessons of these

later years there will be many lines of thought bridging the gulf. Even now there are points, discoverable if we look for them, at which the children's experience touches or approaches the customs, circumstances and events of these earlier times. There is a " child's end " at which to begin.

While, then, there is certainly a danger of lessons on law-making and religious changes, for example, remaining to the children dull and of little meaning, there is also a possibility of clothing these matters with interest ; for, as the author of *Studies in the Teaching of History* assures us :

" . . . there is nothing abstract or intangible about legislation for those who are brought into contact with it. . . . An increase in the income tax is not in the least abstract to the boy who is told that for him and his brothers it means a fortnight less at the sea-side. For the boy . . . the concrete is the small human detail, and if we can show in this detail the effect that legislation had upon the lives of human beings its abstract appearance vanishes at once."

The writer then goes on to show how by introducing a personal element and weaving a story round the persons introduced streams of interest may be made to trickle even through the " Sahara " of Edward I's legal activity :

" *The Statute of Mortmain checked the giving of lands to corporations which were unable to perform feudal service.*"

When Standard V children meet with this or a similar statement in their text-books, it means nothing to them and they proceed to memorise it mechanically. Yet even this may be turned into *live* history, as Mr. Keatinge shows :

He introduces two feudal barons—Barons A. and B.—each living on his own estate. These estates are rapidly represented by rough irregular outlines on the blackboard and the feudal stronghold of each marked by a ring or tower within them.

A few questions then revise some of the facts of feudal

land letting and holding. From whom did the barons obtain the land? On what terms? The "dues" claimed for wardship, marriage, and in case of a king's tenant dying without a will, or being found guilty of treason, are remembered. The teacher then proceeds with a little fiction: Baron A. is under fifty, married young, has two sons of age, two daughters married; he is business-like, his affairs are all in order, arrangements for the disposal of his property made in accordance with the law; and he is very loyal. What are the king's chances of getting money from this baron? The pupils see that they are extremely small.

Baron B., on the contrary, is verging on fifty—a great age in the thirteenth century—and is besides in poor health. He had married late; his eldest son is only fifteen and has inherited his father's feeble constitution; his three daughters, who may become heiresses, are still unmarried. The baron is unbusinesslike, too, and keeps putting off the making of his will; he is moreover suspected of treason. What are the king's expectations in his case? Very great, the pupils see. Baron B. is much the more profitable tenant.

But now if he—in poor health, as the children remember, and of a religious disposition—begins as he grows older to see much of the neighbouring abbot and finally, disinheriting his children, leaves all his property to the monastery [entered thus † as mentioned] on his estate, what becomes of the king's chances of profiting? They vanish. For, it must be made clear to the children, the monastery has no sons under age, no daughters to marry; can incur no fines for dying without a will—for corporations cannot die—and none for treason, as monks do not rebel. If many nobles follow the example of Baron B. the king's income will be considerably lessened. How is he to prevent this? Why clearly, by making a law against the passing of property into such "dead hands"—"dead" as far as the king is concerned, for they put no money into his coffers. The class is now ready for the statement quoted above. As Mr. Keatinge says: "Its abstract nature has vanished."

Again, speaking of the indifference, if not actual dislike, with which children are apt to regard religious law-making, the same writer shows how it is possible—as it is very necessary, for in some periods of history the whole situation depends upon the religious question—to ensnare attention even to Elizabeth's Act of Uniformity:

"Drake's father was a chaplain in the Royal Navy in the reign of Edward VI, and the sailors in the South of England seem in general to have been Protestants, probably because their opponents the Spaniards were on the Catholic side. It was from the captain of a Huguenot privateer in the Spanish Main that Drake learned of the massacre of St. Bartholomew, and later on, his adventures give the teacher an opening for revising the Act of Uniformity. Drake has returned from Nombre de Dios, has come to anchor off Plymouth, and sends a boy on shore to announce his arrival. It happens to be Sunday morning, and the boy finds the worthy inhabitants of Plymouth in church. He sings out to them that Drake is back, upon which they promptly leave the parson to preach to empty benches and rush down to the shore to catch the first sight of his ship.

"No matter how lamely he may tell the story of Drake's exploits, and of this dramatic home-coming, the teacher will have no difficulty in riveting the whole attention of his class, and here he can switch them off on to the Act of Uniformity. What was the interior of the church like? Was there a crucifix? Were vestments worn? Were all the citizens there? What was the penalty if they absented themselves? The interest engendered by the 'Sea Dog' narrative will be transferred to the greyer matter of religion, and though it will evaporate by degrees, some minutes may elapse before the class realise that a march has been stolen upon them, and that they are paying whole-hearted attention to a subject hitherto regarded with suspicion." (*Studies in the Teaching of History*, Keatinge.)

Here we have two instructive examples of how interest may be aroused by beginning "at the child's end"—with something with which his own experience or interests may bring him into touch—even when the subject seems at first glance very remote from him.

In South African history such connections may be made between the many types of humanity seen in Capetown streets and the successive events accounting for their presence; between the present Malay inhabitants of Capetown and neighbourhood and the introduction of slaves and Asiatics; between the name Huguenot, so familiar in the Western Cape Province, and the religious contest in France which led to the coming of the French settlers; between the distrust and dislike of Roman Catholicism exhibited

from time to time, and Holland's long struggle with the Roman Catholic powers of Spain and France; between the trekking habit of modern times and the irksomeness of Company rule in the early days of Dutch occupation; between Western and Eastern Cape Province differences, and their mode of settlement.

This ability to trace the past from the present will grow by exercise. What is needed at the beginning is a recognition of the continuity there is in all national development, and a knowledge of those enduring traits of human nature which link generation to generation and ensure interest whenever this subject is taught as human story.

FOR FURTHER STUDY

[Of necessity a long list. The teacher of history must read widely. Books marked with an asterisk are specially recommended.]

WORKS OF REFERENCE AND STANDARD WORKS ESPECIALLY IN ENGLISH AND SOUTH AFRICAN HISTORY

The Rise of South Africa. G. E. Cory. (Vol. 1, 15*s.*; vol. 2, 18*s.* Longmans.)

The Diary of Adam Tas. L. Fouché. (12*s.* net. Longmans.)

Readings in South African History. N. Hofmeyr. English and Dutch Edition. (1*s.* 9*d.* Longmans.)

Longmans' Historical Illustrations. T. C. Barfield. 6 Portfolios. (Each 2*s.* 6*d.* net. Longmans.)

Longmans' Wall Pictures. British History. Henry J. Ford. Each Picture is 24 × 18 in., painted on a Card 30 × 25 in. Unframed, each 2*s.* 6*d.* net. In oak frame, glazed, each 10*s.* net. Complete set of 12 in portfolio, £1, 15*s.* net. Complete set of 12 in envelope, £1, 10*s.* net. 1. The Roman Wall: The Roman Period. 2. Augustine Preaching before King Ethelbert: The Saxon Period. 3. A Danish Raid: The Danish Period. 4. Harold's Last Stand at Senlac: The Eleventh Century. 5. Richard Cœur de Lion's Sight of Jerusalem: The Angevin Kings. 6. King John seals the Great Charter: The Angevin Kings. 7. Henry V at Agincourt: The Fifteenth Century. 8. The Armada in the Channel: The Tudor Period. 9. Charles the First's Visit to the House of Commons to seize the Five Members: The Stuart Period. 10. Wolfe on the Plains of Abraham: The Fight for British North America. 11. Trafalgar: The Nineteenth Century. 12. Portsmouth Harbour in 1909: The *Dreadnought* and the *Victory*: The Twentieth Century.

Outlines of European History. A. J. Grant. (3*s.* 6*d.* Longmans.)

A History of Europe. A. J. Grant. (7*s.* 6*d.* net. Longmans. Also in 3 parts. Part 1, Classical World. 2*s.* 6*d.* net. Part 2, Middle Ages. 3*s.* net. Part 3; Modern Europe. 3*s.* net.)

Syllabus of Continental European History. (2*s.* 6*d.* Ginn & Co.)

A Short History of the English People. J. R. Green. (Illustrated. 40*s.* net. Macmillan.)

Social England. H. D. Traill and Horace Munn. (6 vols. 14*s.* each. Cassell.)

History of South Africa. G. M. Theal. (8 vols. 7*s.* 6*d.* each. Sonnenschein.)

Historical Geography of the British Colonies. C. P. Lucas. (6*s.* Oxford Press.)

Historical Portraits. Fletcher and Walker. (2 vols. issued. 8*s.* 6*d.* each. Oxford Press.)

Atlas of Classical Portraits. Rouse. (2*s.* Dent.)

Collection of 66 *Classical Portraits in Portfolio.* (10*s.* Berlin. New Photographic Society.)

*South African History told in Pictures.** (5*s.* S. L. Looy, Amsterdam.)

School Atlas of English History. S. R. Gardiner.* (5*s.* Longmans.)

School Atlas of English History. S. R. Gardiner. An Abridged Edition. (1*s.* Longmans.)

Dictionary of Dates. Everyman's. (1*s.* Dent.)

SOURCE BOOKS

Readings in Modern History. Robinson and Beard. (2 vols. 6*s.* each. Ginn & Co.)

English History Source Books. (12 vols. 1*s.* each. G. Bell.)

*Illustrations to British History.** G. Turral. (2*s.* 6*d.* Oxford Press.)

*Illustrative History.** (6 vols. 2*s.* 6*d.* each. Horace Marshall.)

*Selections from the Sources of English History.** C. W. Colby. (6*s.* Longmans.)

*English History illustrated from Original Sources.** (9 vols. 2*s.* 6*d.* each. A. & C. Black.)

Source Books of English History for use in Schools. A. D. Innes. (3 vols. 5*s.* each. Cambridge Press.)

*The Cape of Adventure.** Ian Colvin. (12*s.* 6*d.* Jack.)

Note.—Original source-books such as the *Life and Letters of Oliver Cromwell*, and such as are given in Leaflet No. 7 of the Historical Association (obtainable from the Secretary of the Society), should be read.

TEXT AND SCHOOL BOOKS AND READERS

*The Expansion of Europe.** J. Edgar. (2 vols. 4*s.* 6*d.* each. Maskew Miller.)

Britain and the British Seas. H. J. Mackinder. (7*s.* 6*d.* Oxford Press.)

Advanced History of Great Britain for Schools. T. F. Tout. (5*s.* Longmans.)

The Groundwork of British History. Warner and Marten. (2 vols. 3*s.* 6*d.* each. Blackie.)

*Introductory History of England.** C. R. L. Fletcher. (4 vols. 5*s.* each. Murray.)

Outlines of English Industrial History. Cunningham and Macarthur. (4*s.* Cambridge Press.)

The Expansion of England. J. R. Seeley. (4*s.* Macmillan.)

*Growth of the Empire.** A. W. José. (4*s.* 6*d.* Murray.)

Growth of the British Empire. A Time Chart. (5*s.* Arnold. Leeds.)

*Historical Geography of the British Empire.** H. B. George. (3*s.* 6*d.* Methuen.)

*Progress of South Africa in the Nineteenth Century.** G. M. Theal. (7*s.* 6*d.* Chambers.)

*South Africa.** In "English People Overseas" Series. A. Wyatt Tilby. (7*s.* 6*d.* Constable.)

Our Place in History. C. D. Hope. (2*s.* 6*d.* Juta.)

*Studies in the Teaching of History.** Keatinge. (4*s.*6*d.* A. & C. Black.)

An Experiment in History Teaching. E. Rockliff. (2*s.* 6*d.* Longmans.)

Note.—For fuller information the Teachers' Library Lists—Historical Section—in *The Cape Education Gazette* (Vol. IX, Nos. 3 and 16) should be consulted. No. 16 is an Appendix on Historical Fiction which may be made of great service in relation to school working History.

*Suggestions for the Consideration of Teachers.** English Board of Education.

Regulations for Primary Schools. Transvaal Education Department.

CHAPTER X

NATURE STUDY

"The world is so full of a number of things,
I'm sure we should all be as happy as kings."
—R. L. STEVENSON.

"The country should become an outer, uncovered classroom—a Divine museum utilised by our teachers."—RUSKIN.

"Nature study is learning those things that are best worth knowing to the end of doing those things that make life most worth living."—HODGE.

IN an earlier chapter it was said that one effect of our teaching must be to keep gladness alive in the hearts of young children, and to help older ones to recover, if they have lost it, their sense of the wonder and beauty of the world. No subject of the school course offers us such ready means of doing this as does nature study.

To very young children the days are a succession of delightful discoveries—discoveries of new things and of new powers. To each new thing they give for the moment close attention; each new power they exercise until they tire. They are exploring their own little corner of the great world of nature, and the days are not long enough for them to see and do all that there is to be seen and done.

Almost all children seem to lose something of their happy absorption in the world about them as they pass out of infancy; and, three or four years later, many seem to have little interest in it left. As teachers we may well ask ourselves why; for it is the answer to this question that must guide our nature work in school.

The very young child is in a world which constantly offers him something new. On each new thing in turn he exercises such powers of observation as he has, chiefly by looking and handling, though, in some cases, by listening, tasting, or smelling. Nothing, however, chains his attention for long:

. . . this has now his heart,
And unto this he frames his song,
But it will not be long
Ere this be thrown aside,

and it is only by reason of the "number of things" to be seen and done that he is kept from tiring. Throughout infancy he keeps coming into touch with the same things day after day and day after day; and, by degrees, if he is left to himself, his delight in them and his wonder at them begin to abate. Things are growing familiar. He has found out as much as he is able, unaided, to find out about them; and, unless some one steps in to show him that he has not really seen all that there is to be seen, or in some other way to re-awaken his interest, familiarity will breed indifference. A child observes rightly as far as he is able; but, in the absence of training, his observation does not show him very much. Beyond a certain point, training or some special urging is needed to carry him forward to new discoveries.

Our first aim, then, when we begin nature study with very young children who have just come to school, should be to help them to pursue the discoveries which have kept them busy and happy at home—in the house or garden, about the farm or out on the veld.

This will lead us to ask to what kind of things their attention is most readily drawn. Anything "alive" interests them, whether it is more alive like an animal or less alive like a plant. Animals and plants, therefore, should have the first place among their nature studies in school; and, because of our pupils' greater interest in animals, these should be chosen for the subject of them more frequently. Little children delight, too, in the sunshine, and in the flowers and birds and butterflies which come with it after rain; they may be heard exclaiming over the beauty of moon and stars. The wind that buffets them and the rain that drenches them have each made an impression on their minds. They have wondered "What makes the wind blow?" and "Where do the clouds come from?" so that we shall find it easy, if we go the right way to work, to keep them interested while we help them to find such answers to their questions as they can understand at their age. There will be place, then, for lessons on the weather and the seasons.

Closely bound up with our wish to help the children to *see* more than they can do alone, there must be the desire to help them to *feel* in new ways and in new directions. Little children's feelings are naturally centred in themselves. It cannot be otherwise until they have more knowledge of life than they possess as infants. The only needs and desires they are aware of in the first year or two in life are their own. We cannot be surprised, there-

fore, that their efforts are given mainly to satisfying these needs and gratifying these desires. As they grow out of babyhood, however, they must be helped to realise the needs and desires of others. In schools the nature study course provides a means of doing this, and the training possible through it should be adapted to the various stages of their growth.

The animal studies suited to the infant room cannot be successfully made unless a number of animals are kept in or about the school. The presence of these will afford opportunity for the very training that our little pupils need. If an animal seems unhappy under the conditions provided they must be altered, or it must be set free from captivity. Thus the children will see that the happiness of animals must be thought of as well as their own ; and, in time, the feeling will grow that they ought to release a pet if they are unable to make it happy. There are many animals—as, for example, white rabbits, rats and mice, and certain birds—that have been bred in captivity, and it is no unkindness to keep these if we keep them in comfort. There are others—bees in their hives and ants in their self-made heaps—which can be left at liberty within the school grounds, and can therefore be studied under the best possible conditions. Others still, are unaware of captivity if it is not too close. Frogs in tubs, caterpillars and silkworms developing in gauze-fronted boxes, and small fish in artificial ponds will yield some of the most instructive studies. Again, domestic pets, such as the cat and dog, can be brought into the classroom for the purpose of a lesson ; and a hen and chicks can usually be studied near the school. There is no need, therefore, for our pupils to see the unkindness of a forced captivity practised in the name of nature study. All animals should, during captivity, be given as much air, space and freedom as possible, and the greatest attention should be paid to their feeding and cleansing. At first the children can only watch what is being done for the animals' comfort; but as soon as they are old enough they should be taught to help in the work of feeding them and keeping them clean. This is the very best way of developing that thought and care for others' feelings which we wish to see in them. A word or two on the subject now and then may do something to awaken sympathy ; steady, continuous example of kindness will do more ; but most will be accomplished by training our pupils themselves to little, thoughtful, kindly *acts* on behalf of others.

Just as a "zoo" is the first necessity of animal study by infants, so a garden is the first necessity of plant study. Through these, also, the children may learn to think of and attend to wants other than their own; for plants need food, water, air, and light as animals do, and their drooping condition in the absence of these is a reproach to those entrusted with the care of them, that little children may readily be made to feel. The plots need not be large, and may suitably be made in a corner of the playground, or in borders surrounding the school building. What is needed is some place where the children can grow plants under natural conditions—set seeds, watch and tend their growth, and so lay the foundations for later study. Side by side with this outdoor work, the germination of small seeds on damp flannel or blotting paper, and of large ones in pots, glass jars, or tins filled with watered moss, damp sawdust or mould, should go on in the classroom. Seedlings in pots and window-boxes should be cared for, and our pupils should be encouraged to bring plants of their own growing and tending for the brightening of the schoolroom.

Weather observations should make the children familiar with the broad difference between summer and winter conditions with regard to sun, rain and wind. Their attention should be drawn to the seasons as they pass, and changes in plant and animal life should be pointed out in connection with each. Spring is naturally the best time for beginning the scheme of study planned. It should be shown, as the season of the *springing* of new life, and lessons which turn the children's thoughts to this recurrent wonder should be given. Summer should be shown to them as the time of growth and activity, and the heat of the sun should be noted. It is the best time for studying the sunshine-lovers among animals. Autumn may be presented as the harvesting season. The time of vigorous growth is over, and the later crops are ripe and ready for harvesting. Lessons on the food-storers among animals have a special interest at this season. Winter should be characterised as th
season of the year, the time when most plants and som
rest in sleep. Domestic animals may be the special s
study in this season.

No part of nature-study is more important than that which deals with the health of the human body. At this stage simple talks on the cleanliness of hands, face, hair, teeth and nails are most suitable. We must see that where need is these talks have due effect

In these early years our treatment of chosen subjects must be very simple. It should not greatly differ from the children's own methods of examining the things they see round about them. It should only go a little further, pointing out features that they would be likely to overlook, and now and then suggesting the reasons for them. We must not forget, however, that some features are of too detailed a character to appeal to the observing powers of young children. These should be left for examination during later studies. Let us take an example. Little children will discover for themselves that the fur of their kitten is soft and warm; that she has four legs and a tail. If they are in the habit of pulling the tail they will probably have had forced upon their attention the fact that her feet are furnished with sharp claws. They will know a little about her habits—what she likes to eat and drink, how she spends most of her time during the day—but their observations will not have shown them much more. They will very likely not have noticed her noiseless walk, nor the colour of her eyes, nor the roughness of her tongue. These, as characteristic features, should be pointed out, attention being drawn in the case of the first to the little pads beneath the feet, though their number may be neglected at this stage. With regard to the eyes, again, it will be sufficient to advise them to look at kitty when it is nearly dark, and to suggest that the gleam of her eyes then, helps her to see. This will lead up to an explanation of why she sleeps so much in the daytime. The contracting of a cat's eyes in the light is not a point for observation at this stage; but the children will like to feel her rough tongue if she can be persuaded to lick their fingers, and this may be referred to her habits. A first lesson need attempt nothing more, though questioning will reveal a few individual observations that will interest the class as a whole. All early teaching should be more in the nature of informal talks than of formal lessons. We must never lose sight of our pupils' need to come actually into touch through as many senses as possible with the subjects of study, which should be chosen from natural surroundings in home, garden, farm and country-side.

The scheme of work will need very careful planning, for on the one hand it must avoid the mistake of following a formal classification—either of animals or plants—unsuited to the children's years, and on the other must have some thread of association which connects the lessons throughout and prevents haphazard and discon-

nected teaching. A successful scheme may be made in one of two ways. We may use a story as the base of our nature work, developing it from lesson to lesson, and making studies of the various animals, plants, and phenomena that enter into it, and correlating these with other class subjects. In the hands of a born story-teller, there is little doubt that this story plan can be made very fascinating to little children, as it may introduce them to other little ones in whose lives, adventures, work and pleasures they will feel an absorbing interest. The story might tell, for instance, of a family of children, of their home life and out-of-door pleasures—their pets and their gardens, their walks and their visits to seaside, town and country, thus opening up a number of subjects for lessons and conversations. It will be readily seen how drawing and modelling can be brought into the scheme. Language work may also be helped by it. New words used may be brought into writing and spelling lessons; and poems and songs about the nature objects and aspects that have been mentioned in the story may be learnt. But where the teacher lacks the gift of story-telling, and has **not** acquired the power, it will be better for her to fall back upon the other plan. This is to make nature-study the base of the rest of the school work. Talks, reading, and the saying and singing of verses, writing, drawing, modelling and numbering should, according to this latter scheme, be brought into as close association as possible with the central subject, which should then be developed in close touch with the seasons. Whichever scheme is followed, drawing (free expression and studies of given subjects by freearm, freehand, and brushwork methods), modelling, story-telling, the saying of verses, the singing of songs and the playing of games must enter largely into it. Nature stories, poems and songs have a special value in this stage, for almost all that little children can learn of sun and moon and stars, of wind and cloud and rain, must be presented to them in the fanciful fashion to which these lend themselves.

When our pupils pass out of Standard I they will be ready, both because they are older than when they came to school, and because they have had some training both in looking at things and in telling about them, for a rather more advanced form of nature-study. During the next three years it must be our aim to get them to look at things more closely, to notice more details than in their earlier study, and to notice them more accurately. We should in this

stage provide more subjects for study, so that the children's knowledge of the world about them may be increased. Familiar subjects should be chosen, as before, and the children should be led to draw conclusions from their own personal observations. At the same time we must bring the other subjects of the school course—which are treated more formally in these standards than in the Sub-Standards and Standard I—into the closest possible relation with the nature work, so that all may help together in the training of our pupils. They should have a nature reader, or, failing this, we should choose for special study such nature lessons and verses as occur in the reader they have; we should also choose some nature poems for recitation. Their oral and written compositions should frequently be on nature subjects. Problems in arithmetic should have to do with their garden work and other forms of nature-study; while much of their geography should be of the observational nature which links it closely to this subject. Topical history lessons should be concerned with the ways of life of ancient peoples; and their hunting, pastoral, and agricultural pursuits will furnish further opportunity of bringing it into relation to natural knowledge.

The treatment of subjects need not be so simple at this stage, but it must always be of such a nature that the children understand the teaching and are interested by it. Aim and method should vary slightly with the standard taught. In Standard II we should try to get our pupils to observe accurately, but not in great detail, and to train them to see the subjects of their studies as a whole, noting in what respects each differs from others. We should, therefore, get them to make simple comparisons, such, for example, as are possible between a cat and a dog, or between trees and shrubs. Our method should be less conversational than in the Sub-Standards and Standard I, and we should require the beginnings of continuous oral description from our pupils. In Standard III new studies related to the work in geography should be added, our pupils' attention at this stage being drawn to the world outside their home, farm, village or town. They should also be led to discover the value to man of the subjects of their study, and the comparisons made should keep this in view. Simple classification should begin at this point, and the first grouping of plants and animals should be based on use to man. Longer oral descriptions than in the previous standard should be required, and conversational lessons should be

less frequent. In Standard IV the children must go on from the point reached to further inquiries. They must be led to look for the causes of what they see in nature. Lessons and studies should no longer be mainly concerned with animals and plants. Our pupils must be led to feel an interest in inanimate nature (rocks, hills, valleys, &c.), and in natural forces (water, wind and frost). The sun, the moon and the Southern Cross should be the first subjects of sky study. Interest in living things should be turned to the distribution of plant and animal life, and to the effect of this on the life of man. More should be attempted in the way of classification, this being possible through the more detailed examination of the plants and animals chosen for study.

In this stage of their growth children are specially interested in work and its results. This we should bear in mind in teaching them, and it should affect both the choice and treatment of our studies. Our pupils will at this time turn eagerly to the activities of animal life, and we should provide for them studies of such busy workers as the bee and the ant. In studying other animals they will be most drawn to that part of the study which requires some activity on their own part, and where they have opportunity will show a practical interest in the care and feeding of them. It will be possible to give them such opportuntiy in connection with the animals of the school "zoo," and this should be done. In studying the life histories of frogs, fishes, caterpillars and silkworms, children of this age will delight in supplying the proper conditions for development, as in seeing to change of water, or cleaning of boxes and provision of food. Such life histories should therefore enter largely into their studies. They will also be specially interested in animals as servants or enemies of man.

In connection with plant life they will be specially interested in the school garden and the care of their own plot, both on account of the work these provide and of the practical results yielded through the flowers, fruits and vegetables grown. Further use should therefore be made at this time of the school garden, and the children should be held wholly or partly responsible for their own plots. Life histories of plants from seed to seed will furnish them with an enjoyable form of study, as these entail both the tending of the plants and the recording by means of notes and drawings of the facts observed. Tree planting, also, will appeal to them.

In weather and seasonal observations the records and nature calendars to be made will provide lower standard children with the occiupation that is a necessity of their nature in these years, and this side of the work should therefore be emphasized. The sun and the moon, frost, snow, hail, rain, thunder and wind should all be made the subjects of records, while nature calendars should record, and show by drawings, certain seasonal occurrences.

Hygiene lessons will be made interesting to children at this age when they are of such a nature that practical effect can be given to them. This should be easiest, of course, when they relate to matters of personal cleanliness ; but in this, habit plays a large part, and is sometimes difficult to overcome. Lessons on ventilation and house sanitation may lead the children to exercise their practical capacity in the interests of health, and this side of " nature " work (for it is closely concerned with human nature) will then have good results.

But while we are careful to supply matter and methods of study that will appeal to the practical capacity of pupils in this stage of development, we must be equally careful to see that what is prosaic in life and nature does not obscure from them the true romance and poetry of these. We must remember that the concentration upon activity and usefulness which is a characteristic of the stage of childhood, will be apt to dull the " celestial light " through which " the earth, and every common sight " may be seen to shine. Whether it does so for our pupils as a result of their nature-study, will depend to a very large extent on our treatment of our chosen studies. There is a wonderful side to the life of the bee and the activity of the ant ; there is romance in the story of the domestication of animals ; the life history of the humblest creature may well make us marvel ; the springing of a leaf in bare earth, the opening of a bud on the bough above it, the unfolding of the petals of a flower, are miracles which should never become mere matters of fact to us or to our pupils. The shining of sun, moon, and stars ; the singing and moaning of the winds, the sweep and glint of rain should appeal to our sense of beauty, and the interaction of these great forces and its effect on life should appeal to our sense of wonder. These aspects of " common things " must be visible to our own eyes and minds, and we must make them visible to the eyes and minds of our pupils. This is necessary in all stages of school nature-study. It is especially necessary at the time when, during

a stage of their growth, our pupils may be blinded to the beauty and wonder of nature.

The cultivation of reasoning and definite method should be our intellectual aim in nature lessons when we pass from lower to upper standard classes. Our pupils at this stage should be able to make personal investigations without the help given to them as juniors. They should also, in writing their notes (which, again, they should do unaided) arrange them with system and method as a result of their earlier training in observing and describing.

Less will be expected, naturally, of Standard V in these respects than of Standards VI and VII, and our aim and method should vary somewhat in consequence. The scope of chosen studies should also be extended in passing upwards to the highest standard. In Standard V exercise for the reasoning powers should be provided, and classification should therefore take a more important place in the study of animals and plants. In the study of inanimate nature the laws controlling natural forces should be studied, and inquiry made into the cause of observed effects, as, for example, into that of the recurrence of the seasons. Study of the composition and value of minerals, and of the interchange of natural and manufactured products, will suitably link the work of this standard with geography, while lessons on the importance of inventions and discoveries will associate it with history. Systematic study and actual practice of garden operations should go on side by side with classroom study. In Standard VI effort should be devoted to perfecting the objects outlined in Standard V, the work laying the foundations for a scientific course of training. The study and appreciation of beauty in nature should here be carried on through the drawing of animal and plant forms. The problems of animal and plant growth should be attacked in the systematic and scientific manner proper to this stage of development. The aim demands, too, a more systematic course in physiology and hygiene than is attempted in the lower standards, and the pupils are thus brought into touch with elementary chemistry and physics. The interrelations of plant and animal life considered from the standpoint of the distribution of man and the lower animals on the earth, should be studied to further the cultivation of reasoning. Related to this study is that of climate and its influence on man and his food-supplies, in the consideration of which, examples may be plentifully drawn from the

geography of the standard. The inventions of man for making easier cultivation, transport, and manufacture of food and clothing, should be discussed as showing the practical result of scientific thought, and so emphasizing the value of the reasoning and method required at this stage. In country districts special emphasis should be given to all these matters in their relation to farming, local conditions deciding the choice of subjects.

In Standard VII nature work requires consideration from two points of view—from that of pupils finishing their education in the rural school, and that of others about to leave it and pass on to the more advanced study possible in High Schools. It is with the former that we have to do.

For rural pupils nature study should assume a practical form, and the knowledge acquired be applied to solving the problems of living, with which they will soon be confronted. The bearing of home, farm, and market on each other must be considered practically, questions of labour, produce and price being looked into. The end in view may be approached by exercises in practical arithmetic and mensuration, simple surveying, and manual practice in garden and workshop; by the study of geography in its commercial and broader physical aspects, as, for example, the relation between climate and productions, and the chances of the emigrant in various parts of the world, and by the closer study of scientific farming. In short, this last year should equip pupils for the problems and battles of life, and train them to think and act as independent beings.

A special feature of the work throughout the upper standards must be the making of original notes from direct observation, and original sketches illustrating the subjects of study under natural conditions. Insistence on good method in setting down notes and making sketches is a very important part of the training. The art of intelligent note-making—valuable in so many departments of adult life—has been mastered by very few pupils of school-leaving age, and the fact is due to want of proper training in the upper standards.

But we must beware that we do not allow our pupils' joy in nature to be buried beneath a weight of scientific method and commercial detail. Our best way of preventing this will be to bring their nature study at this stage into close relation with their study of literature, making them acquainted with the nature-

lovers among the great poets. It is poetry rather than science that will help them to gain what we wish them to have as a sure possession before they pass from school into the world—an awakened sense of the beauty and wonders of nature. Two or three times in the week, instead of using their ordinary readers, we should bring to class from the school library, or our own, a book in which we have previously marked a poem or passage that has a nature interest. At first we should choose poems or prose pieces that bring out the beauty of things daily apparent to our senses and yet by most of us unwondered at. Very suitably we may take that poem of Robert Louis Stevenson which expresses the difference in the look the earth wears for those who do not and those who do see with something of the poet's vision. It begins with a plaint :

> "*A naked house, a naked moor,*
> *A shivering pool before the door,*
> *A garden bare of flowers and fruit*
> *And poplars at the garden foot :*
> *Such is the house that I live in,*
> *Bleak without and bare within.*"

And the poet answers it with :

> "Yet shall your ragged moor receive
> The incomparable pomp of eve,
> And the cold glories of the dawn
> Behind your shivering trees be drawn ;
> And when the wind from place to place
> Doth the unmoored cloud-galleons chase,
> Your garden gloom and gleam again,
> With leaping sun, with glancing rain.
> Here shall the wizard moon ascend
> The heavens, in the crimson end
> Of day's departing splendour, here,
> The army of the stars appear.
> The neighbouring hollows, dry or wet,
> Spring shall with tender flowers beset,
> And oft, the morning muser see
> Larks rising from the broomy lea,
> And every fairy wheel and thread
> Of cobweb, dew-bediamonded.
> When daisies go, shall winter time
> Silver the simple grass with rime ;
> Autumnal frosts enchant the pool
> And make the cart-ruts beautiful ;

And when snow-bright the moor expands
How shall your children clap their hands.
To make this earth our hermitage
A cheerful and a changeful page,
God's bright and intricate device
Of days and seasons doth suffice."

The poem, of course, was written of another country than this; but here, as there, for eyes that can see, the "bright and intricate device of days and seasons" lends beauty to the barer places of earth—here, as there, are "sun, moon, and stars, all sweet things," and "always the wind on the heath." And in one particular at least, South Africa has a beauty far beyond what is seen in Britain. To those of us who have come from the greyer north, it seems as if we had never known before how "incomparable" is "the pomp of eve"—how magnificent are the "glories of the dawn," and the blue of the sky and the perpetual sunshine.

The opening lines of Keats' *Endymion* might be chosen next.

"A thing of beauty is a joy for ever:
Its loveliness increases; it will never
Pass into nothingness; but still will keep
A bower quiet for us, and a sleep
Full of sweet dreams, and health, and quiet breathing.
. . . . . .
Spite of despondence, of the inhuman dearth
Of noble natures, of the gloomy days,
Of all the unhealthy and o'er-darkened ways
Made for our searching: yes, in spite of all,
Some shape of beauty moves away the pall
From our dark spirits. Such the sun, the moon,
Trees old and young, sprouting a shady boon
For simple sheep; and such are daffodils
With the green world they live in; and clear rills.
. . . . . .
And such too is the grandeur of the dooms
We have imagined for the mighty dead;
All lovely tales that we have heard or read;
An endless fountain of eternal drink,
Pouring unto us from the heaven's brink."

Later we should try to fit our passages more closely to some special study. In these standards our pupils study the seasons and climate, winds and rainfall. Their nature study would fail to have its full effect if their thoughts of them were bounded by scientific explanations concerning the inclination of the earth's

axis, latitude and altitude, and proximity to water surfaces. It is of more moment to them that they should realise, with Wordsworth, that "the sunshine is a glorious birth"; see Autumn, with Keats, as the

> "Season of mists and mellow fruitfulness!
> Close bosom-friend of the maturing sun,
> Conspiring with him how to load and bless
> With fruit, the vines that round the thatch-eaves run,"

and apprehend, with Shelley, the winds as spirits of the dying or reviving year—one, "charioteering to their dark wintry bed"

> "The wingèd seeds, where they lie cold and low,
> Each like a corpse within its grave, until
> [His] azure sister of the spring shall blow
> Her clarion o'er the dreaming earth, and fill
> (Driving sweet buds like flocks to feed in air)
> With living hues and odours plain and hill."

or, like Ruskin, looking on a sodden landscape, see it as the work of "the great angel of the sea—rain."

This linking of nature study with literature is the best means, too, of revising and adding to the knowledge gained from earlier studies. The activities of the honey-bee, for example, form a suitable study for lower standards, but children in these standards are quite unable to realise how wonderfully organised is the social life of the bee. Upper standard pupils, however, may be helped to an appreciation of the work of the hive by reading well-chosen passages from Maeterlinck's *Life of the Bee*, as one or two passages may serve to show.

"Day after day, at the first hour of sunrise, the explorers of the dawn return, and the hive awakes to receive the good news of the earth. 'The lime-trees are blossoming to-day on the banks of the canal.' 'The grass by the roadside is gay with white clover.' 'The sage and the lotus are about to open.' 'The mignonette, the lilies are overflowing with pollen.' Whereupon the bees must organise quickly and arrange to divide the work. Five thousand of the sturdiest will sally forth to the lime-trees while three thousand juniors go and refresh the white clover. Those who yesterday were absorbing nectar from the corollas will to-day repose their tongue and the glands of their sac and gather red pollen from the

mignonette, or yellow pollen from the tall lilies ; for never shall you see a bee collecting or mixing pollen of a different colour or species, and indeed one of the chief preoccupations of the hive is the methodical bestowal of these pollens in the store-rooms in strict accordance with their origin and colour. Thus does the hidden genius issue its commands. The workers immediately sally forth, in long black files, whereof each one will fly straight to its allotted task.

. . . . . .

" Let us go on, then, with the story of our hive ; let us take it up where we left it ; and raise as high as we may a fold of the festooned curtain in whose midst a strange sweat, white as snow and airier than the down of a wing, is beginning to break over the swarm. For the wax that is now being born is not like the wax that we know ; it is immaculate, it has no weight ; seeming truly to be the soul of the honey, that itself is the spirit of the flowers. And this motionless incantation has called it forth that it may serve us, later—in memory of its origin doubtless, wherein it is one with the azure sky, and heavy with perfumes of magnificence and purity—as the fragrant light of the last of our altars." (Chapter VI : *The Foundation of the City*—the most suitable chapter for class reading.)

We can glean from a very wide field for passages that bear in this way on the special nature studies taken in our classes. There is no need of class copies of the books from which we take them ; for, as has been pointed out, in upper standard classes it is a good thing if, sometimes, the only book used is in the hands of the reader. We are therefore free to choose from any book that is even temporarily in our possession. We need not fear lack of interest on the part of our pupils, for " none more than children are concerned for beauty," and, having seen it through the eyes of others, they will learn to look for it with their own and to recognise it when they find it. Thus having been drawn from nature to books, they will be drawn again from books to nature with eyes better able to see and emotions more readily stirred, so mastering at length the last lesson nature has to teach—the reality of her " serene and gladsome influence " on the mind of man.

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CHAPTER XI

THE TEACHING OF GEOGRAPHY

"I should like to rise and go
Where the golden apples grow ;—
Where below another sky
Parrot islands anchored lie.

. . . . . .

Where in sunshine reaching out
Eastern cities, miles about,
Are with mosque and minaret
Among sandy gardens set,
And the rich goods from near and far
Hang for sale in the bazaar."—R. L. STEVENSON.

"Geography treats of physical reality, with which the child comes into direct contact only through sense-perception. The teaching of geography must therefore be founded upon the child's own knowledge of his immediate urroundings. . . . Upon actual observation of his own surroundings . . . the deepening and enrichment of this knowledge of the world will, in the main, depend throughout his whole school course. To the process of extending his knowledge of that same world by direct observation, there are obvious limits . . . but long before these limits are reached we shall begin to enlarge the child's horizon through his imagination by means of stories and descriptions aided by pictures, models, and maps."—*Scottish Memorandum on the Teaching of Geography.*

WE have seen how important the teaching of history is in the training of future citizens. As a closely-related subject, dealing with the causes of so many of the events that fill the pages of history, the study of geography is of equal importance, for it is needed to cultivate in our pupils a sound judgment in matters that are influenced by geographical conditions. To this end it is necessary that they should be familiar with many geographical facts and some geographical ideas, while the method by which such knowledge is pursued will be found useful in everyday life.

The interests of citizens of the British Empire, which is spread over the whole earth, are world-wide ; and, for this reason, their sympathies should be world-wide too. In all schools of the Empire,

therefore, the world at large is the proper subject of study in geography lessons. The subject, of course, may be regarded from many points of view; but the most important one for ordinary citizens educated in public elementary schools, is that which shows it as the scene of life, and, above all, as the scene of human life and of human relations which need careful consideration.

In order that the subject may have the greatest value educationally, the committing to memory of geographical facts must not be regarded as the chief aim and end of it. Some gain of knowledge of this sort must, of course, be looked for as a result of the teaching. There are some names, some features and some distances—the names, for instance, of the world's continents and oceans, of its great rivers and mountain ranges; such features as the Strait of Gibraltar and the Isthmus of Suez; such distances as from Europe to America and across the North American Continent, and the time taken to voyage from Continent to Continent—which are expected to be known by every educated person, and the necessary time must, therefore, be given to them. But when the teaching of a mere fact is under consideration the question must be asked whether the knowledge of it has any value in the outside world, or is of use only in an examination room. Do newspapers expect their readers to possess it? Are the majority of well-educated people, outside school circles, familiar with it? Is it generally assumed to be known by grown-up people who have had a good schooling? If so, it must be taught or learnt. If not, the time that would be taken in mastering it must be kept for matters of greater importance. Geography, from first to last, should bring the student of it into close touch with the outside world of which it treats. Even when he must rely upon the discoveries of others who have travelled and explored where he has been unable to travel and explore, it must do this. It is only through his own earlier observations of the world about him that his imagination can give him a mental grasp of those parts of it which are removed from his sight. From the very beginning he must teach himself by using eyes in seeing, hands in representing, and mind in discovering *what, how* and *why*. He must search out his knowledge, not chiefly from his class text-book, but from the book of nature.

The close relation between geography and other studies must be constantly borne in mind. As it deals with the natural features

and conditions of the child's surroundings, it keeps close to observation lessons and nature work, which have their best result when they have these for their subject. The size of countries, the length of rivers, the height of mountains and the measurement of distances by the map scale connect the study with arithmetic; drawing is associated through the necessity of expressing graphically the observations on their natural surroundings which the pupils make in early years, and, later, of having to show by means of maps what they have learnt about more distant and larger areas. History cannot possibly be studied without reference to geographical conditions—to the nature of the country that affects through its climate, productions and industries the whole life of the nation, and, through its surface and boundaries, its communications and intercourse with neighbouring peoples. But history teaching should be connected with geography in more ways than one. In upper standards, where the subject is more formally treated, there must be constant references to the globe and map. Where possible, indeed, it is a good plan to teach the geography and history of a country in the same year, so as to be able to bring them into closer association. But the relation between the two subjects is most clearly seen in the progress of world history, and teaching on the movement of civilisation from East to West is as rightly considered to belong to one as to the other. In the teaching of composition, again, both oral and written exercises on the subject-matter of geography lessons, particularly where they more closely approach nature study, should be given. During reading lessons, globe, wall map, or atlas should be at hand if there is any reason to expect geographical references in the text.

As the aim in teaching geography is, at the beginning, to make children observe for themselves, and to teach them how to estimate distance and direction, outdoor lessons form an important part of the study from the outset. In these the subject is not merely related to nature study, but is, actually, nature study. It must, therefore, like all nature work, be dealt with as practically as possible. The whole of the syllabus of Standard II—which requires understanding of plans, knowledge of natural features in the neighbourhood of the school, and of the cardinal points of the compass—may be brought into the scheme of nature work. Later, in Standard III, the outlook becomes wider, the children advancing from the study of the home surroundings to the study of the geographical

region in which the school is situated, part of which, at least, will be unknown to them. Here, therefore, more classroom work will be needed for the making of maps which represent the larger areas as plans do the smaller. Yet the actual observational work which makes geography one with nature study should be continued as far as possible.[1] This may be done by means of school excursions, in which the children make observations of as much of the country as possible, and, though these will need supplementing by our own knowledge, gained by personal observation or from other teachers of the division or from maps, the use of the method even so far will serve to keep the children in touch with actualities. While the development of geographical study in Standard IV and upwards takes the subject more into the sphere of the prepared map and printed text-book, even here it may be associated with nature study, both in matter and method. The actual features round the school should be studied as types of what is met with in the larger and more distant areas—local mountain ranges as bars to communication, local poorts and valleys as rendering communication easy. Again, in studying the climate of any country or region, local weather observations should be used to keep the teaching from becoming merely abstract. The market produce of the district should give actuality to lessons on productions and industries. Local rivers, roads, and railways should be studied in connection with means of communication. The necessary facts about the form of the earth, and day and night, should be taught through actual observation of the sun's rising and setting and of its path across the sky, while distance and direction and products in the neighbourhood of the school, and the reckoning of time, should be used to help the children to grasp what is taught them about latitude and longitude. Teaching on the seasons should provide observational work which will bring the causes of them under the notice of the pupils—the changing position of sunrise and sunset throughout the year being noted; the oblique rays in morning and evening, and in winter, being associated with cold; the vertical rays at noonday and in summer with heat. Other observational exercises which suggest themselves are the determining of a north and south line and of the sun's height at noon in different seasons of the year, the recording of the

[1] How far it may be is shown in *The Geography of the Cape Division*, by G. B. Kipps (Juta), which should be obtained for the purpose of working out on similar lines that of any other school region.

varying length of the day, the making of temperature charts and the keeping of nature calendars.

As we have seen, the study of geography is to bring children into touch with physical realities, and this can only be achieved if they are led to exercise their senses in observation of the world about them. The teaching of the subject must therefore be based upon their knowledge of the natural features of the earth near school and home, and be directed towards widening and deepening this. The fulfilment of both these aims must at first be sought through actual observation, and the more thorough and sound is this early work, the more accurate will be the ideas gathered later about distant parts of the earth. While the practice of actual observation must be carried on as long as the immediate subject of study permits of it, the aid of imagination must early be called in to widen the horizon of the pupils. The two processes of observing and imagining must then go on side by side; the one finding exercise in familiar sights and experiences, the other being stimulated by means of stories and descriptions illustrated by pictures, models and maps. Thus, even in the lowest classes, two types of lessons, based on observation and description respectively, are required, and both must be continued throughout the school course. These two factors in the study of the subject will be found constantly helpful to each other; for "the motive which impels the child to enlarge his knowledge is curiosity," and, while "after babyhood curiosity is more readily excited by the distant than by the near, once aroused it can be reflected back upon the familiar so as to keep the sense of wonder fresh" (Scottish Memorandum on *The Teaching of Geography*).

The secret of success, therefore, in teaching geography lies in keeping the balance even between these two sides of the work. While the greater part of our geographical knowledge is gained through description, oral or written, the observational work must form our grounding in the subject. We owe all descriptions in the first instance, to the personal observations of travellers or explorers, although the record of these may not reach us directly. What is important to remember is, that neither we nor our pupils can understand such descriptions except in the light of what we have observed for ourselves. In the study of geography the imagination must paint scenes and conditions that are true to actual fact, and this it cannot do unless scenes and conditions, similar in kind, though

not in degree, have come under the observation of the senses. At the same time, unless imagination is brought to bear on the matter of observation, extending it beyond things seen into the region of the unfamiliar, true geographical study is never reached. We remain bound to the matter and method of nature study—to the study, that is, of such natural laws, forces, phenomena and productions as can be brought under our personal observation. "From the first then, or almost from the first, these two aspects should develop abreast—the child's conception of the great world growing more precise and coherent as his knowledge of his own little world grows wider and deeper" (Scottish Memorandum on *The Teaching of Geography*).

In our scheme of instruction we must distinguish three stages of teaching—the first for children up to seven years, the second for junior scholars and the third for senior scholars. The first is a preparatory stage in which the children begin to observe their surroundings "as a whole and as they come," not being expected to distinguish different aspects which later will resolve themselves into separate subjects; while, at the same time, stories and pictures are giving them ideas about strange peoples and distant lands. In the second stage the subject becomes more systematic, and the matter hitherto studied is recognised as belonging to three separate subjects—history, nature study and geography—which are, from this point, developed on lines of their own, though always, as has been emphasized, in close relation with each other. Descriptive geography is continued in this stage, but with a difference, the people and lands—hitherto existing, without reference to globe or map, simply "across the sea," "far from here," or "on the other side of the world"—being now given "a local habitation and a name." The stage adapted to older scholars is intended to "round off" and render practical, in view of the approach of school-leaving age, such geographical knowledge as they have previously amassed, relating it to life and citizenship: "Though each stage has thus its characteristic features, there are no hard and fast dividing lines. Descriptive and pictorial methods will not be dropped suddenly when we pass from the first stage to the second; even in [the third stage] the pupils will still enjoy and profit by good stories well illustrated" (Scottish Memorandum on *The Teaching of Geography*).

We must now consider the work of these stages in detail.

Even of geography children have some knowledge when they

come to school, and the wise infants' teacher will set herself to discover the amount of this in order that she may see the best place to begin and the best course to follow. From the time he learns to walk, every child is an explorer in a small way. In his home he learns where bedroom and dining-room and kitchen are; where his toys are kept, and, possibly, where his mother stores her jam and other sweets. He is led, that is, from one place to another by his needs and desires. In the garden and yard he knows where to look for the things that interest him most. By the time he comes to school, he probably knows fairly well the roads leading from his home into the village or town, or further into the country, and soon he comes to know very well, that which stretches between school and home. The starting-points for his study of geography are, therefore, easily seen to be the home and the school, and, as has been said, geography at first includes both history and nature study. The work in this stage, therefore, will deal with subject matter common to all these.

Observational work at this time should be concerned with people—their look, dress, work and homes; with animals, plants, inanimate objects and weather conditions, and with land and water forms. All these may usefully be treated in talks, and the method suitable for these has been outlined in an earlier chapter. At the same time the children should be gaining by direct methods ideas of shape, size, position, slope, direction and distance.

From the outset, rough representations of facts and features observed must be made by the children themselves. This may fitly begin by the making on the floor or on a horizontal blackboard of a model of the home and school and neighbouring roads and buildings, blocks and sticks being used for the purpose. The children should copy this model in sand on their trays, or make chalk or crayon drawings of it. Natural features—hill ranges, kopjes, valleys, plains—may also be modelled in sand or some such substance as clay. Water forms—vleis, rivers, sea—may be represented either by the use of water, or in the case of a clay model, by colouring parts of the surface blue. Very simple records of weather observations should be kept, these being at first coloured and pictorial. The following scheme has been suggested for general use in this matter:

Phenomena.	Representation.	
	Pictorial.	*Coloured.*
Sunshine.	Circle with six to twelve rays to show grades of warmth.	Reds—to show grades of warmth.
Wind and dust.	Flag flying—varying in size.	Yellow—dust like.
Rain.	Drops or umbrella. Number of drops showing grades.	Dull (grey) spotted with black.
Clouds.	Cloud-like form.	Dull (grey).
Cold.	Muffler or similar object.	Blue or pink.

Such observations and representations are meant to serve a double purpose—first, to give the children a fairly correct idea of the position of noticeable features, both natural and constructed, and to teach the names of neighbouring streets, hills, buildings, etc.; and, second, to impress on their minds examples of natural features which, later, will help them to imagine and understand the forms and forces met with in their world study.

A help to the realisation of what pictures descriptive of geography should paint for children at this stage will be found in the poem on *Travel*,[1] the opening lines of which are quoted at the head of this chapter. Robert Louis Stevenson was a poet who saw with a child's eyes to the end of his life, and the poem paints with wonderful skill the world-pictures that may crowd the minds of imaginative children, naming, as it does, one after another, the sights, sounds and smells that have fascination for them.

In the descriptive lessons children should be taken—by means of stories and pictures—on imaginary travels to these wonderlands of fact, and have the scenes of cities, deserts, and jungles spread before them. Linked with their travels should be the myths, legends and true stories in which history takes its rise. No regular order need be observed in the telling of these stories. The children's interests will place a guiding thread in our hands. These interests centre first round Man, and he should be met in various types and seen against different backgrounds—the Red Indian in his wigwam, the Eskimo on an icefield, the pastoral nomad with his flocks, the Chinaman on his rice patch, the Arab in the desert caravan. His occupation (hunting forest animals or sea-creatures, pasturing, cultivating or trading) will add to the interest felt in his looks (colour, form and dress) and his home, showing what manner

[1] Published by Messrs. Longmans, Green & Co. in *A Child's Garden of Verse*.

of weapons or tools he uses, and what is the nature of his food. After Man, the animals that are his friends or servants will arouse eager interest—the familiar horse and dog, the stranger reindeer and camel—and after the animals, the plants he uses. Descriptions of occurrences and forces not experienced at home—iceberg, avalanche, earthquake, volcano—should be given, and pictures of them shown. Unfamiliar aspects of the homeland should also be treated by the descriptive method, the country thus being made familiar to town children, the town to rural pupils, and the sea to those born and bred inland. As has been suggested, quite indefinite expressions—as, for example, "Very far away," "In a cold country by the sea"—for the position of the lands described through their people and products, will suffice at this stage. When the map and globe are introduced in the systematic stage, localities will be definitely placed.

[*Note.*—A number of well-written and well-illustrated books, descriptive of actual places and peoples, are available as source books for this part of the work. Among these may be mentioned the series of Messrs. A. & C. Black, beginning with *The Children's World*. If used as reference books by teachers of infant classes, and as readers in the standards, they could hardly fail to have a good effect in stimulating imagination and improving expression. The same publishers' *Visual Geography*, a book of outline drawings —with brief notes—to be coloured by little pupils, should aid on the representative side of the work. Messrs. Blackie & Son have also a good series, of which the first two books—*Little Folk in many Lands* and *Tales and Travels*—should prove helpful to teachers at this stage.]

The teaching of the second stage must be adapted to the mind development and needs of children from eight to thirteen years of age. It is very necessary that, at the beginning of it, we should determine what the children may be expected to know by the end of this stage, when a considerable number of them will be within sight of the end of their school life. It is not unreasonable to expect that they shall know the chief features of the great world divisions, shall have studied the countries of Europe—especially those more closely connected with South Africa—and of the British Empire in some detail, and have a still closer acquaintance with their own country. In addition, they should have some knowledge

of the facts affecting the earth as a globe rotating and revolving in space, and of its relation to the sun.

In this stage of the observational work, earlier ideas of distance and direction must be extended. The practice of ascertaining distance by actual measurements must begin in such small areas as the classroom, by rough and ready methods ; but, as time goes on, proceeds by the use of measuring instruments for larger areas. Early in the stage the children must learn to express direction not by reference to their own persons, as earlier, but by the points of the compass.

As the children should know something about the earth's motions they must continue their sky study, and this will bring them to the consideration of the earth as a globe rotating and revolving in space. Teaching on the shape of the earth should be introduced fairly early—as early, at least, as Standard IV—for while children of from ten to twelve years cannot be expected to appreciate the proofs of its roundness, it is very necessary that they should, as soon as possible, gain correct ideas of it as one of a number of globe-shaped bodies revolving round the sun. Proof of its surface curvature, such as is afforded by the differing heights of poles of equal length, set up at considerable distances from each other on level ground, is not likely to convince them. The characteristic manner in which approaching and departing ships are seen to appear above and disappear below the horizon is not much more likely to do so. In fact, while the majority of children of this age will be found ready to accept the fact that the earth is round, but few would appreciate the reasoning by which it is reached. The best way of introducing the idea of its roundness is, as one of the foremost of modern geographers, Mr. H. J. Mackinder, has pointed out, to refer to the apparent path of the sun in the sky, pointing to actual sun and earth, and not, at first, using globe or any devised apparatus. We should then question the children as to where the sun was before it rose, where it is after it has set, and how it gets back to its usual rising place. Gradually, the idea of a completed circular path, part visible and part invisible, will enter the children's minds as they grasp the fact that the sun has—apparently—travelled round the earth. Then the idea of the earth as floating in space will begin to impress itself, and the fact—rarely realised by children—that there is a dome of changing sky above the other side of the earth as well as above our own. At this point drawings or objects may

be used for illustration, but there is always a danger that the children's imaginings will be bound by them. At first we should speak as we do in ordinary conversation as if the sun really moved. We say "The sun is coming up" and "The sun has gone down," and no harm is done by continuing this familiar way of speaking in our early geography lessons. Observation of the sun's greater heat at noon and of the fact that a northward slope is hotter than a southward, should lead up to the connection between the shape and tilt of the earth and the position of the hottest and coldest countries on its surface.

As the recurrence of day and night is familiar, the teaching on its cause should be given fairly early. The lessons will most successfully be given in a darkened room. The children should stand round the globe and should change their position at least once during the lesson.

The mode of fixing position on a globe by means of two sets of lines cutting each other will be understood by Standard IV children if it is very simply treated. Latitude should be taught in relation to productions and longitude in connection with time, the matter being dealt with from the standpoint of South African time.

Teaching on the seasons cannot be effectively given until after a year's observations directed towards the place and time of sunrise and sunset, and changes in the height of the sun. After a year's direct observing and recording the two sets of observations should be related, when the connection between higher sun, longer day, warmer weather, and changes in plant and animal life and human occupations should be studied. Then because geographical studies are not completed until the knowledge gained from them has been applied to the conditions of life on the earth, the effect of the seasons on plant and animal life in widely different parts of the globe should be determined.

Observation of weather changes and records of sunshine, temperature, wind, and rainfall should be continued and extended.

Observations on the earth's surface must be continued, attention being concentrated on natural features and on matters affecting plant and animal (especially human) life. *The diagram, representing the earth as a globe at four stages of its journeying in a very elliptical orbit, should not be used in teaching the seasons.* It can only give wrong impressions. Up to Standard IV direct observation of the land surface in the school neighbourhood must give reality

to the knowledge acquired, so that when the pupils are advanced to the more systematic study of their own country they will be able to see it through the map which serves to represent it to them, and which will then be to them something more than "a number of dots and lines on a coloured surface." In the teaching on these features it must be borne in mind that their *names* (with a formal definition) are very much less important than the *nature* of the things for which they stand. Thus:

Inlets of the Coast—bays or gulfs—must be realised by the children as starting and stopping places for ships.

Rivers as waterways making—if navigable—exploration, transit, cultivation, and industrial occupations easy, and settlement, therefore, profitable.

Straits as narrow connecting passages between one large water area and another.

Isthmuses as rendering artificial passages of the same kind possible, *e.g.*, those of Suez and Panama.

Islands as affording opportunity for intercourse and defence and characteristic occupations, and as aids to navigation.

Capes as landmarks valuable in navigation.

Mountains as natural defences, as barriers to communication, as causing (under certain conditions) rain, as the sources of rivers, as supplying material for fertilising lowlands, and bringing about changes in river valleys and lake basins. Many of these effects may be observed on a small scale in neighbouring ranges. Children know for themselves how difficult it is to reach a place that lies on the other side of the hills; they can watch clouds form and gather about the mountain tops, and can observe the muddy streams pouring down from them after rain.

Valleys as sites for cultivation and settlement.

Not all of these, of course, will fall to be studied in the earlier standards, for in II and III the children's attention will be more profitably concentrated on those of the home and school region; but a vlei or dam, or the artificial pond in a park, may be made to help towards a realisation of the larger lake, and such possibilities for teaching by types should be taken advantage of whenever possible.

By such observations as these, the underlying meanings and value of earth-study will be brought home to the pupils. Through sky-study they will come to conceive of the earth as a rotating planet revolving round the sun from which it receives light and heat. The

amount of heat it receives and the manner in which it is lit, will be seen to be determined by its shape, the tilt of its axis, and its daily and yearly motions ; and life as it exists on the earth will be shown to be influenced by these. Through weather observations, again, the children will gain true notions of the atmosphere—realising that it rotates with the earth and transmits light and heat and moisture to it, varying from day to day in its own temperature and in the amount of water vapour it contains. They may be helped to realise, too, that it is through the inter-relations of sun, air, land and water that life, as we know it, exists and continues.

Observations of the material needs of human beings (food, clothing, shelter), and the occupations supplying these, and of human customs and habits of life, should be added.

Thus, gradually, the children may, through their geography lessons, come to a view of life on the earth which, while by no means full or complete, leaves no aspect of it entirely unobserved or unillumined.

Representation and observation must both be more accurate in this stage of the work, instruments being used when necessary. Both must be more extended, too, in order to show what has been learnt of the larger areas under study.

The main object of mapping at this period is to make the children thoroughly acquainted with the usual methods of representing surface features used on globes and maps. The more accurate methods should be applied first to the school, its immediate surroundings and neighbourhood, and then be gradually extended to all countries that form the matter of study.

Plans of small areas such as the classroom, the schoolroom, and the immediate neighbourhood of the school should prepare our pupils for the next step in representation—a map of the geographical region in which the school is situated. This may be taken in two parts—one of the area with which the children are familiar, and the other of that which lies outside the field of their observation. Imagination must here come into play to replace observation. In order to gain a true mental vision of the surface of those parts of the district which they have not seen the children should be shown first a " relief " map of them, and then a " bird's-eye " view. After this they should be ready to study and draw a map in which the ordinary mapping signs are used. Physical and political aspects should be dealt with separately.

The ruler work in the drawing syllabus of the lower standards will have enabled the children in Standard III to make the necessary advance on the freehand method of the preparatory stage; and, accordingly, measurements should become more exact and the maps for which they are used more accurate. The children's chief difficulty will be the representing of surface relief on the flat. In this, as has been suggested, the colour scheme of the atlas in use should be adopted. It will be necessary, however, for them at least to understand, if not actually to practise, alternative methods for showing raised masses of land—shading, feathering, and the thick line—because these are so generally used in maps met with in text-books and readers.

The aim of this representative work is not so much to make the pupils expert in representing the surface features of a given stretch of country, as to make them familiar with the manner of map-making in order that they may read maps with ease—be able, that is, to visualise readily the actual features variously represented on them. No time can be spared for elaborate reproductions of detailed maps; but the ability to make a recognisable sketch map of a region under study must be steadily cultivated. In addition to ordinary map-making, exercises in filling in outline maps with given particulars should be set. The estimating and subsequent verifying, for example, of the course of rivers from the position of mountains previously entered, is valuable practice. The best course for a projected railway may be decided in the same way, or the natural lines of communication between one place and another may be entered. Such exercises in representation will aid in the development of the idea of a map, and, as the children's study is extended to wider areas and distant countries, the need for such records of their features—natural and artificial—will be recognised. Thus the recording of observations, at first crude and pictorial, will gradually become more accurate and more diagrammatic, and the children will pass naturally from the more concrete to the more abstract form as their minds develop.

As in the earlier stage, this observational and representative work must accompany lessons conveying interesting ideas about distant countries and strange peoples. Such lessons as these must be illustrated as fully as possible by pictures and photographs of characteristic scenery, types of houses and other buildings, and of people in national costume; and by the examination of natural

productions and typical manufactured articles, including national costumes, specimens of weapons, tools, toys, etc. The museum shelves should supply some of these, but children who have any in their homes—the harvest of some sailor or soldier relative's travels—will take pleasure in bringing them to be shown in class.

The story method of bringing countries and people before the children must still be employed; but the transition to the systematic stage of treatment should be marked by the introduction of the globe, and more emphasis should be laid on lands than on peoples. It is as the homes of people made familiar through story and picture, however, that these lands must be regarded.

Children of eight years, while probably ready enough to reply "It is round," if asked the shape of the earth, are not likely to have a true conception of it as a globe. To them it appears flat, with risings and hollows; and it is as a flat earth, we may be sure, that it exists in their minds. At this stage, however, they must learn to think of it as a globe; and they will not be able to change their ideas of it without help. Some treatment of the matter, therefore, is necessary and suggestions are given below:

Introduction of the Globe.—We should not, for the moment, attempt to prove to the children the fact of its roundness, but simply put the globe—one in relief will be infinitely more valuable—before them and tell them that it is to stand to them for the earth, which is the same shape but immensely larger. Should one of them object that the earth looks flat, it will be enough to say: "Well, let us suppose that there were some very tiny creatures—smaller than the smallest fly—walking on this globe"—touching it—"Don't you think the globe might seem flat to them because they could see such a very little of it at a time? But the globe wouldn't *be* flat for all that, would it?" Then, as occasions arise, in the course of the lessons, we may bring in the fact that people have been round it. While this is not a *proof* of its roundness, it will help towards their grasping the idea later. From time to time, also on school expeditions, we should draw attention to the widening view within its circular boundary as some hill is climbed. Draw attention, too, to the sun's path in the sky. Try to get them to follow it in imagination, after it has set, round to its rising place next morning. These are helps to realisation which will have done

something to prepare the way for the idea before it is necessary to begin more formal teaching on the shape of the earth.

When the globe is first introduced, the poles, equator, continents, and oceans should be pointed out, as they will be useful in locating places. The names of the land and water divisions need not be given unless there is reason to believe that they will be helpful to the children. The chief mountain ranges of the world and the chief rivers and most famous towns should be located, too. The homes of people learned about can then be referred to these, and so knowledge of places on the globe will gradually become more definite.

As at this stage of their mental development the children's memory both for words and appearances is especially strong, advantage should be taken of the fact both to teach names of such of the more important features and towns as are known to all educated people, and to call attention to characteristic shapes of land masses, coast features, position of mountains and direction of rivers. Though the significance of these cannot be appreciated till later, their storing away in the mind will be found to be of advantage before the school course is over.

In their world-survey the children should not now, as in the preparatory stage, be confined to the study of people and their homes. Their survey should be more general, and one or two important relations should be brought out. Thus the variation in temperature at different levels—high, low, medium—and under different conditions of heat and cold, moisture and drought, should be touched upon. The typical appearance of desert and jungle, frozen waste and tropic swamp, should be described and contrasted, teaching on the causes of them being reserved for a later stage. These contrasts will serve to recall what has been learnt in nature lessons of the needs of plants.

The close connection that exists between vegetation and position can be well seen in the continent of Africa, which falls to be studied during this second stage of teaching; and consideration should be given to it. Then, though the study of the New World comes later, the pupils may be carried on the "magic carpet" of the imagination across the Atlantic to the American continents in which, the land stretching further north and south, all the belts of vegetation (tropical, sub-tropical, temperate and frigid—from Amazonian jungle to frozen wastes that yield only moss and

lichen) succeed each other between the Equator and the Arctic and Antarctic Seas.

Such imaginative globe-travelling will enable full advantage to be taken of the geographical allusions met with in class and private reading. The habit of "looking up" these, and the growing power to appreciate them, are of the greatest value in filling in the outlines of formal geography lessons and study.

For South African children the study of the home country should mean rather the Union and Rhodesia in outline than any one particular province in detail. Geography lessons which are given up chiefly to the memorising of names and unrelated facts are now discredited; and the teaching must be on modern *regional* lines: the area under study, that is to say, must be considered in its natural regions, determined by surface and climate, and political boundaries will be for the moment neglected. They are matters of history rather than of geography.

There are two facts that give special value to the beginning of the study of the home country at this time. The pupils have reached the limits of possible observational work on their surroundings; and, though revisionary lessons should be given from time to time, the more imaginative mind-work required in studying unseen regions is better suited to their age and powers. Opportunities for observation they will still have, for at this age they will take longer journeys and visit other places more frequently. They are old enough to bring back from these, reliable information in regard to distant and widely different parts of the country—of the fruit and grain districts of the south-west, and of the ostrich, sheep and goat farms of the middle and eastern Cape Province; of the Karoo; of the semi-desert Kalahari; of the mines of the Rand; of the pastoral Orange Province region and of the sub-tropical coast-lands of Natal; so that places which might have been little more than names to them will come to have meaning through personal associations. The second fact that gives special value to the systematic study of South Africa at this point, is that the children are about to begin the formal study of South African history, and the two subjects will illuminate each other in a way that brings out the close connection existing between them.

The aim of this first systematic study of the home country should be to describe and locate places and to give them living associations in the minds of the children. The method of treat-

ment should be something like that which converts a rough sketch into a finished picture. First a clear vision of the country in outline should be given—of its chief coast features, mountain masses, rivers and centres of population. A more vivid description of its scenery should follow—of mountain, veld, karoo, semi-desert and coast-lands—and these should be clothed in their characteristic vegetation and haunted by the animals that have their homes in them. After this, the country should be peopled, its inhabitants being shown with their characteristics of race (European and native) and occupations (farmers, miners, government servants, townsmen and country labourers). It should be reviewed, finally, from the historic standpoint. In each review the study should be kept *alive* by frequent drawing upon the direct experience and personal associations of the pupils.

After South Africa has been studied in this way, similar, but less detailed treatment should be given to the rest of the continent. The preliminary glance at it was taken for the purpose of seeing South Africa in its proper relation to the great regions of the whole. These are now to be studied in more detail, and will be found to be capable of subdivision.

When the home continent has been studied thus, the world at large should be taken up systematically in the order decided by the syllabus of the school course.

In the third stage of teaching the aim must be still more clearly defined. The question before us as we enter upon it is: "How may the knowledge gathered by my pupils during their previous school life be most usefully strengthened, and in what direction does it need supplementing?" As, for the majority of elementary pupils, school life ends at the close of the Standard VII year, it is necessary to review their acquired knowledge with an eye to the demands likely to be made upon it in the world they are about to enter. What geographical knowledge will be required of them when school years are over? Broadly speaking, the knowledge which the better class of newspapers assume on the part of their readers—such knowledge of the earth, and of life and government upon it, as is the common possession of all educated people.

By the beginning of the last year of school life, the pupils should have studied the geography of the whole world in outline, and gained more detailed knowledge of the British Empire, with considerably more of South Africa, and especially of the Union. A

suitable course for the last year then will be the revision of the great world-Powers—those of Europe, the United States of America, China and Japan—in their relation to the British Empire generally and to that part of it in particular of which we are citizens. The necessity of following newspaper geography will cause special emphasis to be laid on natural resources and their development ; on the exchange of products, on communications, with study of the great trade routes, past and present, and the reason for their growth or decay ; on the causes of the growth and decay of towns ; on government and recent history, especially of those interrelations which are constantly threatening to disturb the present balance of power.

For revision, at this stage, is not enough. New light must be shed, new views given and new interests aroused, while the habit of self-reliance must be created in order that, on leaving school, the pupils may find it possible to continue their education alone. They should be urged, for instance, to follow the march of world events as recorded in newspapers and magazines : geographical and political changes that in time will become historical ; developments in the study of natural history ; scientific discoveries that affect the health, well-being and prosperity of the world at large, and influence exploration and settlement in fever-haunted regions of the globe. In addition to this home reading there should be, once a week at least, discussion of current events in class. Emphasis should be laid on the advisability of looking up in the atlas such of the places mentioned as cannot be instantly located—at least approximately—on a mental map which the sight of the names calls up in a flash, especially if their situation affects the matter under discussion. Where necessary, attention should be directed to reference books from which fuller information on the subject may be obtained. In all such discussions any side of the topic likely to arouse prejudice should be avoided as much as possible, or, if avoidance is impossible, should be dealt with quite impersonally. Our aim here must be to place facts before our pupils—not to draw conclusions for them. There is a danger, too, that in studying newspapers and magazines they will be attracted by the wrong sort of thing—by sensational items and matters of small gossip quite valueless from an educational standpoint. Much tact and skill will be needed to discourage such reading without lessening interest. It must be done by showing the greater interest attaching to matters

worthy of study, and can be done if we have, in addition to a real interest in such matters ourselves, the power to put them in an interesting light for our pupils by bringing them into relation with their existing interests. As in all efforts to reform, the taste for something better must be given before the something worse is taken away.

While a new outlook is thus provided over the field of the world, the study of South Africa itself must not be neglected, but be given likewise a new turn and a wider and deeper meaning. The stage of mind-development reached by the seventh standard year will enable the pupils to enter more fully into the matter of the general build of the country as influencing occupations, and, through them, national development.

In addition, the matter suggested for study in the case of the World Powers as related to the Empire—natural resources, exchange of products, communications, growth and decay of trade routes and towns—should be studied here in greater detail.

A return should also be made upon the study of the immediate surroundings of the pupils, which, first begun in the preparatory stage of teaching, has meanwhile been enriched by contributions from the history and nature lessons which have gone on side by side with those in geography. An attempt must now be made to bring the matters of separate study—physical features, facts concerning the plant and animal life of the region, human activities and historical events—into relation with each other. Big national problems, as, for example, irrigation schemes, land settlement, prevention of soil erosion, treatment of stock diseases, improvement of methods of agriculture, railway development, should receive attention.

The familiarity with the countryside arising from this new study of it, should result in greater skill in map-reading ; for it is when the pupils are freshest from the study of the natural features that surround them that the conventional mapping signs, if understood, have the greatest meaning for them.

On the side of representation, rough sketch maps must illustrate the matter of study whenever this is possible. The drawing of these is to be regarded as a graphic form of rapid note-making—drawing *as a means of expression* again. Not only greater speed, but also greater skill, should mark the map-making at this stage.

Weather observations and records should be continued, especially observations of air-pressure in connection with climate, winds

and rainfall. In the study of winds and ocean currents the connection between their direction and the daily rotation of the earth must be established.

The importance of outdoor work is very great at this stage. The knowledge of mensuration gained in senior standards should be applied, during school walks and excursions, to the making of contours and of plans of the routes travelled. All such exercises, again, have their effect on map reading, which is, perhaps, the final goal of elementary geography teaching, for while this, in the words of the Transvaal Education Department's *Regulations*, "begins with the method of representing familiar places, the classroom, the school premises and the neighbourhood by means of a plan . . . it would be hardly an exaggeration to say it might end where the pupil can read a map intelligently." Certainly we should encourage him to think of a map as a book to be read and studied.

When they are able through the study of many maps to read a new one readily, our pupils should be able to paint in their own minds fairly correct views of remote areas. The possession of this power will enable them to derive far more pleasure and profit from books of travel and exploration.

Boys in rural and mining districts should gain some direct knowledge of the various soils and typical rocks of the neighbourhood, leading up to future study of farming operations or of mine planning and levelling. In coast towns they should be instructed in the elementary principles of seamanship. In industrial and commercial centres they should follow the market reports of some staple product. It is very essential, however, that there should be some local or personal interest or some definite purpose governing the study of these reports, or it will have no more actuality than similar statistics drawn from an ordinary text-book. Diagrams on squared paper may be used with advantage to illustrate these trade statistics, for graphic illustration often carries conviction of facts very difficult to establish without it.

The systematic study of any region must be made according to a definite and uniform plan. As in the case of all other lessons, an introduction of—or "*preparation*" for—the subject of it will be necessary. The method to be followed in this has often been stated. It must seize upon and make use of knowledge previously possessed by the children, and with this the new matter must be brought into relation. In junior standards it will generally be well

to recall some matters previously studied. For senior scholars reference to some passing event may best serve the purpose. In all cases emphasis should be laid on some important aspect of the subject likely to stir the interest of the pupils. Thus Switzerland may be approached by way of its mountain scenery; America by reference to the gigantic scale of occurrences; China through the odd customs of the country; Australia by means of some resemblance to familiar features of the home country, or by reference to some of its peculiar animal forms. One thing is linked to another in geography as in other studies, and much of the necessary teaching may be given simply by following the lead of such natural connections. It must never deal with bare names, but must show the meaning and origin of them, refer them to history, to literature, to recent occurrences and to personal experiences.

Then before a region is left it must be systematically reviewed according to a prepared plan which follows some reasoned order, as, for instance, *position, size and shape*, with such inferences as may be made regarding elevation and climate; *build and surface; prevailing winds and ocean currents; rainfall, soil, minerals, vegetation, animal life;* and, lastly, *human inhabitants*—their race, appearance, distribution, occupations and government.

Some such course as is outlined above is suited to the needs of pupils in elementary schools, giving to those who leave after passing Standard VII necessary familiarity with geographical facts and geographical ideas, and laying a firm foundation for the more advanced work of the high schools in the case of those who continue their schooling beyond the elementary stage.

FOR FURTHER STUDY

Teachers' Text-Books and Works of Reference

Longmans' Geographical Series. Book I, The First Book of Geography. 1*s.* 6*d.* Book II, The World for Junior Students. 3*s.* Book III, The World for Senior Students. 4*s.* 6*d.* Book IV, The British Empire. 3*s.* 6*d.* Book V, A Primary Physical Geography. J. Thornton. (2*s.* Longmans.)

Modern Geography. M. I. Newbigin. Home University Library. (1*s.* Williams & Norgate.)

*The Teaching of Geography in Elementary Schools.** Archer, Lewis and Chapman. (4*s.* 6*d.* A. & C. Black.)

An Introduction to Practical Geography. Simmons and Richardson. (3s. 6d. Macmillan).

A Rational Geography. Ernest Young. (3 vols. 1s. 6d. each. Philip & Sons.)

*General Regional Geography.** Unstead and Taylor. (6s. Philip & Sons.)

*A Progressive Course of Comparative Geography.** P. H. L'Estrange. (6s. Philip & Sons.)

*Elementary Studies in Geography.** H. J. Mackinder. (4 vols. 2s. each. Philip & Sons.)

*Descriptive Geography.** A. J. and F. D. Herbertson. (8 vols. 2s. 6d. each. A. & C. Black.)

A Smaller Commercial Geography. G. G. Chisholm. (3s. 6d. Longmans.)

Longmans' Wall-Maps of South Africa. An entirely new series. Sheet I. Size 46×40 in.; mounted on rollers and varnished. Price 15s. Contains (1) South Africa, showing Winter Climate; (2) Ditto, showing Summer Climate; (3) Ditto, showing Physical Features; (4) Ditto, showing Vegetation and Natural Industries. Sheet II. Size 46×40 in.; mounted on rollers and varnished. Price 15s. Contains (1) South Africa: Political Divisions; (2) Ditto: Density of Population; (3) Ditto: Railways, Steamship Routes, and Minerals; (4) Ditto: Geology.

South African Geology. Schwartz. (3s. Blackie.)

Physical Geography for South African Schools. Du Toit. (5s. Cambridge Press.)

*Relations between Geography and History.** H. B. George. (4s. 6d. Clarendon Press.)

Geography Section of *Nature Study Articles* in *The Cape Education Gazette.** A. B. Lamont.

Geography Section of the *Regulations for Primary Schools.* Transvaal Education Department.

*The Teaching of Geography.** Scottish Education Department.

How to Use Contour Hand Maps. J. A. C. White. (6d. Philip & Sons.)

Books suitable as Readers or for Junior Library

Note.—There are several good series of geographical readers published. Among them may be mentioned:

*Highroads of Geography.** (Books for the Standards from about 8d. to 2s. each. Nelson.)

*Peeps at Many Lands and Cities.** (1s. 6d. per vol. A. & C. Black.)

Pictorial Geographical Readers. 10 vols. (Prices from 1s. to 1s. 8d. Longmans.)

CHAPTER XII

THE TEACHING OF ARITHMETIC

"Arithmetic is a science . . . and an art. . . . Studied as a science it is an admirable training in abstraction, judgment and reasoning. Practised as an art it enters into the daily life of nearly every civilised being, from the boy who sells matches in the street to the minister who controls the finances of a nation."—*Salmon.*

"Arithmetic in the primary school should be regarded as consisting, not of so many isolated rules, but simply of a few fundamental operations which may be applied in a great variety of circumstances."—*Scottish Memorandum on "The Teaching of Arithmetic."*

In spite of the fact that more time is spent on arithmetic in our schools than on any other subject, the results obtained are very far from satisfactory, whether we regard them from the point of view of practical usefulness or from that of mental training. There are a number of causes, including bad and insufficient teaching, to which this unsatisfactory state of things is due, but perhaps the chief is that both these aims are often lost sight of in the endeavour to keep pupils occupied in the working of exercises, and in preparing them for a prescribed examination-test. These endeavours have led to the neglect of principles of teaching which must be observed if real success is to follow. It will be well to summarise these principles here, in order that they may be borne in mind from the beginning.

The first necessity in teaching any subject is to interest our pupils in it. If we feel that this interest is lacking we must try to make the subject *real* to them—to show them, that is, that it has something to do with their lives as they live them from day to day. In arithmetic this may be done by basing examples on matters within our pupils' experience; by stating these, as a rule, in concrete terms, by having early examples worked out by means

of concrete objects and by giving practical exercises whenever possible. How very unreal their operations in arithmetic often are to children is proved by the absurdity of some of the answers they find for us. This feeling of unreality is sometimes strengthened, if not actually caused, by the absurdity of the conditions given in examples. A standard arithmetic contains the following example in proportion: *If a man can plough* 1280 *acres in* 8 *days with* 12 *horses, how many will he plough with* 10 *horses?* The children, who have no experience of winged horses, may well be excused for thinking that such arithmetic has nothing to do with their every-day life.

Having attended to these conditions we must see that we really *teach* arithmetic and do not merely *test* our pupils by means of examples. To state a rule, to apply it to one or more blackboard examples, and then to set the children to work an indefinite number of exercises on it, is not to teach arithmetic in any real sense. Under such conditions their work is sure to be of a more or less mechanical nature, of little use for practical purposes except in a few cases of straightforward reckoning, and of no value as mind-training.

The concrete side of arithmetic teaching is of such importance both in the early stages, when the children are too young for much abstract calculation, and throughout the school course for the purpose of explaining new rules more clearly, that more attention should be paid to it than is usually the case. In the early stages of number teaching the actual counting and placing of objects should first precede and then accompany abstract figure working. Later, working by means of concrete objects will be found to aid in the full understanding of new rules. It must be remembered, however, that arithmetic is meant to be abstract in the latest stages of all rules, since it is in abstract reckoning only that the necessary speed can be obtained. In using the concrete, speed is, of course, sacrificed; but it is sacrificed deliberately in the interests of understanding. A number of exercises which will be found useful in the different stages of teaching are suggested below, being grouped here for convenience of reference. They are taken chiefly from articles on *Correlated Nature Study* in *The Cape Education Gazette* and from *Longmans' Practical Arithmetics*, by permission.

1. For notation from 1 to 9. Simple addition and subtraction.

Exercises with concrete objects (such as counters or kindergarten sticks) as units ; drawing exercises to illustrate the same number facts.

On squared paper (ruled in 1-inch squares) let the children "line in" an oblong containing 3 squares. Adjoining this, let them also line in an oblong containing 2 squares. Bid them count the number of squares in each part, and in the whole oblong, and then write down : 3 squares + 2 squares = 5 squares. (Similarly 2 squares + 3 squares ; 1 square + 4 squares, and 4 squares + 1 square.)

For another exercise, let them "line in" an oblong of 5 squares, then shade 2 squares showing 5 squares − 2 squares = 3 squares. (Similarly 5 squares − 1 square = 4 squares, etc.*)

2. For composition of the number 10. Exercises with counters, ten-slips (strips of paper ruled in ten equal squares), two-slips, five-slips ; cardboard coins, rulers and pencils.

3. For notation from 11 to 50. Addition and Subtraction. Exercises with counters, kindergarten sticks, slips, etc. Separating the "ten-group" from the remaining units ; drawing exercises. Being provided with the paper ruled in 100 squares, the children should line in, or shade, squares as required to represent the various numbers, writing down the necessary statements in each case, *e.g.*,

1 ten-group + 6 units = 16 units.
1 ten-group + 3 units = 13 units.*

4. For notation from 51 to 100. Addition and Subtraction. Exercises with kindergarten sticks and elastic bands (for the making of bundles), counters and slips.

5. For Multiplication and Division. Exercises for illustrating certain numbers, *e.g.* 12, by means of inches and pence ; drawing exercises and others with cardboard coins ; 16 by means of balance and actual weighing exercises (sand is a suitable substance for these) to be done by chosen children, not by the teacher ; 3, 6, 9, and 12 by means of foot-rule and yard-stick.

6. For elementary notions of Fractions. Exercises with paper squares and oblongs of squared paper ; paper folding and paper cutting ; drawing exercises ; dividing and shading of lines and squares ; use of coinage and measures ; shop games.

(1) For Multiplication Tables (Standard II).—Exercises in con-

nection with extension of number square to 12 × 12. The number 12, of special importance as entering into money table and long measure, demands several lessons, and many practical exercises during them. A foot-rule and 12-slip, and pence and shillings in cardboard coins should be used to aid the demonstration.

(2) For Multiplication and Division of Money, Weights and Measures.—Work of a concrete nature should here be given to illustrate these rules, children being called from the class to perform actual operations, cardboard coins being used in money sums, lines drawn on the blackboard for the measures of length, and actual vessels of varying content for that of capacity. Conversion—at this early stage from one denomination to the next only—may be informally introduced by means of varied exercises with the same apparatus.

(3) For Tables of Weights and Measures (Standard III).—(*a*) Exercises in connection with avoirdupois. Examples of objects or quantities weighing an ounce and a pound to be shown and handled, of others weighing a cwt. and a ton to be cited. The children to be familiarised with these, and the standard of weight to be frequently applied in connection with arithmetical examples. (*b*.) The inch and foot lengths should be accurately drawn by the children in their books, and a yard strip folded within them or drawn on blackboard. The pupils should, thereafter, be exercised in estimating lengths and surface areas of books, slates, desks, etc., rough and ready standards being shown to be available in hand, thumb, span, arm, and foot. The mile should be known as a certain distance from school on the main road, and should be measured by each Standard III class once in the school year. Exercises in connection with this unit should be given, the children being told to find how long it takes them to walk and to run the distance. (*c*) The measures of capacity should be dealt with in a similar practical manner, actual measuring vessels, as far as possible, being taken to class for purposes of experiment. The capacity of a paraffin tin having been found experimentally, the pupils should be required to find by its means the capacity of larger vessels, etc., at home. (*d*) A simple object-lesson on the unit of time, using in demonstration a small lead ball fixed to a fine thread about 39 inches long. This, allowed to swing freely, will beat seconds. Exercises in connection with the unit of time should then be given, the clock—or a clock-face—being used in illustration. The children may be directed to notice their heart

or pulse beats in order to accustom them to the duration of a second. (*e*) The class should be given a rough idea of plots of ground, an acre and a morgen in area respectively. A simple object-lesson on the chain or tape should be given, and if a chain is procurable the boys in the class should do some actual measuring with it.[1] (*f*) The cubic inch, foot, and yard, as introducing the idea of a new dimension, must be carefully explained. By means of a large bar of soap cut into cubic inches, the cubic table can be taught experimentally. Large cubes should be employed to teach the relation between the cubic foot and cubic yard. The dimensions of the cubic inch, foot, and yard should then be marked in a corner of the room, floor and walls being used for the purpose. Simple practical exercises in finding the cubic capacity of small boxes (in inches) and of rooms (in feet) should be set.

In connection with these exercises the children should be taught the names and capacities of measures used locally—of the muid in grain districts and the hogshead where the vine is grown. The pupils should also be encouraged to find by what measures commodities of every-day use are sold, and their price per measure at the local store or market. Thus arithmetic will begin to appeal to them as a thing that concerns their every-day life.

(4) For Vulgar Fractions (Standard IV).—(*a*) Further exercises in connection with the teaching of addition and subtraction. *Apparatus:* paper squares, rulers graduated in inches, halves, quarters, and eighths, drawing paper and materials, imitation coins, weights, and measures. These should be used to show the relation of the fractions mentioned to whole lines, squares, and other figures and coins. The paper squares may be employed to work out actual addition and subtraction examples. (*b*) Exercises in connection with measures and multipliers. *Apparatus:* cardboard strips and counters; wooden splints and other small objects; plain and squared drawing-paper and materials. Slips, lines, and rectangular figures to be used for finding measures or factors and multiples. (*c*) Exercises in connection with the more formal teaching of the four rules applied to vulgar fractions. *Apparatus:* squared paper, paper squares, and circles.

(5) For Decimals.—Exercises in connection with the notation, addition, and subtraction of decimal fractions. *Apparatus:* plain and squared paper.

[1] The higher denominations in area are more suitable for Standard IV, in which standard they should be dealt with.

(6) For Decimal and Vulgar Fractions.—Exercises in connection with the conversion of these—concrete and graphic illustration being given through the use of imitation coins and the drawing of lines and rectangular figures.

(7) For Introduction to Metric System.—(*a*) Exercises in connection with the use of metric edge of rule. Explanation of the rule and its markings to be followed by exercises in drawing lines to be marked off in millimetres, centimetres, and decimetres, and in picking out given weights from a box of metric weights. (*b*) Experimental building of metric table of length. Actual metric rule to be used, the children being taken into the playground for the purpose of measuring off metres with it. Metric rule and yardstick to be compared.

The value of oral exercises in making clear underlying principles, as well as in developing ease and speed in calculating, has not been sufficiently recognised in the past. Such exercises train the pupils to work with increasingly large numbers without resorting to the use of figures. At the same time, long operations should not be given in the form of oral exercises, since it is in the solving of the problem, and not in the manipulating of its numbers, that the value of them chiefly lies.

Here, perhaps, is the place to remark on that strange tendency, noticeable on the part of some students and teachers, to speak of "mental" and "written" arithmetic as if they were two separate subjects. All arithmetic, of course, is worked mentally, and what is called written arithmetic differs only in the fact that the answer is reached by means of a certain amount of figuring. We should make the transition from one form to the other naturally by substituting for the small numbers in a given problem, such larger ones as make impossible the task of remembering all the figures that the required reckoning gives rise to. This would show our pupils the true relation between the two and lead to their using both intelligently. They would realise that "Mental arithmetic is not a different kind of arithmetic to be wrought by special shorthand methods. Every short method taught for mental use should also be used in paper-work, for the short method is always the correct one to use in any calculation" (J. Gunn, *Class Teaching and Management*, p. 120).

But although, as has been stated, oral exercises are to be given for the purpose of securing a clearer understanding of principles, they are not to be used solely with this aim. They have

besides to fulfil the purpose of developing ease and speed in calculation. Exercises should be set with the aim of making the pupils ready reckoners in all practical calculations. Rapidity in working may be secured by the adoption of methods and setting of exercises specially designed with this end in view. Among methods the following are recommended :

The naming of totals only in addition—*e.g.*, in adding 9, 7, 5, 3, pupils must not say 9 and 7 are 16 ; 16 and 5 are 21 ; 21 and 3 are 24 ; but simply 9, 16, 21, 24.

Working by the "complementary" method in subtraction. Its working may be seen in the following example, 952–674 ; 4 and *8* are 12 ; 7 and *7* are 14 ; 6 and *2* are 8. Answer *278*.

The adoption of shortened methods in multiplication—*e.g.*, *by* 10, by adding 0 to the multiplicand ; *by* 5 (based on the preceding method), by adding 0 to the multiplicand and dividing it by 2 (since $5 = 10 \div 2$).

Of course, the principles underlying these shortened methods must be taught, and taught inductively. With regard, for example, to the multiplying by 5, the following statements should be obtained from the children :

When we add 0 to the multiplicand we multiply it by 10.

But 10 = twice 5.

∴ We must divide the result by 2, which will give half 10 times = 5 times.

The use of the tests of divisibility in division.—As a knowledge of these will be useful, the children should learn them one by one in connection with the different numbers. The various tests must not simply be set as rules to be memorised during the course of a single lesson.

As useful exercises the following are suggested :

Speed testing by tables of various kinds specially built to enable the teacher by simply pointing, after initial instructions, from one number or quantity to another, to indicate to the pupils what is required in answer. This results in the securing of the greatest possible number of answers in a given time. Such exercise is very valuable in the lower standards.

Starting with a given number and requiring each pupil to add another to it progressively.—Starting with 3 and adding 7 we get, for example, the successive totals 10, 17, 24, 31, etc.

Combining the four simple rules in a single example—as, for

instance, 2 and 5 and 0 and 3; double the answer; take away 2; divide by 3; add 4; multiply by 2. Call the answer farthings—how many pence?

Decimalising of money instantaneously,—e.g., of £1, 10s.=·5; 5s.=·25; 2s. 6d.=·125; 2s.=·1; 1s.=·05, etc.

While oral exercises are especially useful in the lower standards, where, as the children are not quick at figure-making, written examples would waste much time, they should be given constantly and regularly throughout the school course. In the sub-standards and Standard I, not less than two-thirds of the whole time given to arithmetic should be spent on them; in Standards II, III and IV, a half; and a very considerable portion in the upper standards. Of course, in single-teacher schools it will not be possible to give so much time to them; but even in these it will be found that by careful grouping much may be accomplished.

While every possible endeavour should be made—both by means of concrete working and by furnishing suitable oral exercises—to make the rules and principles of arithmetic intelligible to the children at the outset, it must be borne in mind that it is not possible for them to get a firm mental grasp of every rule during early lessons. Here, as elsewhere, they must learn by doing, and the doing in this case consists in the working out of a sufficient number of suitable exercises. During the working of these there should, however, be a constant turning back to the principles involved in order that the pupils may come to a clearer understanding of them.

We may frequently notice during oral exercises that a child who can readily furnish an answer to a given test question is at a loss if asked to tell how he obtained it. This is because it is a difficult task for untrained minds to analyse the processes by which a conclusion is reached. Intelligent teaching of the rules, and the practice of inviting the children to trace the steps by which they work out their mental exercises, is necessary in such cases. We sometimes find, too, that children who seem to have mastered a rule quickly have not grasped the underlying principle. This is proved when, faced with the necessity of applying the same rule to new examples, they fail to take advantage of opportunities for shortening which the new rule provides. From the beginning children should be trained to keep a look-out for possible methods of shortening and to treat all examples by commonsense methods.

Before considering in turn the various rules of arithmetic, the

necessary preparation for learning them and the subsequent applications to be made, it will be well to consider the stages into which arithmetic teaching in elementary schools is usually divided. There are three, corresponding to the work of the sub-, lower and upper standards respectively. The first is a preparatory stage in which the pupils must learn to understand the principle of the decimal system of notation; to master the names and order of sufficient of the numbers to exemplify it; and to recognise and write the symbols representing these numbers. The second is a middle stage in which the work treats mainly of whole numbers. Our endeavour in this stage should be, not to enable our pupils to work long or involved exercises or manipulate large numbers, but to deal readily and quickly with small ones. Examples should be stated in concrete terms, and should deal with actual instances of buying and selling, of making bills and such other arithmetical processes as enter into the practical business of life. The operations should be within the children's power of realisation at all times, and they should not only know what to do, but *why* it is to be done. Every principle should be illustrated by means of small numbers, and rules should be formed by the children themselves as the result of direct observation.

Problems should be given very early, since they are best suited to train children in habits of intelligent working. When the first two rules have been mastered (as far as small numbers are concerned) with the aid of concrete illustration, they should be combined in little problems. From this time every rule, besides being preceded by oral exercises, should be followed by written problems.

The third is a completing stage. In it the effort must be made to round off the pupils' knowledge before the school-leaving age is reached. In the first place, by means of exercises suited to their age, revision of all rules and principles mastered must be constant, its aim being to develop further speed and accuracy in reckoning. Readiness in making approximate calculations, and in applying short methods, must be a special feature of the practice given during this stage. Secondly, the teaching on certain rules must be carried further, and more difficult applications of them required as in the treatment of the units of length, area and volume for advanced work in mensuration, of vulgar and decimal fractions, and of proportion. Thirdly, there must be application of the rules to new work, as in the case of the notation of the metric system, averages, percentages, simple and compound interest and stocks; profit and

loss, and discount in relation to business partnerships and profit-sharing; squares and square roots.

We may now trace the development of this work through the school course.

It begins in the sub-standards, where, as a necessary preliminary, the children must learn in order the names of the numbers with which they will have to deal; and it will be well if, from the beginning, they learn to associate these names with the figures used to represent the numbers. The teaching of the name of a number should therefore be accompanied by the presenting of the form which stands for it, and the forms taught during any lesson should be copied by the children. During this stage it will be found helpful to associate small numbers with their arrangement on cards and dominoes, as these not only give a graphic representation of the number, but show of what smaller ones they are made up.

The earliest number exercise is the actual counting of objects, as opposed to adding, which should, however, begin very soon. Numbers at first must be associated with actual objects, as when the children, having the ball-frame in front of them, say 2 balls and 2 balls are 4 balls, *placing the two 2's together to make the 4 as they speak*. Then in the interests of speed it must be associated with the *idea* of the balls only, as the children say again, *but without touching them or seeing them*, 2 balls and 2 balls are 4 balls. This is the intermediate step between concrete counting and abstract adding, as in saying 2 and 2 are 4. In this last case the number is presented by itself. Objects and the idea of them called up by their name have both been stripped away, leaving only the abstract form of statement.

In connection with the matter of concrete counting, we must decide what are the best objects to be used for it. On this point authorities differ, for while some would rule out the use of fingers in favour of objects that can be removed at discretion, others advocate their use as, literally, "the handiest of all." While the fact that the systems of number in common use originated in a counting of the fingers seems an argument in favour of allowing it in the very early stages, there is a drawback to the practice that makes it better on the whole not to do so. Their very handiness tempts the pupils to continue using them longer than they should do, so that they fail to advance at the proper time from concrete counting, which is necessarily slow, to the quicker addition without the aid of objects.

Whatever objects are used for the purpose should not be either too attractive in themselves (as, for example, sweets, nuts and

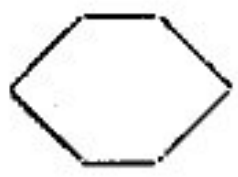
fruits), or such as crumble, or otherwise perish, quickly; or such as make the children desire to possess them. They should be easily procurable in sufficient numbers. Sticks, laths or cubes of wood, large beans and buttons, are perhaps as suitable as any.

The number lesson should be a language lesson also, the children being trained to express clearly in words what they have done in any arithmetical operation. It is very necessary in this as in every other part of their work that the children should be accustomed to giving complete answers, plainly spoken, with clear articulation and purity of vowel sound.

While all authorities are agreed that children must be taught to count by use of concrete objects, they differ as to the method to be employed in teaching. The particular method, however, matters much less than the recognition of the principle that mental calculation must be approached through actual operations with concrete objects, and we are likely to do the best work with a method evolved in its details by ourselves once we are familiar with the central ideas which should govern it. These are given below.

Early lessons should deal with numbers under 10, and in learning to count up to 9 the children should learn the composition of these numbers through arranging their objects in different ways—thus 8 as eight 1's, four 2's, two 3's + 2, and two 4's. They should be taught to count not by 1's alone, but by 2's, 3's, 4's and 5's, for the children who learn to count by 1's only, are likely, later, to *add* separate 1's and, given 7 + 3 to solve, to reckon 7, 8, 9, *10* instead of obtaining the answer 10 in one operation. They must be taught to count backward (later subtraction) by 1's, 2's, 3's and 4's from 10 to 1, as well as forward (later addition) from 1 to 10. In the figure teaching that must accompany the object counting, we should first show the value in the concrete and then the symbol, requiring the children both to place the object and to make the figure, for "the work of teaching a number is not complete until the child has been taught to make neatly and with despatch the figure which stands for the number."

Object Work.	*Chalk Work.*
— One stick	Figure 1
Letter V two sticks	,, 2
A table ⌈¯⌉ three sticks	,, 3

Object Work.	*Chalk Work.*
A box four sticks	Figure 4
A saucepan five sticks	„ 5
A kettle-holder  six sticks	„ 6
A flag seven sticks	„ 7
A ladder eight sticks	„ 8
A signal-post nine sticks	„ 9

After the figures have been taught, simple examples in addition and subtraction, with totals not exceeding 9, may be given thus:

To 2 sticks
add 1 stick.
3 sticks. Answer.

From 3 sticks
take 2 sticks.
1 stick left. Answer.

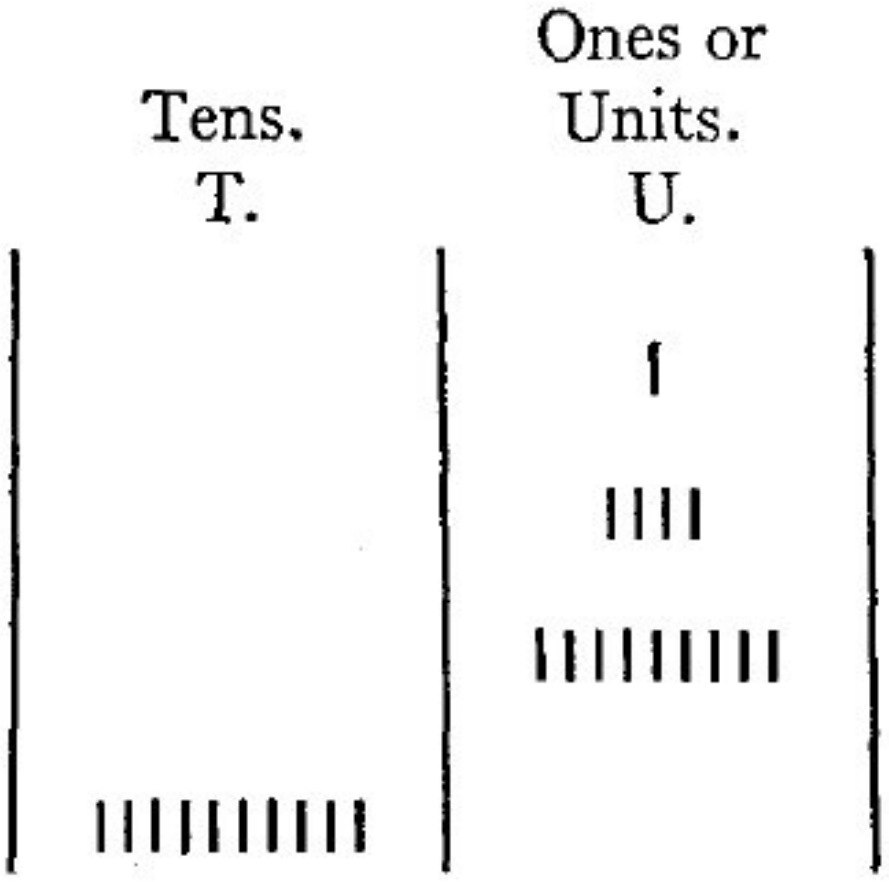
Apples.
To 4
add 2
and 3
9 apples. Answer.

Pennies.
From 6
take 3
3 pennies left. Answer.

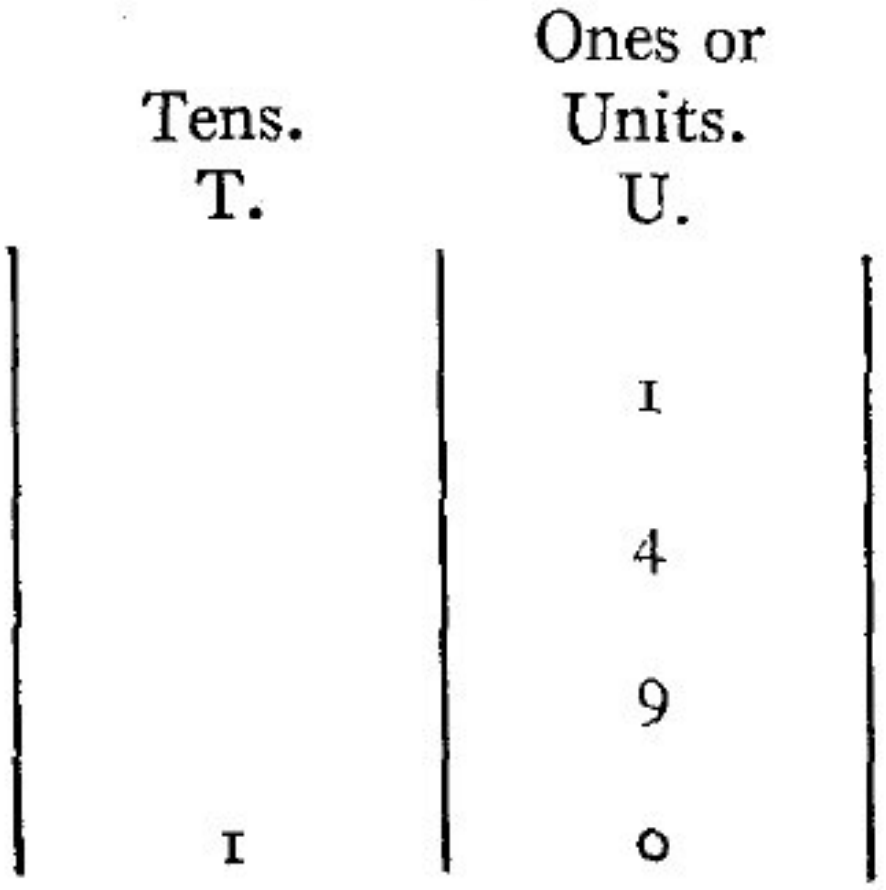
Note.—Even while the children are still at the stage of printing letter forms, they should be trained in the habit of making clear statements by words aiding figures.

As soon as these examples are perfectly understood and readily worked, it is time to deal with the number 10 and those beyond it within the limits of lower class work. At this point the first principles of place value will need careful teaching and illustration. The children have already begun notation in learning to make signs to stand for numbers—the figures or digits from 1 to 9—and in stating the small sums in addition and subtraction employing these numbers. This acquaintance must now be extended, and in passing from 9 to 10 the children need to learn that the value of a figure depends upon its position with regard to other figures, and that, in any one number, the figure on the left has ten times the value of the figure on the right. This can be made clear by the use, for example, of kindergarten sticks or matches with the heads cut or washed off —single ones and others tied in bundles of 10—and may be taught in the following manner :

Provide a small sloping table and divide its surface by chalk lines thus :



Divide the B.B. in the same way, thus :



Over the right-hand column, in each case, print Ones or Units as a heading. Show that the divisions of the table and the B.B. correspond.

Hold up 1 stick. Get children to tell that it is a *single* stick or *one* stick. Put it on the table in the right-hand place. Ask children what figure must be put for it on the B.B., and impress that it also must go in the right-hand column which is the place for ones or units.

Similarly show 2, 3 or 4 sticks. Obtain the answer that they also must go into the right-hand place. Put them under the one stick on the table and enter the figure to represent them under the 1 on the B.B.

Show also 5, 6, 7, 8 or 9 sticks, and proceed as before, finally entering the figure to represent them under the last unit figure above. Print U over the right-hand place first on the table and then on the B.B., and point out that, as the first letter of Units, it may be made to stand for the word.

Show 10 sticks. Ask how the number must be written on the B.B. (The children having learnt figures to 9 only will be puzzled.) Make the 10 sticks into a bundle and show that the *ten single ones* have become *one bundle of ten* sticks, which may therefore be called one *ten*. Emphasize that it cannot go into the Units place because it is no longer ten single *ones*, but a bundle. Being different from the others it must have a place of its own. Put it in the left-hand column on the table and tell that that is the place for *bundles of ten* or *tens*. Ask a child to show its place on B.B. Impress that though it is not 1 single stick it is 1 bundle. Figure 1 is therefore put for it, but is put in the new place to the left, not among the Units. Print T for Tens over the left-hand place on the table and B.B., and impress that the name is given because there are 10 single ones in the 1 bundle. Ask how many units there are on the table level with the 1 ten. [None.] Make 0 on the B.B. level with the 1 ten and in the Units place. Impress that these two figures together, 1 on the left (in the Tens place) and 0 on the right (in the Units place) stand for the number ten which is made up of ten ones.

Note.—The lesson should end at this point. Before the next notation lesson the children should have practice first in writing the symbol 10, then in counting to 10, and finally in writing all the figures to 10 by way of impressing that 10 follows 9 as 9 follows 8.

The number 10 is so important in our decimal system of nota-

tion that other lessons on it should be given before passing to the notation of higher numbers. It is generally recognised that rapid and accurate addition of a column of numbers is best secured through *adding by tens*. If, for example, children have to add 7 to 5, they should be taught to add first the 5 required to make 10 and then the 2 remaining which is the difference between that 5 and the 7 given. The sum of 5+7, they must see, is 2 more than 10, *i.e.* 12.

But if they are to use this method readily they must previously have had much practice in decomposing the number 10 and in deciding what number must be added to a given number to make it. Lessons must therefore be given on 10 and its parts, practice in the addition and subtraction of these parts being provided for during their course. During these lessons, by the use of concrete illustrations and drawing the following number-facts should be brought out :

10 = 9 + 1 or 1 + 9	9 = 10 − 1
10 = 8 + 2 or 2 + 8	1 = 10 − 9
10 = 7 + 3 or 3 + 7	8 = 10 − 2
10 = 6 + 4 or 4 + 6	2 = 10 − 8
10 = 5 + 5	

Frequent drill in the use of these facts should be given, and then exercises like the following :

Mary is five years old. In how many years will she be ten years old ?

Tom had 10*d. one day, and spent* 10*d. the next. What had he left ?*

How many days are there in a week and three days ?

The factors of 10, for the purpose of making our pupils still more familiar with the number, should now be introduced. The first step will be to show them by means of the "ten-slip" that 10 = 10 × 1. Suggestions for treatment follow :

Apparatus : Counters ; ten-slips, which can be made by cutting strips 10 squares long and 1 square deep from a squared exercise book ; squared papers ruled in ¼ inch squares ; rulers and pencils.

Give the children each a number of small counters to serve as units. Let them take from these one at a time and put it on the desk in front of them, counting the while from 1 to 10. Give them one ten-slip each and bid them take each of the ten units they

have just counted out and put it upon one of the squares of the ten-slip, counting aloud as before. Ask: "How many ones did you count?" "How many ten-slips?" Write:

10 ones = 1 ten-slip

Take a pair of scissors and from your own larger ten-slip cut the squares one by one, the children watching and counting aloud. Write:

1 ten-slip = 10 ones.

Bid the children line in an oblong 10 long and 1 deep. Bid them line in the separate squares more thickly. Ask: "How many times have you drawn a square?" "How many squares in the oblong?" "How many times larger than one square is the oblong?" Write:

10 times 1 square = 10 squares.

Bid them look again at their oblongs. Ask: "Into how many parts have you divided it?" "How many squares in each part?" Write:

10 squares ÷ 10 = 1 square.

Repeat the exercises several times.

The next step will be to teach the factors of 10 (5×2). Suggestions follow:

Apparatus: Small counters; two-slips, five-slips, ten-slips; imitation coins; measures; squared paper; rulers and pencils.

1. By means of exercises with their counters let the children find that: 2 counters + 2 counters + 2 counters + 2 counters + 2 counters = 10 counters.

5 times 2 counters = 10 counters.

2 counters × 5 = 10 counters.

2. Through the use of five-slips let them find that:

5 squares + 5 squares = 10 squares.

2 times 5 squares = 10 squares.

5 squares × 2 = 10 squares.

3. By cutting off 2-square pieces from the ten-slip and having the number of pieces and the number of squares in each piece counted, show that :

10 squares ÷ 5 = 2 squares.

By cutting off 5-square pieces and having them counted in the same way, show that :

10 squares ÷ 2 = 5 squares.

4. By sharing 10 pennies among 5 children show that :

10 pennies ÷ 5 = 2 pennies,

and by sharing them between two boys that :

10 pennies ÷ 2 = 5 pennies.

5. By arranging 10 children in 2 rows and then in 5 rows show that :

10 children ÷ 5 = 2 children.

10 children ÷ 2 = 5 children.[1]

Subsequently the symbols from 10–19 should be practised from copy and from dictation, questions being asked from time to time to ensure that the children understand the value (1) of each number represented, (2) of each figure in the number, and (3) their relative values. The point that will need emphasizing is that no higher number than 9 may go into the units place, because the next number above 9 is 10 and it must be written as 1 ten and 0 units.

So :

T.	U.		T.	U.	
11 =	1	1 = 10 + 1 or 1 + 10 ;	16 =	1	6 = 10 + 6 or 6 + 10
13 =	1	3 = 10 + 3 or 3 + 10 ;	19 =	1	9 = 10 + 9 or 9 + 10

When all the numbers from 10 to 19 have been introduced, and dealt with in the concrete, rapid practice in decomposing them should be given. The meaning of the suffix *teen* must be made clear. Exercises in numeration (writing of number in words) should accompany the exercises in notation (writing of number in figures), the words, to begin with, being *printed* on the blackboard opposite the figures and the children helped to read them.

[1] Adapted from Lesson 5, *Longmans' Practical Arithmetics*, Bk. I (Teachers').

As soon as our pupils know the names, order and value of numbers from 1–19, they should be taught to count by tens, first using the ball frame and bundles of sticks in doing so, and then proceeding by way of the intermediate step with names to the abstract with use of the symbols only. The filling in of units between one 10 and another will present no difficulty, as the names, order and value of these are all known. Backward counting, it must be remembered, is to be practised both from 19–1 by ones and from 100–10 by tens. Practice should also be given in counting forward and backward by tens, starting from any number, thus: 11, 21, 31, 41, etc., to 91 and 95, 85, 75, etc., to 5. Questions should be put to ensure that the counting is not merely mechanical, but that the children realise the difference in value resulting from the change of name, viz.: "Is 30 more or less than 20?" "How many more?" etc.

The introduction of the multiples of 10 in counting carries forward our teaching on the decimal system of notation. This is of such importance that every effort must be made to get the children to understand it. Concrete illustration must be freely employed—counters, cardboard, or paper slips and matches, or kindergarten sticks made up in bundles of tens and fastened by means of small elastic bands or some easy form of tie-string. Suggestions for treatment (based on Lesson 7, *Longmans' Practical Arithmetics*, Book II, Teachers') follow:

Apparatus: Small counters; ten-slips; squared paper ruled in ¼ inch squares; rulers and pencils.

Bid the children take counters from their heap one by one till they have taken 9, counting each one as they place them in a row before them. Bid them place the ten-slip below the row of counters and write the digits 1 to 9, one in each square. Bid them count and place the tenth counter and write the symbol for 10 in the tenth square of the slip.

Tell them to compare the symbol for 10 with the other 9 symbols. It consists of two figures, the rest of one only. Lead them to see, by comparison of the counters and slips, that:

10 ones = 1 ten-group.

By another reference to the symbols lead them to see that while

1 stands for 1 unit,
10 stands for 1 ten-group and 0 units.

Get them to tell that the 0 shows that there are no units, and that the 1 does not stand for a single *one* but for 1 ten-group, which is ten times as great as 1 unit.

Bid them place a second ten-slip under the first in the squares of which they wrote the symbols 1 to 10.

Point out that they now have 2 ten-groups and lead them to see that :

1 ten-group + 1 ten-group = 2 ten-groups,
and 1 ten-group × 2 = 2 ten-groups.

Have the separate squares counted and get the children to tell that

10 units + 10 units = 20 units,

and that

10 units × 2 = 20 units.

Lead them then to see that

2 ten-groups = 20 units.

Have the symbol 20 examined and show that it stands for 2 ten-groups and 0 units.

Take away one ten-group. Ask what is left. Get the answers : 2 ten-groups − 1 ten-group = 1 ten-group.

20 units − 10 units = 10 units.

By means of a third ten-slip help the children to discover and to state that :

2 ten-groups + 1 ten-group = 3 ten-groups.

and that :

1 ten-group × 3 = 3 ten-groups.

Lead them to see further that :

20 units + 10 units = 30 units.
10 units × 3 = 30 units.
3 ten-groups = 30 units.
3 ten-groups − 1 ten-group = 2 ten-groups.
30 units − 10 units = 20 units.

Bid the children examine the symbol 30. Get them to tell that it stands for 3 ten-groups and no units.

Deal similarly with the other multiples of 10 from 40 to 90.

Have certain of the exercises revised by means of drawing exercises, the children being required to line in the required number of ten-groups.

Give simple exercises stated in concrete form, *e.g.*:

There are three money-boxes each having 10 *shillings. How many shillings in all?* (*Written answer* : 10 *shillings* × 3 = 30 *shillings.*

A man had 50 *sheep and sold* 30 *of them. How many left?*

If I have 70 *marbles, to how many children can I give* 10 *marbles each?*

Before the end of Standard I our pupils should be ready to proceed to the notation of *hundreds*. The method of teaching *tens* should be employed and developed. It must be pointed out that the process of turning *tens* into *hundreds* is similar to that of turning *ones* into *tens*. Before a written example involving the notation of *hundreds* is given oral exercises should revise the earlier process, as, for instance: 9, 7, 5, *and* 4. *How many tens?* An addition sum, the items making 100 exactly, may then be written on the blackboard. When the new step has to be taken, the added tens having been found to total 10 tens, we may proceed as suggested below:

Only 9 tens can go into the tens place. Ask, therefore, what is to be done. Aid the children by reminding them of what they did when they had more than 9 units (made them into bundles of 10 units). In the same way, now that they have more than 9 tens, they must make them into bundles of 10 tens. Call two children out. Tell one to hold the 10 tens together, and the other to tie a piece of string round or slip an elastic band over them. How many bundles of 10 tens do the 10 tens make (1 bundle exactly). What were the 10 units called after they were made into a bundle? Show the new big bundle of 10 tens. Now a name must be given to this. Call a child out and ask him to count the bundles of 10 in it, calling them each *ten*, viz.: 1 ten, 10; 2 tens, 20; 3 tens, 30; and so on to 9 tens, 90; and 10 tens, 100. Tell that *hundred* is the name of the new big bundle, because if the ones in it are counted there will be found to be 100 ones or 10 tens. Now the hundreds must have a place to themselves. Where is it to be? Where is the tens place? (Next to the ones on the left.) Get a suggestion for the hundreds place, and tell that it is next to the tens on the left, just as the tens place is next to the ones on the left. How did we mark the units place? (By a U. for units above it.) And the

tens place? (By a T. for tens above it.) How then shall we mark our hundreds place. (By an H. for hundreds above it.) Refer back to the total of the tens line. What was it? (10 tens.) What did we turn our 10 tens into? (1 hundred.) Are there any other hundreds to be added to this 1 hundred? (No.) Then we will enter it between the lines. Bid the class read the answer 1 Hundred, 0 Tens, 0 Units, or—briefly—1 Hundred.

Apparatus in teaching notation will not be required beyond three figures; for when the children are ready to pass beyond 999 they will be old enough to apply the principle learnt in connection with tens and hundreds to thousands and millions. The three lines of these (Hundreds, Tens, and Units) should be taught together, not separately, since by this plan ease in reading and writing large numbers is quickly attained.

When the notation of thousands and millions has been taught it will be found helpful both in the reading and in the writing of numbers to set them out thus:

Millions.			Thousands.			Ones.		
H.	T.	U.	H.	T.	U.	H.	T.	U.
3	6	9	1	8	7	5	0	3

If, occasionally, twenty such numbers were written on the blackboard one under the other and the children exercised in reading them—pointing, first, to the number in the left division (369) and then to the name (millions) written above; next to the number in the middle division (187) and then to the name (thousands) above; lastly to the number in the right division (503)—ease in reading would soon result, and it would soon be possible to susbstitute commas for the vertical lines and M. Th. U. above, dispensing finally with the letters. Exercises in numeration should follow the exercise in notation. Numbers containing cyphers will be found to need special attention, as also the writing in proper position one under the other of numbers with different notation values, *e.g.*:

906,713
71
1,063
290
12,608

If it were impressed that the digits should always be marked off in threes from the *right* by means of commas, many mistakes in notation would be avoided.

Roman numerals to C (100) might be taught with advantage in Standards I, II and III. In Standard IV first notions of decimal fractions, by extending the principle of place value to figures to the right of the units figure, should be given.

The oral forward counting—or addition—by groups brings us into closer relation with multiplication and its "tables," as backward counting—or subtraction—brings us into relation with division, the tables for which should receive more attention than is customary. They are, of course, only a reversing of the multiplication tables, and when our pupils have learnt, for example, that 9×5 and $5 \times 9 = 45$ they should know the number of fives and of nines in 45, and be able to give readily the remainder over in the case of each number from 45 to 49 or 53. It is customary to teach the tables in the order of the number series, but a better way is to pick out the easiest first, viz. 10, 5, and 11 times (to 9×11); then 2 times with 4 and 8 times (as multiples) following; then 3, 6, and 9 times. This leaves the end of 11, 12, and 7 times only to be learnt. Twelve times may be connected either with 2 and 4 times or with 3 and 6 times; 7 times, as the hardest, because 7 is unrelated to any other number, should be left to the last, and after frequent rebuilding with concrete objects should be memorised with especial care and thoroughness. All tables must be built by the children themselves before any attempt at memorising them is made. The ball frame, perhaps, affords the readiest means of concrete table-building, but it can only be used by one child at a time. Small detachable objects—*e.g.* beans—as well as dots, strokes, squares, and rings chalked on the blackboard, are, therefore, better for the purpose. In these ways each table should be perfected before it is left, and, even after that, there should be frequent revision by forward and backward repetition and cross-questioning, for when the table is put into use there must be no hesitating or calculating. The answer to the query, self-asked or not, 6 times 8 or 6 into 48 must follow like a flash.

When the compound tables are taught lessons on each should be given in turn, as far as possible with the use of actual specimens

of money, weights and measures. Even in Standard I the children during concrete exercises in table-building should be made familiar with the coins used in the country and with such simple weights (the pound avoirdupois and its parts) and measures (hours and minutes; yards, feet and inches) as they need to know for practical purposes.

Money tables should not be learnt by heart; for "facility in dividing by 4, 12, and 20 (which ought to come from a thorough knowledge of the Multiplication Tables) is far more useful than the recollection of a few money equivalents." (Salmon: *The Art of Teaching*.)

On the use of specimen weights and measures in the teaching of the compound tables the same writer justly says:

"Every school should have a set of the smaller weights and measures—the pound, ounce, quarter; the foot, inch, yard; the pint, quart, gallon, &c.; and these should be constantly employed in teaching the tables. Children will thus see the relations between the different multiples, and acquire some definite idea of each. For lack of concrete teaching it is common enough to find young people who can repeat their tables correctly, but who yet cannot tell whether the playground is a pole or a furlong long, and whether a scuttle of coal weighs a pound or a quarter."

In teaching the rules of arithmetic we must not be content merely to show our pupils what operations they are to perform without giving any reason for them, as that method would make no appeal to their intelligence, and could only result in mechanical working. As far as is possible we should lead the children to find out for themselves both what they are to do and why they are to do it. Something may be done in this way even in the sub-standards, for children are not entirely ignorant of arithmetic when they come to school. They know something of the properties of number through actual operations—in counting, grouping, taking away and sharing—which they have performed at home in play or in earnest. The real difficulties of arithmetic in these classes are language and representation. Little children cannot readily tell in words what they know of number, and in most cases they know nothing, or almost nothing, of the symbols used to express it. Addition differs from counting only in being abstract, while the

earlier operation is concrete. When we count *one, two, three, four, five,* &c., without reference to concrete objects, we are adding by *ones*. Our pupils do abstract addition in oral exercises at an early age as a development of counting which has already been discussed. We are here concerned therefore with the difficulties of later addition.

These are met with as soon as a written statement of any example worked is required. The first is the difficulty of notation, and though early lessons and practice in the writing of number in figures should have impressed the principles of *place value* on our pupils before this stage is reached, it may be advisable for a time to show the given numbers and the answer decomposed, as follows:

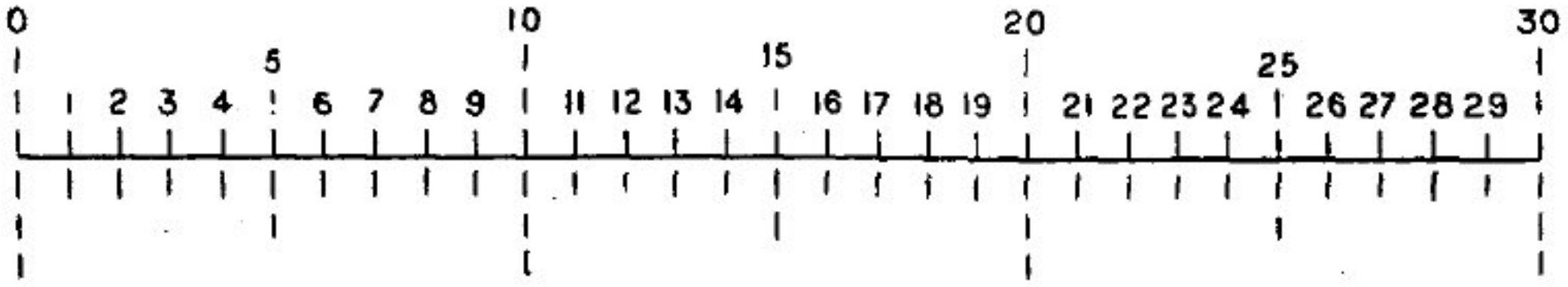
		H.	T.	U.
16	10 + 6		1	6
39	30 + 9		3	9
7	00 + 7			7
40	40 + 0		4	0
5	00 + 5			5
107	80 + 27	1	0	7

The time spent in the extra figuring is not time lost, because, besides the value of the mechanical practice in figure-making, which is very necessary for young children, the fuller statement helps to keep the minds of the children on the *place* value as opposed to the *face* value of the separate symbols. It should, however, be given up as soon as we find that our pupils see at a glance without the aid of decomposition that, for example, 3 in the second place is 3 tens or 30. Once understanding is reached, speed must be the aim.

A further difficulty is that of adding by unequal groups instead of by equal groups, which, through the practice afforded in counting, is easier. It is in preparation for this difficulty that the number 10 is treated in such detail at an earlier stage.

Further help in the using of 10 as an intermediate resting-point

in addition (and subtraction) may be given by means of the number chart shown below.



On this, additions and subtractions can be seen pictorially. Taking 8+4, for example, it is *seen* that from 8 we have 2 to go to get to 10, and when we have taken 2 of our 4 steps there are 2 remaining to be taken past the 10, bringing us to 12. Again in 16–9, we have 6 steps to go backwards to get to 10, and having taken 6 steps out of 9 have still 3 steps to take, bringing us to 7. The value of the chart lies in the fact that it enables the children to *picture* the operations, and so saves much memorising.

The difficulty of *carrying* in addition is met with as soon as the total of the units line passes beyond 9. The principle, of course, is of more importance than the term, which might easily, and perhaps with advantage, be dropped; and the principle (of adding the tens formed from the units of the answer to those occurring in the given sum) must be clearly explained to the pupils and firmly grasped by them. If the term is retained, it can be illustrated concretely by actual *carrying* of the bundles of tens made from the units into the tens place, and of the bundles of hundreds made from the tens into the hundreds place, children being brought from the class to *carry* them in their hands, and so becoming perfectly familiar with the operation and the reason for it. But once concrete working gives place to abstract calculation. it seems simpler and better to use the word added, as in the following example :

Statement	Working
67	U. T. U.
113	21 = 2 1
9	
242	
20	
~~2~~	
451	

The sum of the units having been given as 21, and the necessary process of converting them into 2 tens + 1 having been performed ask: "What is this 1? Where, then, must I place it? And what is this 2? Yes, so we must *add* [not *carry*] it to the tens in our sum. At first, to remind us, we will make a figure 2 under them. I can just get in a tiny 2 under the big one without taking up too much room. Now let us add them." Treat similarly the hundreds. The extra figuring, both in the working part and under the statement, should be given up as soon as the children have grasped the principle underlying the process. Less haste is more speed until understanding is reached; but not afterwards.

Beyond this point all that is needed is practice:

"*Rapidity and accuracy together, and neither at the expense of the other*, must be the teacher's aim. And, in order to get both or either, constant care must be given to method, in order to make sure that the pupils are really adding, and not counting up by units." (J. Gunn, *Class Teaching and Management*, p. 89.)

Terms used in connection with addition (sum, total, plus and the sign +) should be introduced, explained and brought into use as soon as possible.

Both as the most useful (because the most commonly used) of arithmetical rules, and also as the one in which the greatest number of blunders are made, addition demands great care in teaching and much practice, in order that the pupils' mastery of it may be as perfect as possible.

The second rule to be taught in connection with the written work is subtraction. In oral exercises, addition and subtraction should keep pace from the first, counting forwards to a given number, being immediately followed by counting backwards from it. In written work, however, it is better to get a little ahead in addition—after the very simple examples given to the Sub-Standards—before introducing the difficulties of subtraction.

DECOMPOSITION METHOD:

Class: Standard I. *Time:* 25 minutes.

Apparatus.—For children, books (or papers) and pencils; for teacher, table; sticks in single ones and bundles of 10, blackboard.

Note.—The lesson should open with oral exercises in subtraction, and others combining addition and subtraction in problem form.

Example on Blackboard.—From 16 sticks take 9.

Bid a child come out and show the larger number in bundles of sticks and single sticks, placing them on the table in front of the class. Bid another child come out and print over the bundle and the 6 single sticks the letters indicating their value (T. U.). Write down the sixteen on blackboard and compare with number on table.

Sticks	10	
16 =	10 +	6
9 =	00 +	9
07 =	00 +	7 = 7.

Ask how many sticks are to be taken away from 10 sticks and 6 sticks. Write the number (9) on blackboard under the 16 and, after appeal to the children, decompose both upper and lower to show value. Bid a child come out to begin the sum. Ask what he is to do first. (Take 9 ones from 6 ones.) Appeal to class. Can he do this? What then must he do?

(The question will puzzle the children if the example is the first they have had requiring decomposition.) Point out that the 6 single sticks are not the only sticks the boy has got. What has he besides? (A bundle of ten sticks.) Point out further that if the bundle of 10 is untied there will be 10 single sticks as well as the 6 single sticks, making 16 in all. Have the operation performed concretely, and show it in figures on the blackboard as above. Ask how many single sticks, ones or units, the boy has now. Bid the class count them, (16). Ask what it was he had to do. (Take 9 sticks away.) Point out that he can now do this. Bid him do it, and tell how many remain, (7). Show the working on the blackboard in figures. Ask if the sum is finished. (Yes, because 9 sticks have been taken from 16 sticks.) Ask for the answer, and show it on the blackboard. Impress the new teaching, namely, that when the number of single sticks (*i.e.* the "units" or "ones") to be taken away is greater than the number of single sticks from which they have to be taken, a bundle of ten must be broken up and the ten single sticks in it added to those in the units place. Give further examples, gradually increasing difficulty.

COMPLEMENTARY ADDITIONS METHOD:

Example.—325 :—325 − 168.

Again we shall require in early examples a full statement of the necessary decomposition as below:

$$\begin{array}{l} 325 = 200 + 110 + 15 \\ 168 = 100 + 60 + 8 \\ \hline 157 = 100 + 50 + 7 = 157. \end{array}$$

The working is as follows: 8 from 5 cannot be taken. Take and break up 1 ten; with the 5 units it totals 15; 8+?=15 (7). Enter the 7 in the units place; 1 ten from 2 tens in the given number has left 1 ten; 6 tens from 1 ten cannot be taken. Take and break up 1 hundred; with the 1 ten remaining totals 11 tens; 6+?=11 (5). Write the 5 in the tens place; 1 hundred from 3 hundreds in the given number has left 2 hundreds; 1 hundred therefore has to be taken from 2 hundreds; 1+?=2 (1). Enter the 1 in the hundreds place. The remainder =157, or, decomposed, 100+50+7.

As in the previous rule all terms and the sign connected with this one should be introduced as early as possible. The children should be able to use intelligently the terms *difference*, *remainder*, *minus*, and the signs " – " and " =." For this reason examples should be stated as variously as possible—*e.g.* "What is the *difference* between ——?" "Find the *remainder* when ——." "What is *left* after —— is taken from ——?" "What will *remain* if ——?" "Take —— from ——." "From —— take ——."

Multiplication should be introduced as a shortened form of addition. The children have made their first steps towards mastering the rule, during their early counting, and later adding, by groups. There is, therefore, no reason why concrete exercises on it should not be followed, even in Standard I, by the working of written examples within the limits of number reached. Care should be taken, that is to say, that examples do not require a further knowledge of notation than the children possess, and that results can be obtained through the tables they have learnt. It will be well in this standard to give none involving numbers greater than 99.

The practice of teaching all the simple rules about the same time, using small numbers, instead of pursuing each independently from

units to millions before attacking the next, leads to more intelligence in dealing with number. It shows arithmetic "as consisting, not of isolated rules," but of operations closely connected with each other—subtraction as a reversing of addition and division of multiplication; multiplication as a particular variety of addition worked in a shortened form, and division bearing the same relation to subtraction. When the rules are seen to be thus intimately related to each other, a more intelligent and common-sense use of them results. In problem sums, particularly, the benefit of the newer practice is seen, and the working of problems is the exercise which, before all others in arithmetic, may be made to cultivate intelligence.

Having granted, then, that it is advisable to give, within the prescribed limits, exercises in multiplication and division to be worked in Standard I, we must consider how to teach the rules.

When numbers given to be added are equal, there is a shorter way of obtaining the required answer than by adding them one after another. We may, instead, find the number of groups to be added, and perform the operation in one step by saying that so many *times* the given number is equal to whatever the sum may be. For example, if we were counting by fives from 1 to 20, we should say 5, 10, 15, 20. In stating each number we have added a 5, and as there are four numbers in the sum, the number of 5's added is four, and the working might be indicated thus:

$5+5+5+5=20$, or thus:—

$$\begin{array}{r} 5 \\ 5 \\ 5 \\ \underline{5} \\ 20 \\ \hline\hline \end{array}$$

Multiplication, however, enables us to obtain the answer much more quickly. Taking the number to be added (5), and the number of times it has to be added (4), we say 4 times 5, or write it 5×4, getting the answer by one operation, for the sum of four 5's added by separate steps, and the product of four times 5 reached in one step are the same. In the latter case, instead of actually adding, we have made use of our knowledge of the result of previous additions committed to memory in the multiplication tables.

In teaching multiplication, therefore, we should approach the rule through addition, working all early examples first by that rule,

and then getting the answer more quickly by means of the new one, thus :

11	
11	
11	11
11	4
44	44

Children "take to" the rule readily, because the saving of time and labour effected through it is so apparent.

The fact that the short form can only be used when equal numbers are to be added will need emphasizing.

The terms multiplicand, multiplier, and product, and the sign × should be taught in connection with this rule.

A new difficulty in multiplication occurs when the multiplier has two digits. We have then to obtain two partial products, and combine them into the whole product required. The writing down of these demands care in teaching, in order that there may be no error or confusion in "placing" them, so as to give them their proper value. We have also to decide in the case of partial products which is to be obtained first? While it is immaterial, as far as the answer is concerned, it seems reasonable to obtain first—though this is contrary to what has been the usual practice—that which is first asked for: that is, the largest. For example, if we are asked to find 23 times 637, there is no weighty argument in favour of finding 3 times first, and then 20 times, while the practice of obtaining the larger product first will be found useful in stating approximate answers.

Careful teaching will be needed on the value, shown by placing, of the partial products when the multiplier consists of more than one digit. In early stages it should be decomposed—*e.g.* 3703 × 52.

3703 = the quantity.
52
185,150 = 50 times the quantity.
7,406 = 2 ,, ,, ,,
192,556 = 52 times the quantity.

In later examples the statement of the value of each partial product is less necessary, though it is always valuable in the interests of clearness.

When several multipliers higher than 12 have been given, multiplication by factors should be taught. This may be done in connection with the exercises in reduction of money, weights, and measures, which form part of the work at this stage.

(1) *By use of imitation coins :*

Example.—I wish to change 6 sixpences into farthings. How many should I get for it ?

Method.—Call out one child and give him the amount to be changed, in cardboard imitation coins ; call out two others and give them the amount, or more, in pennies and farthings respectively. Question of the class : How many farthings should be given in exchange for each 1d. ? for each 6d. ? for the 6 sixpences ? State on blackboard (*a*) :

(*a*) 6 =No. of sixpences.
24 =Value of each in farthings.

120
24

144 =Value of the six in farthings.

(*b*) 6 =No. of sixpences.
6 =Value of each in pence.

36
4 =Value of each penny in farthings.

144 =Value of the six in farthings.

Let the change be effected by the third child counting out the required number of farthings (by *fours*).

Next tell the class that instead of changing thesixpences directly into farthings, the boy who possesses them will first exchange them for pennies, and then for farthings. Question again : How many pennies for 1 sixpence ? for 6 sixpences ? State on blackboard (*b*). Compare the two results.

Direct attention to the two multipliers in the second statement. Multiplied together, they *made* the single multiplier of the first, or, in other words, 4 and 6 (multiplied) are the *makers* or *factors* of 24.

2. *By use of yard-tape or yard-line.*

Example.—Find how many inches there are in 5 yards.

Method.—Produce a yard-tape with the feet marked in red and the inches in black, or draw on blackboard a line a yard long, and divide it into feet and inches. Bid the children find by counting (*a*) the number of inches, and (*b*) the number of feet in 1 yard. State on blackboard (*a*) and (*b*).

(*a*)		(*b*)	
5	=No. of yards.	5	=No. of yards.
36	=No. of inches in each yard.	3	=No of feet in each yard.
150		15	
30		12	=No. of inches in each foot.
180	=No. of inches in 5 yards.	180	=No. of inches in 5 yards.

Again draw attention to the multipliers in the second statement, and show that they are the *factors* of the one in the first statement, pointing out that the same answer is obtained by both methods of multiplying.

3. *By diagram* drawn on squared blackboard and copied by children on squared paper.

Example.—Find the number of lbs. in 13 qrs. (*a*) by direct method, and (*b*) by multiplication by factors.

1 qr. =28 lbs. ∴ 13 qrs. =13 ×28 lbs. or 13 ×7 ×4 lbs.

Method :

(1) Draw a rectangle containing 13 qr.-inch squares which divide into 1 ten +3.

(2) Draw a second rectangle containing 13 ×28 qr.-inch squares. Bid children count the squares (by convenient groups), and state that 13 × 28 = 364.

(3) Draw a third rectangle containing 13 ×7 qr.-inch squares. Let them find that it contains 91 qr.-inch squares.

(4) Draw 4 such rectangles, one under the other, and show that as each contains 91 qr.-inch squares, the 4 contain 91 × 4 =364 qr.-inch squares. Compare with contents of rectangle (2), also 364 qr.-inch squares. Bid children work out the example arithmetically

(*a*) by direct method, and (*b*) by factors.

(*a* 13 = No. of qrs.
28 = No. of lbs. in each qr.

260
104

364 = No. of lbs. in 13 qrs.

(*b*) 13 = No. of qrs.
7

91
4

364 = No. of qrs. × 7 × 4.

= No. of qrs. × 28 = No. of lbs. in 13 qrs.

From a number of such examples get the children to discover the rule that when one number is multiplied by the factors of another the answer is the same as if it had been multiplied by the second number itself. Show children the necessity for the direct method in the case of multipliers that cannot be factorised, and the usefulness of multiplying by factors when possible, as saving the line of addition of the partial products.

In the case of exercises involving the multiplication of money, weights, and measures by numbers higher than 12 that are not among the products in the multiplication tables, the finding of partial products is likely to give trouble.

Example.—£25, 18s. 7½d. × 217. Here, if the required 200 times the amount is found by multiplying it by 10 × 20, we shall get (*a*) as below :

£.	s.	d.	
25	18	7½	= given amount.
		10	
259	6	3	= 10 times the amount.
		20	
5,186	5	0	= 10 × 20 (= 200) times the amount.
259	6	3	= 10 times the amount.
181	10	4½	= 7 times the amount.
5,627	1	7½	= 217 times the amount.

200 times the amount having been found, there remains 17 times to be found and added. It is in finding such lower partial products that children are apt to go wrong. Here they can be helped by insistence on a clear statement of value being written against each partial product as above. The practice of making these statements should begin with the first blackboard example during early teaching, when questions should be asked to insure that the children know how many times the given amount or quantity they are required to find, and how each partial product is to be obtained. In order that sufficient practice may be given them, questions on the finding of partial products in a number of examples should be asked, instead of two or three examples only being worked out fully.

The difficulty, however, is avoided if each part of the quantity is multiplied by the whole multiplicand in one operation instead of by its parts in turn.

£	s.	d.	
25	18	$7\frac{1}{2}$	$\times 217$
			217
5,627	1	$7\frac{1}{2}$	

£ s. d.	Working		£ s. d.
	d.		
	$\frac{1}{2} \times 217 = 108\frac{1}{2}$	=	9 $0\frac{1}{2}$
	s. d.		
	$7 \times 217 = 1519 = 126$ 7	=	6 6 7
	s. s. s.		
18 0	$\times 217 = 2170 + 1736 = 3906$	=	195 6 0
	£		
25 0 0	$\times 217 = 21700 \div 4$	=	5,425 0 0
			5,627 1 $7\frac{1}{2}$

Division may be related to either of the two rules immediately preceding and shown as a shortened method of subtraction, as multiplication is of addition, or as a reversing of multiplication.

Before the teaching of the rule is actually begun, there must be preliminary-work, designed to get the children to understand the principle underlying it. In this, of course, we must make use of

concrete illustration, showing by means of actual operations with sticks, etc., that division is a shortened form of subtraction.

E.g., 15 − 5 − 5 − 5 = 0, from which it is seen that in 15 there are three groups of 5, which can be taken away in three separate operations (subtraction), or, more quickly, in one (division).

$$15 \div 5 = 3$$

When three groups of 5 have been taken from the 15, nothing is left. This proves that 15 is composed of three 5's, which may be stated as 5 into 15 goes 3. Show this, step by step, thus :

$$\left.\begin{aligned} 15 - 5 &= 10 \\ 10 - 5 &= 5 \\ 5 - 5 &= 0 \end{aligned}\right\} \text{or } 15 \div 3 \text{ or } 3)\underline{15}$$
$$\underline{5}$$

Remultiplying the 3 and the 5, we get 15 again. Here, the aspect of division which shows it as a reversal of multiplication is seen.

Again : 11 ÷ 2 = 5 and 1 remaining or

$$\left.\begin{aligned} 11 - 2 &= 9 \\ 9 - 2 &= 7 \\ 7 - 2 &= 5 \\ 5 - 2 &= 3 \\ 3 - 2 &= 1 \end{aligned}\right\} = 11 \div 2$$
$$\text{or } 2)\underline{11}$$
$$\underline{5} \text{ and}$$
1 (remaining) 1 remaining.

A number of such examples should be worked out with sticks, at first very simple ones, no difficulty being presented, but that of measuring a number which contains the divisor exactly.

Later, examples involving remainders and "carrying" downwards should be given.

Example.—Divide 99 sticks among four children (99 ÷ 4).

Call out 4 children. Bid one set out the dividend (the number which is to be divided) as 9 tens and 9 units. How many tens will there be for each child? Let each take 2 tens. 1 ten is left. This cannot be shared among 4 children as it stands. What is to be done? Bid a child break it up into units. It gives 10. Draw attention to the 9 units on the table. How many altogether? (19). These are to be divided among four children. How many will each get? Share out 4 to each. 3 remain. Can these be divided equally among the 4 children? Can they be turned into anything smaller than units? (Not by children of this age, so

accept the answer "No?") Then what has each child got from the 99? 2 tens and 4 units, and there are besides 3 left over which cannot be shared among them equally.

State the example on the blackboard, and work out thus:

No. of Children.	No. of Sticks.	No. each Child got.
4)	99	(20 + 4
	80	
	19	
	16	
	3 remaining.	

No. of Children.	No. of Sticks.
4)	99
No. each got. }	24 (3 remaining).

Note.—There is a difference of opinion whether the long or the shortened form of stating examples in division should be taught first. The more reasonable way is to begin with the longer, fuller, clearer statement. The shortened form will then be better appreciated later. On the other hand, there is little doubt that young children find short division easier. This, however, may arise from the fact that it has been customary in the past to teach short division first, and employ long division only in examples with divisors which necessitate its use. It is possible that, in this way, a difficulty belonging rather to the numbers than the statement has come to be associated with the latter.

The terms divisor, dividend, quotient, and the sign ÷ should be known and commonly used in connection with this rule.

The finding of partial products necessary in the case of divisors having two digits is apt to give trouble, *e.g.*:

$$408 \div 17$$

(*a*)		(*b*)	
17) 408 (20		17) 408 (24	
340	4	34	
68	24	68	
68		68	
..		..	

The transition to the ordinary form of statement (*b*) should follow examples worked out as in (*a*). It will then have a better chance of being understood. The difficulty, of course, is slightly increased with the increase of the number of digits in the divisor.

Statement (*a*) should therefore be resorted to again when such increase is made.

Division by factors should be attacked by methods similar to those used in the case of multiplication, being introduced by practical exercises in money, common weights and measures. These should be followed by drawing exercises giving proof by diagram, and lastly by the arithmetical operations.

The first exercise, again, may be with imitation coins; two children supplied with pence and shillings respectively being required to exchange them for a certain number of farthings supplied to a third child.

Example.—Willie has 48 farthings, and wishes to change them for sixpences. How many should he get?

Method.—Question of class: How many farthings in a penny? How many in sixpence? How many sixpences then for 48 farthings? State on blackboard (*a*).

(*a*)

No. of fs. in 6d.	No. of fs. to exchange.	
24)	48	(2 No. of sixpences in exchange
	48	for 48 farthings.
	—	
	∴	

(*b*) No. of farthings to exchange.

$$24 = \begin{cases} 4)48 \\ \hline 6)12 \text{ No. of pence in exchange.} \\ \hline 2 \text{ No. of sixpences in exchange.} \end{cases}$$

Next have the example worked through the pence and state as in (*b*) above.

Note.—1. The necessity for the direct method of division and use of the factor method should be pointed out as in the case of multiplication.

2. Exercises involving remainders should be left until later, although they present less difficulty in the case of concrete compound quantities than in the case of abstract numbers.

Division by factors introduces the difficulty of remainders. It is not easy for children to grasp the reason for the method adopted

for finding the full remainder in cases of division by factors each of which gives a remainder, and careful teaching will be needed. The following example, to be worked with concrete objects, indicates the method to be followed.

Example.—Divide (by factors) 496 sticks into groups of 63.

Note.—Earlier examples should have proved to the pupils that dividing by the factors of a number gives the same result as dividing by the number itself directly. Attention, in the present one, should be fixed on finding the remainder, the rest of the operation taking the children over old ground.

Bid a child come to the table and set out 4 *hundreds* bundles, 9 *tens* bundles, and 6 single *ones*. By reference to statement of example on blackboard, show the class that instead of dividing the sticks at once (or directly) into equal groups of 63, they are first to divide them into equal groups of 7 and then to make these into equal groups of 63 by putting 9 of the groups of 7 ($=7\times9$) together. The first division, made by breaking up the bundles as required, and dividing, shows 70 groups of 7, with 6 *odd ones remaining*. Division of these by 9 has next to be made, and is actually performed by putting the groups of 7 together by 9's, the operation yielding 7 groups of 63 with 7 *groups of* 7 *remaining*. The full remainder is then seen to be 7 *groups of* 7 ($=49$)$+6$ *single ones*$=55$ *single ones*. Your blackboard statement, having kept pace with the children's concrete working, should show as below:

$496\div63$ (factor method)
$=496\div(7\times9)$
7)496 single ones.
63$=\times$9)70 groups of 7 with 6 single ones remaining.
7 groups of 63 with 7 groups of 7 remaining.

Answer $\therefore=7$ *groups of* 63 with 7 *groups of* 7 and 6 *single ones* remaining.
$=7$ groups of 63 with 55 remaining.

Note.—From your first dealing with remainders be careful to avoid as the best way of ensuring that your pupils avoid, the false statement of the quotient as itself + the remainder, *e.g.* in the first division above as $70+6$, which of course is 76 and—*false*.

A number of examples should be worked before the children

are shown that as the first divisor always shows the number in the groups made from the first dividend, whilst the last remainder shows the number of groups over, the multiplying of these together will give the number of single ones remaining after the second division which, with the first remainder added in, gives the total remainder in single ones. The impossibility of adding *groups* to *ones* should be referred to and given as the reason for finding the total remainder in the way just examined. The rule should then be formulated by the children: To get the total remainder when dividing by factors, multiply the first divisor by the last remainder and add in the first remainder.

Note.—To children who have advanced as far as the multiplication and division of vulgar fractions, there is, of course, another method open for finding the total remainder—to turn the first remainder into a fraction by setting it upon the first divisor; then, in the lower line, to add to this fraction the whole number over, turning the mixed number so made into an improper fraction, and dividing it by the second divisor (by giving it fractional form, inverting it, and multiplying by it). In the example above, for instance, the 6 over from the first line would be written as $\frac{6}{7}$, the remainder 7 of the second dividend be added to it, giving $7\frac{6}{7} = \frac{55}{7}$ to be divided by $\frac{9}{1}$, that is, multipled by $\frac{1}{9}$—the total remainder showing finally as $\frac{55}{63}$.

Conversion of concrete quantities.—The ability to convert concrete quantities from one denomination to another—as, for example, hundred-weights to pounds, quarts to gallons—is necessary before the four fundamental rules can be applied to them in exercises which require "carrying." From the use of the rules in the case of the simple numbers, it will be best to pass first to their use in connection with sums of money, the "tables" for which are the easiest and most familiar. This practical use of the "tables" may be helpfully introduced by demonstrating with a similar "table" for the simple rules—

10 units = 1 ten; 10 tens = 1 hundred, etc.

One or two examples of simple rules worked by 10, 10, 10, may then precede money rules, by 20, 12, 4, and the rest, and at first the numbers should be written up thus:

£20 12s. 4d.

In early examples the addition of pounds, shillings, and pence only should be required, and these three lines of the compound sum be shown in comparison with the hundreds, tens, and units of simple addition. But, even before this can be done, the children must have been taught by previous practical and oral exercises, to convert pence into shillings and shillings into pounds.

Conversion of lower into higher denominations.—Ability to convert a quantity from a lower into a higher denomination (as, for example, pence into shillings) is needed in addition and multiplication. When the children, that is to say, in adding or multiplying sums of money, require to turn pence into shillings, they must know that for every 12 pennies they will have 1 shilling, and that, therefore, they will have as many shillings as they have 12 pennies, or their number of pence divided by 12. Similarly, when it is necessary to carry forward to the pounds all above 19 of the total number of shillings, they must know that there will be as many pounds to add as there are 20's in the shillings, this number being found by dividing the shillings by 20.

Conversion of higher into lower denominations.—This is necessary in subtraction and division. Whenever in subtracting, the number (either of pence or shillings) is greater in the subtrahend than in the minuend, it will be necessary to take *one* of the next highest denomination and convert it into the lower denomination being dealt with. Thus if 7 pence have to be subtracted from 1 shilling and 6 pence, the 1 shilling must be converted into 12 pence in order that it may be added to the 6 pence; or, if 13 shillings have to be taken from £2, 5s., one of the pounds must be converted into 20 shillings and added to the five shillings to permit of the subtraction being performed. In these cases, however, the number of pence in a shilling, and of shillings in a pound will, or should, be so well known that the operation will not be consciously performed.

Again, whenever in dividing there are any pounds or shillings over which require to be brought to the next lower denomination in order that the sharing process may be carried a step farther, con-

version from the higher to the lower must be performed, as in the examples below :

1.

s.	*d.*
3	2 ÷ 2

2 is contained in 3 once, 1 shilling remaining. (Write 1 under the 3.) The 1 shilling remaining must be converted into pence (1 × 12 = 12d.) in order that it may be added to the 2 pence in the example. 12 + 2*d.* = 14*d.* ; 14*d.* ÷ 2 = 7*d.* Answer = 1*s.* 7*d.*

2.

£	*s.*	*d.*
4	10	6 ÷ 3

3 is contained in 4 once, 1 pound remaining. (Write 1 under the 4.) The 1 pound remaining must be converted into shillings (1 × 20*s.* = 20*s.*) in order that it may be added to the 10 shillings in the example. 20*s.* + 10*s.* = 30*s.* ; 30*s.* ÷ 3 = 10*s.* ; 6*d.* ÷ 3 = 2*d.* Answer = £1, 10*s.* 2*d.*

Vulgar Fractions.—Teaching on vulgar fractions used to begin in Standard V. Now that it is introduced so much lower in the school course than formerly, it must be almost entirely practical and experimental. There is reason for this earlier introduction in the fact that even children below school age have a practical knowledge of fractions through such familiar parts as one-half and one-quarter. There is, therefore, no reason to put off dealing with them arithmetically till so late. When farthings are brought into money sums, the knowledge of how to write these parts in the conventional way becomes necessary, and from that time there is nothing to be urged against the extension of the teaching to other fractions with small denominators, while the value of the practice will be found in dealing with remainders in division. Still, systematic teaching on vulgar fractions—the application to them of the four rules in written exercises—should be left until Standard IV. In Standard III the work should embrace no more than the oral addition and subtraction of such fractions as have denominators not exceeding twelve.

In this oral work it will be found that the children are apt to add and subtract vulgar fractions having different denominators without changing these for one common to all the fractions involved—to add, for example, $\frac{5}{6}$ and $\frac{2}{3}$, and give, as answer, $\frac{7}{9}$; or to take $\frac{1}{2}$ from $\frac{3}{5}$ and state that $\frac{2}{3}$ is left.

The writing of the denominators in words instead of expressing them by the figure symbols in early examples, may help to impress the fact that the lower number in a vulgar fraction as usually

expressed—for example, $\frac{6}{7}$—is neither more nor less than a name. The children will then be more likely to realise that just as it is impossible to add 6 cwts. to 5 lb., so it is impossible to add 6 *sevenths* to 5 *sixths*.

The exercises set at this stage should not necessitate the finding of L.C.M. and H.C.F. by the ordinary methods. As only fractions with denominators up to and including 12 are to be dealt with, the method of inspection will serve well enough.

It is advisable in the early stages of addition and subtraction to insist on the common denominator being repeated for each fraction—*e.g.*, $\frac{1}{3}+\frac{3}{4}=\frac{4}{12}+\frac{9}{12}$, instead of the shorter statement, $\frac{1}{3}+\frac{3}{4}=\frac{4+9}{12}$, which should not be made till later.

New difficulties arise in connection with multiplication and division. Both rules will be best illustrated by practical exercises with paper squares and the drawing of diagrams on squared paper. The first exercise in both is the applying of the rule in the case of a simple "proper" fraction multiplied—or divided—by a whole number. The method of procedure is outlined below in the case of multiplication. For division, as the rule is a reversal of multiplication, the steps may simply be followed in reverse order. This is an argument in favour of teaching the two rules concurrently.

Multiplication.—(*a*) of a simple "proper" fraction by a whole number.

Example.—$\frac{3}{4}\times 5$.

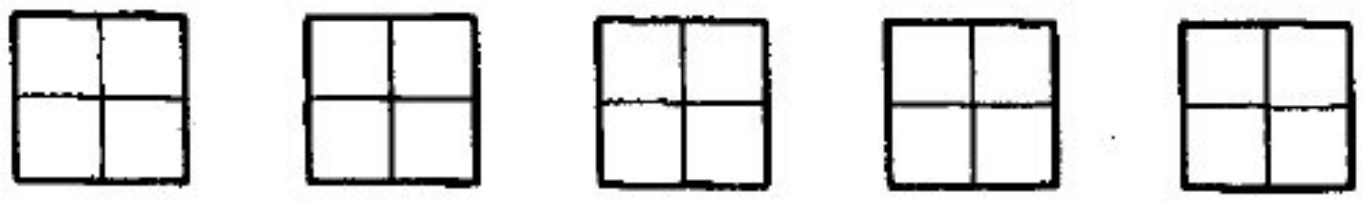
The children, being provided with five $\frac{1}{2}$-inch squares (see (*a*) below) of paper, divided by pencil or ink lines into quarters, which they know both as quarters and fourths, should be directed to cut, or fold and tear, them into separate squares. From each of the four $\frac{1}{4}$-inch squares forming a whole, they should then be told to take three, so that they have $\frac{3}{4}$, 5 times. Next they should be required to count their separated $\frac{1}{4}$-inch squares, when they will find that they have 15 (see (*b*) below), *i.e.* 3×5 $\frac{1}{4}$-inch squares, and finally to rearrange them in full (4 $\frac{1}{4}$-inch) squares. The result will then be seen (see (*c*) below) to be $3\frac{3}{4}$ $\frac{1}{2}$-inch squares.[1]

State on blackboard thus: $\frac{3}{4}\times 5=\frac{15}{4}=3\frac{3}{4}$.

[1] See Longmans' *Practical Arithmetics*, Book I, Teachers' Series, p. 79.

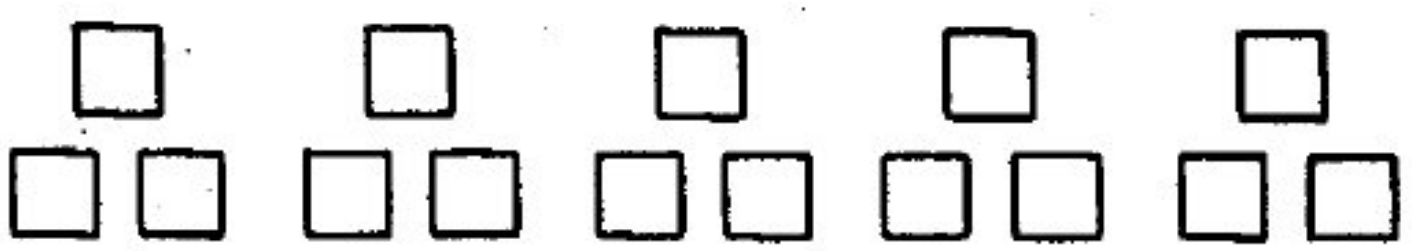
The same thing may be shown by diagram, a line $\frac{3}{4}$ inch long being lengthened till it is 5 times $\frac{3}{4}$ inch, shown by short vertical lines upwards. Such divisions—showing $3\frac{3}{4}$ inches—may

(*a*) 5 $\frac{1}{4}$-inch squares divided into $\frac{1}{4}$s.



$= 5$

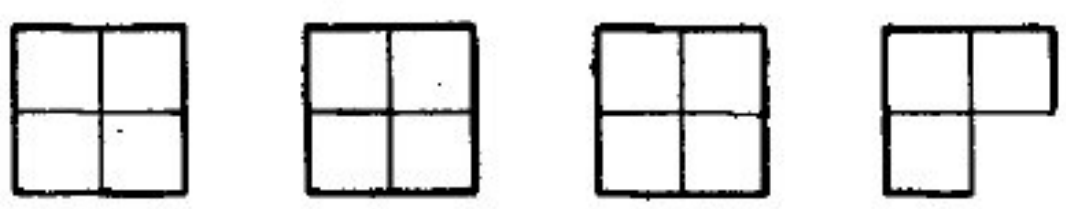
(*b*) $\frac{3}{4}$ of whole $\frac{1}{4}$-inch squares taken 5 times.



$= \frac{3}{4} \times 5$

$= \frac{15}{4}$

(*c*) $\frac{15}{4}$ recombined into wholes.



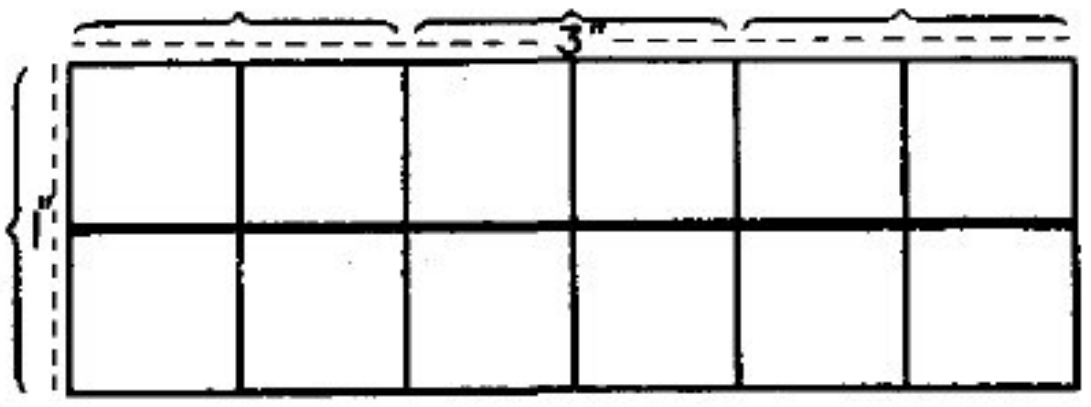
$= 3\frac{3}{4}$

then be marked off by short vertical lines downwards. Further experiments with coins, weights, and measures should be made in proof.

(*b*) Of a simple "proper" fraction by a similar fraction.

Example: $\frac{1}{2} \times \frac{5}{6}$.

Taking this time a diagram in illustration, require your pupils to draw a rectangle $1'' \times 3''$ to represent unity, and divide it equally, by pencil lines, into 6 vertically and 2 horizontally as below:



Each division will then be a $\frac{1}{2}$-inch square, and the whole figure contain 12 equal parts. The multiplicand $\frac{1}{2}$ will then be represented by six of these parts which should be marked off from the rest, say, by the thickening of the horizontal line as in the figure. What is now wanted is $\frac{5}{6}$ times this half, that is to say, 5 of the 6 divisions comprising it. Direct the children, therefore, to shade these in, to mark them off from the rest. As they represent 5 of the 12 sections forming the whole, the result of multiplying $\frac{1}{2}$ by $\frac{5}{6}$ is seen to be $\frac{5}{12}$.

State on blackboard thus: $\frac{1}{2} \times \frac{5}{6} = \frac{5}{12}$.

Division.—The result of division by a fraction presents difficulty to children who, while working with whole numbers have been used to finding the answers to division sums less than the number or quantity divided. In early examples it will be well to fix attention on the divisor by giving such as have whole numbers for the dividend.

Reverting to knowledge familiar in the case of whole numbers, gain from the pupils such statements as $20 \div 5 = 4$; $20 \div 1 = 20$. Write these on the blackboard and, drawing attention to divisors and quotients, bid children note that when the divisor is so many times —in the example above, 5 times—less, the quotient is the same number of times greater. If, then, the divisor in the given example is again made five times less, becoming $\frac{1}{5}$, the result will again become 5 times greater, *i.e.* 100. A number of such examples will accustom them to the apparent peculiarity of quotients larger than the given dividends.

Continue examples having for divisors fractions with 1 for numerator until the children have discovered that to divide by $\frac{1}{5}$, for example, is the same thing as to multiply by 5. This should recall to them the fact, learnt during multiplication, that to multiply by $\frac{1}{5}$ is really to divide by 5. Next pass to examples in which the numerator is greater than 1. Still using the given dividend in illustration, we see that if $20 \div \frac{1}{5} = 100$, $20 \div 4$ will give a result 4 times less because the fraction $\frac{4}{5}$ is 4 times greater than $\frac{1}{5}$. The answer, therefore, is $100 \div 4 = 25$. Examination will then show that the division of any number by $\frac{4}{5}$ is performed when it has been multiplied by 5 (*i.e.* divided by $\frac{1}{5}$) and the result divided by 4; or, stated arithmetically, 20 (in this case) $\div \frac{4}{5} = 20 \times \frac{5}{4}$. Other examples will bring the children to the discovery that to divide by a fraction we invert it and multiply by it in its inverted form.

Simplification.—Most of the mistakes made in simplifying complex fractions are caused either by neglect of the rule (multiply and divide before adding and subtracting) for getting rid of the signs in solving, or through failure to copy down the whole of the given fraction at each stage of the simplification.

To compel obedience to the rule of signs, we must insist from the first on our pupils bracketing off the fractions connected by $\times$ and $\div$ and reducing the parts of the given complex fraction within

the brackets they have made, to their simplest form, before dealing with the + and − signs, *e.g.*:

$$\begin{aligned}
&\tfrac{3}{4}+\tfrac{2}{3}\text{ of }\tfrac{1}{2}\div\tfrac{3}{5}-\tfrac{1}{3}\div\tfrac{5}{6}\\
=\ &\tfrac{3}{4}+(\tfrac{2}{3}\text{ of }\tfrac{1}{2}\div\tfrac{3}{5})-(\tfrac{1}{3}\div\tfrac{5}{6})\\
=\ &\tfrac{3}{4}+(\tfrac{2}{3}\times\tfrac{1}{2}\times\tfrac{5}{3})-(\tfrac{1}{3}\times\tfrac{6}{5}\\
=\ &\tfrac{3}{4}+\tfrac{5}{9}-\tfrac{2}{5}\\
=\ &\tfrac{135}{180}+\tfrac{100}{180}-\tfrac{72}{180}\\
=\ &\tfrac{235}{180}-\tfrac{72}{180}\\
=\ &\tfrac{163}{180}
\end{aligned}$$

Equal care must be given to seeing that the fraction is kept as one whole in the order given, until the various parts are simplified out step by step into one simple fraction expressed in its lowest terms. This plan may, at times, seem to involve unnecessary repetition, but confusion is sure to result if any other is followed.

Decimal Fractions.—The notation of decimal fractions must be shown in its relation to the notation of whole numbers and the principle of place value. Revising early lessons on whole numbers, we should remind our pupils that in the symbol 111, only one figure —that on the right—denotes the value of 1 unit. The middle and left-hand ones, owing to their position or *place*, have the *value* (hence, *place value*) of 1×10 and $1\times10\times10$ respectively. Then point out that if the value of figures increases by 10 times with each remove to the left, it must decrease by just as much with each remove to the right. This the children know to be true between units and millions; but they have not hitherto been asked to consider the value of any figure placed to the right of the units. This is what they are now to be required to do, and intelligently-taught children of normal capacity will have no difficulty in seeing and saying that the first one to the right of the units will have the value of $1\div10$ (which their knowledge of vulgar fractions has taught them may be expressed as $\frac{1}{10}$) the second of $\frac{1}{10}\div10=\frac{1}{100}$, the third of $\frac{1}{100}\div10=\frac{1}{1000}$, and so on. As the writing down of these figures straight after the whole number 111 without any mark of division would make its impossible to tell where the fractional values began, the need for some mark will be readily seen by the pupils. The conventional mark should then be shown, and its advantage over any other [1] be pointed out.

[1] On the Continent, for example, "," is used, 111,111 being equal, to 111·111.

Following the first lessons on decimal notation, oral exercises should give practice in multiplying and dividing fractions expressed in this notation until the children realise that all that is required is the moving of the decimal point so many places to the right or left, and can work the exercises almost instantaneously. The decimalisation of money at sight—for example, 10*s.* = ·5 of £1; 5*s.* = ·25; 2*s.* 6*d.* = ·125; 2*s.* = ·1—is another valuable oral exercise at this point. For some time only terminating decimals should be involved in the exercises.

In applying the four rules to decimal fractions reference should be made, for purposes of illustration, not only to similar work with whole numbers, but also to familiar practice in the case of vulgar fractions.

Addition and Subtraction.—The setting down of examples in these rules should be preceded by reference to the setting down of similar sums in whole numbers—figures of equal *place* value being written under each other in both cases. The necessity of keeping these lines straight for the sake of clearness should be impressed. The reason for beginning addition or subtraction with that of the line in the right which contains the figures of lowest denomination should be shown to be the same necessity for "carrying," in addition, and for "decomposing" in subtraction as arises in the case of whole numbers. Early examples should be worked out both in decimal and vulgar form and the two answers compared.

Multiplication.—This rule will be best illustrated by answers to examples being proved through working in vulgar fractions. *E.g.*, ·2 × ·8 = ·16, not, as might be expected, 1·6. Converting multiplicand and multiplier into vulgar fractions shows that $\frac{2}{10} \times \frac{8}{10} = \frac{16}{100} = \cdot 16$. After a number of such examples, the children should be able to give the rule for placing the point in multiplication sums—namely, that there must be in the product the same number of decimal places as in multiplicand and multiplier together.

Division.—In this rule the placing of the point presents more difficulty, and careful teaching will be needed. Before actual division is begun the fact that multiplying or dividing both divisor and dividend by the same figure, whatever it may be, makes no difference to the quotient, should be impressed through a number of examples, and comparison made with the *cancelling* of vulgar fractions. This fact enables us to convert all divisors, as is more convenient, into whole numbers by multiplying by a power of 10

sufficiently high to effect the change, if we multiply the dividend by the same power. *E.g.*, ·3259 ÷ ·175 may be converted into 325·9 ÷ 175 by multiplying both dividend and divisor by 1000—the power of 10 required to turn the latter into a whole number. Earlier oral examples, of course, should have shown that this multiplication by 1000 is performed in both cases by moving the decimal point three places to the right. This leaves, in the example above, one decimal place in the dividend. The fractional part of the quotient begins, of course, when all the whole numbers in the dividend being exhausted, the 9-tenths is brought down, and the point must be placed accordingly. We shall find it valuable to give much practice in such preparation of divisor and dividend for the operation of division before requiring it to be actually carried through.

Conversion.—There is a strong tendency noticeable on the part of pupils to convert all decimals into vulgar fractions before working out examples. This, *as a general rule*, should be discouraged. In some cases it is better to make the conversion, but not in all, and pupils should acquire such facility in dealing with decimals, that they can follow the dictates of common sense in deciding whether, in any individual case, to work in decimals or vulgar fractions. Very frequently, a combination of the two notations gives the readiest solution.

The work in fractions of both notations includes the conversion of vulgar fractions into decimals, and decimals into vulgar fractions. The fact that certain decimal and vulgar fractions are equal to each other becomes apparent in the early stages of teaching, and exercises in conversion result naturally. Early examples should deal with the conversion of such vulgar fractions only as make terminating decimals. When recurring decimals are introduced as the equivalents of vulgar fractions we must not be content simply to give the rule for conversion; but must show the reason for it by working out on the blackboard with explanatory statement a sufficient number of examples, both of pure and mixed repeaters, to show why, in the first case, the decimal figures are taken for numerator and the denominator made of an equal number of 9's; and why, in the second, the non-repeating decimals are to be subtracted from the whole fraction to give the numerator, and in the denominator a 9 to be written for every repeating figure, followed by an 0 for every non-repeating one.

Metric System.—The metric system may be introduced in con-

nection with the fractional values of the decimal system previously learnt, the table of length being used to illustrate the decimal scale. The complete table should be given, and the significance of the prefixes explained. It may be written as:

10 millimetres (mm.) = 1 centimetre.
100 millimetres = 10 centimetres (cm.) = 1 decimetre, etc.

or, as: 1 millimetre (mm.) = ·001 metre = $\frac{1}{1000}$ metre.
1 centimetre (cm.) = ·01 metre = $\frac{1}{100}$ metre.

while for comparison with our ordinary notation the following chart[1] may be shown:

Thousands	Hundreds	Tens	Units	Point	T.ths.	H.ths.	Th.ths.
×	×	×	×	·	×	×	×
Kilometres	Hectometres	Decams.	Metres	·	Decims.	Centims.	Millims.

Note.—The relation of each lower and higher denomination to the unit (*e.g.* that the millimetre is the thousandth part ($\frac{1}{1000}$ or .001) of the metre) must be emphasized. The metric edge of the rule will show the various measures.

Other tables should be introduced similarly, built experimentally if possible, and memorised.

"*Practice.*"—Exercises should be confined to examples that can be worked out without the aid of figures. Of course, for such working, the quantities must be kept within certain limits, the price in the case of the odd shillings or pence being calculable in not more than two easy aliquot parts.

Such oral exercises on this "rule" as are given should deal first with prices at £1, plus such a number of shillings, or shillings and pence, as makes an easy fraction. From the outset the children should be taught to look for short methods of working, and to use them. If, for instance, the given price is £1, 13*s.* 4*d.*, it should be calculated at £2 *minus* the price at 6*s.* 8*d.* ($\frac{1}{6}$) not at £1 *plus* the price at 10*s.*, *plus* the price at 3*s.* 4*d.* Teaching should also suggest the use of multiples of aliquot parts, and the pupils be accustomed to working not with $\frac{1}{3}$ only, but also with $\frac{2}{3}$; with $\frac{3}{4}$ as well as with $\frac{1}{4}$, and not with $\frac{1}{5}$ alone, but with $\frac{2}{5}$, $\frac{3}{5}$, and $\frac{4}{5}$, etc. It is assumed that the table of aliquot parts will have been learnt before their use is required. As in the case of other oral exercises, the blackboard must

[1] From Longmans' *Practical Arithmetics*—by permission.

frequently be used for the purpose of showing the best ways of working.

Proportion.—The difficulty of getting children to grasp the meaning of a *ratio* is an argument in favour of teaching "proportion" by the "method of unity" rather than by "rule of three," and the former method is now generally preferred. It gets its name from the fact that the answer is always obtainable by reckoning the cost, etc., of *one* or *unity*, which stands between the first and second terms of the proportion forming the second line of the statement, as in the example below:

Example.—If I buy 60 oranges for 5*s*. what should I pay for 100?

60 oranges cost you 5*s*.

$$\therefore \quad 1 \text{ orange would cost you } \frac{5s.}{60} = \frac{60d.}{60} = 1d.$$

and 100 oranges would cost you $1d. \times 100 = 100d. = 8s.\ 4d.$

Another argument in favour of the unitary method is the fact that it makes a commonsense application of fundamental rules and is therefore more likely to be used by the pupils in after life. Further, "direct" and "inverse" proportions present less difficulty when the method of unity is employed. Working by "rule of three," pupils are apt to place the first and second terms in haphazard fashion, because the reasoning on which the statement is based is not clear to them. Working by the unitary method, however, even a dull child must see that (to take, as an instance, the "direct" example above) if 60 oranges cost 5*s*., 1 orange will cost 5*s*. *divided* by 60 = 1d., and 100, 1d. ×100. Similarly, in the following "inverse" example: If 25 men do a piece of work in 6 days, how long would 50 men take to do it? it will be apparent that 1 man would take 25 times as long as 25 men, and 50 men 50 times *less* than 1, and that, therefore, the 6 days must be *multiplied* by 25 and the answer so gained *divided* by 50.

When the pupils are able to work exercises in proportion readily, examples containing additional terms, unnecessary in solution, should be given for the purpose of testing intelligence—*e.g.* A wall 33 feet long was built by 9 men in *27 days*. What length of wall would 12 men have built? Oral exercises should give preliminary practice in throwing out such terms.

It is not proposed to deal in any detail with the method of teaching the remaining "rules" and applications. The methods advocated in connection with the first introduction of the various rules and principles in lower standard work, should suggest their own development in the higher stages, for no new principles are involved. All new work, whatever the application, must be approached in a common-sense way, the children being led to see it in its relation to what has gone before.

Compound Proportion.—In "simple" proportion examples, pupils are required to find the change in *one* number, amount, or quantity resulting from a change in *one* other. In that given on a previous page, for instance, the change in the cost (5s.) of oranges had to be determined, when, the number bought was changed from 60 to 100. In "compound" proportion more than two numbers, amounts or quantities are involved, and the change in one of them, consequent upon given changes in the others, has to be found. This will be seen in the following examples:

(1) If 16 oxen plough 27 acres in 12 days, how many acres will 32 oxen plough in 18 days?

In 12 days 16 oxen plough 27 acres.

$\therefore$,, 1 day 16 ,, will plough 27 acres $\div$ 12 = $2\frac{1}{4}$ acres.
$\therefore$,, 18 days 16 ,, ,, ,, $2\frac{1}{4}$ acres $\times$ 18 = $40\frac{1}{2}$ acres.
$\therefore$,, 18 days 1 ,, ,, ,, $40\frac{1}{2}$ acres $\div$ 16 = $2\frac{17}{32}$ acres.
$\therefore$,, 18 days 32 oxen ,, ,, $2\frac{17}{32}$ acres $\times$ 32 = 81 acres.

$\therefore$ the number of acres = 81.

The example requires the finding of the change in the number of acres ploughed, consequent on the change in the number of oxen (from 16 to 32), and in the number of days allowed (from 12 to 18). In the first three lines of the statement the number of days is changed from 12 to 18 without any change being made in the number of oxen; in the last three lines the number of oxen is changed from 16 to 32.

(2) If 15 boys can do a piece of work in 36 days, how many boys can do a piece of work 5 times as great in one-sixth of the time?

The work can be done in 36 days by 15 boys.

$\therefore$,, ,, ,, ,, 1 day ,, 15 boys $\times$ 36 = 540 boys.
$\therefore$,, ,, ,, ,, $\frac{36}{6}$ days ,, 540 boys $\div$ 6 = 90 boys.
$\therefore$ 5 $\times$,, ,, ,, 6 days ,, 90 boys $\times$ 5 = 450 boys.

In this example it is unnecessary to have a line of statement for the unit in stating the change in the amount of the work, since the terms are referred to the unit of work in the earlier lines. In both examples, it may be noticed, the problem is re-stated in several lines, in such a way that the number, the change in which is to be discovered, comes last. Such a rearrangement is necessary in all examples. It may be noted, too, that each of these "compound" examples is made up of separate "simple" ones—hence the name. The first three lines represent the first simple proportion, and the remaining ones, which make use of the answer to that, the second. "Compound" proportion is, therefore, seen to consist of a series of "simple" examples, in which every later one is based on the answer to that preceding. The number of simple proportions in the series increases with the number of terms necessary to solution.

Percentages.—In percentages there is really no new principle involved, but old ones are applied to unfamiliar uses, and some oral teaching will be necessary. The "rule" should be connected with fractions—vulgar and decimal—and the fact emphasized that a percentage is, itself, really a fraction of which the denominator—unexpressed—is 100, just as a decimal was previously shown to be one with the denominator 10 or some power of 10.

In the first stage of the work the idea and meaning of percentages should be conveyed by the aid of graphic illustrations, and a percentage represented, as has been said, as a fraction with the denominator 100. Then exercises in conversion to and from decimal fractions should be given. Others requiring the value of a given percentage of any given quantity, and the addition and subtraction of a given percentage, should follow, and subsequently applications to easy problems. The second stage should require the finding of cost price, the selling price and percentage of profit or loss being given; and the finding of gain or loss through a change of selling price, the gain or loss per cent. at a given selling price being stated. The third stage should consist of revision exercises and problems. Similar exercises should be given in the case of other than money percentages.

Pupils should not be taught to look upon simple interest, profit and loss, discount, partnerships, profit-sharing, and insurance as separate rules, but as various applications of the principle of percentages. The new terms involved by these variations should be explained incidentally as they occur.

Simple Interest.—The course of teaching in simple interest should make use of the knowledge of decimals and percentages previously acquired by the pupils, and present a series of carefully chosen and graduated examples for solution. From the results gained in the course of these exercises, the class should be led to discover and formulate a general law or rule to be used in working out further examples.

The subject may be introduced through a number of examples to be worked mentally, the answers only being written down. Of such examples the following is a type:—A borrows £300 of B, and for the loan of it pays £3, 15s. quarterly. What would he pay per annum for the loan of £100 at the same rate?

Oral exercises, very briefly worded and leading to the rule, should follow. Chosen examples should deal with sums of money within the limits of the pupils' mental grasp and possible experience—as, for instance, small sums borrowed for a short period, or small investments. Questions on simple interest should, as a rule, be confined to loans of no longer than a year's duration. Shorter periods of time, 6, 4, 3, 2, and 1 month, will give useful practice.

Compound Interest, again, must not be introduced as a new rule, but shown as an application of continued ratio. Early work should be concerned with definitions and explanations of the system. This would include an explanation of the method of investing money at compound interest, and illustration, in connection with small sums of money, of the points in which it differs from simple interest. Exercises moderately easy employing the method and reckoning the interest (*a*) yearly, (*b*) for longer periods than a year, should then be required. In a course of oral lessons, illustrated by examples, compound interest should then be shown as continued ratio in such a way as to lead the children to discover the conventional method of working and the reason for it.[1]

Square Root.—The subject of squares and square roots should be introduced by preparatory oral lessons which have for their aim the explanation of the terms. One lesson should deal with whole numbers, one with decimal, and a third with vulgar fractions. Squared paper and drawing materials will be required for these lessons.

By drawing exercises, first, the pupils should be brought to

[1] Brief notes of typical lessons are given in *Longmans' Practical Arithmetics*, Book VII, pp. 60–62.

the knowledge that a square with its side 4 units in length, divided horizontally or vertically to show that it contains 4 strips each consisting of 4 unit squares, contains in the whole square 4×4 (=16) unit squares. Hence, in the case of numbers only, 4×4 (or 16) is the square of 4.

By illustrations, next, from the square measure table it should be pointed out that the square foot shows 12×12 (=144) as the square of 12; and the square yard 3×3 (=9) as the square of 3.

By Blackboard statement the method of writing should then be shown—4×4 as 4^2, 12×12 as 12^2, and 3×3 as 3^2.

By arithmetical examples—chiefly oral—these facts should be impressed.

By further drawing exercises, consisting of squares variously divided into smaller ones (*e.g.* 1 square foot divided into 144 square inches and seen to have length of sides 12 inches), it must then be shown that 12 is the base or root of the square 144, and (by other squares) that 3 is the base of the square 9, and 4 the base of the square 16; that these are, therefore, called the *square root* of 144, 9 and 16 respectively, and are written $\sqrt{144}$, $\sqrt{9}$, and $\sqrt{16}$. By other drawings it should be demonstrated that it is impossible to make squares which contain 10, 15 or 20 unit squares, and so the term *perfect square* be introduced.

By arithmetical examples [1] these new facts must then be impressed.

Note.—The lessons dealing with the squares and square roots of vulgar and decimal fractions should follow similar lines.

This chapter should not be closed without reference to the desirability of all student-teachers gaining sufficient knowledge of elementary geometry and algebra to enable them to teach these subjects, the one throughout, and the other in the higher divisions of the school course.

It is impossible to deal with the teaching of these branches of mathematics in this book, as the inadvisability of assuming at present a sufficient knowledge of them for teaching purposes on the part of student-teachers, would result in the taking up of more space than can be given to them. Some reasons for their inclusion in the elementary school courses of the Union generally, will, however, be in place.

[1] See *Longmans' Practical Arithmetics*, Book V, Ex. 11.

Geometry as geometry is not the main aim of the teaching of this branch of mathematics in the elementary school, but the illustrating by its means of the processes of arithmetic by graphic representation. In order, however, that this purpose may be served the teaching must follow a definitely planned and reasonable order, and convey clear ideas of its fundamental principles.

At first we should avoid formal definitions and simply strive to make our pupils familiar with certain of the terms used in geometry—as, for example, *straight-line angle*, *circle*—and to show, not merely to tell, the meaning of them, avoiding looseness of expression as far as possible, even while withholding, as stated, formal definitions. Secondly, we should show how certain mechanical exercises in connection with the study are to be performed; and thirdly, should train, through these exercises, a habit of observation which will lead the children from the noting of particular facts to the finding and formulating for themselves of general laws. Even while confining ourselves to these aims, we shall find it possible to make these early exercises form a firm foundation for the more formal and exact work required in later stages.

From the beginning the study of geometry must be made experimentally—the children learning by doing. All exercises should be worked out by them under our instructions, while by well-directed questions we draw their attention to the points to be noted. Repetition of the various exercises at the time they are first given, and revision some time later, should be used to make their grasp on their acquired knowledge firm.

The value of an ability to substitute in arithmetical exercises literal (L. *literalis*—*litera* = a letter) symbols as in algebra, for values expressed by numbers, is so unquestionable that the total neglect of algebraic methods is unwise even in the elementary stages of the subject. There is no plea of difficulty to urge against the use of them, for children can be taught, as their power of abstraction increases, to appreciate the meaning of $7x + 3x$ almost as readily as they did that of 7 boys + 3 boys at an earlier age. The solution of many problems is most easily found by use of algebraic symbols and methods, as, for instance, those which involve proportion. Apart from this, progress from the working of arithmetical exercises by use of concrete objects, proper to the early stages o

teaching, to the abstract calculation required in later ones, only reaches its logical end in algebra, and, unless the work is carried to this conclusion, the mental training to be derived from it remains incomplete.

To study geometry and algebra as branches of our own education—as students first and last, that is—is one thing; to study them as teachers, feeling the necessity of instructing children in them, quite another. We ourselves need both the student's and the teacher's knowledge, and the ordinary students' text-book does not give all we need to know of the subject, as teachers. Both geometry and algebra form part of the scheme put forward in *Longmans' Practical Arithmetics*, from which frequent quotations have been made in the present chapter. Methods of teaching both subjects are very fully given in the "Teachers' Series," while examples for working will be found in the accompanying pupils' books. Apart from this, the intelligent use of these books for class work would do much to improve the present teaching of arithmetic.

FOR FURTHER STUDY

*The Groundwork of Arithmetic.** Margaret Punnett. (3*s.* 6*d.* Longmans.)

Exercises for above. Book I, 4*d.* Book II, 6*d.* Book III, 6*d.*

*Practical Arithmetics.** Knowles and Howard. (7 Books. Teachers', 9*d.* to 1*s.* 6*d.*, and Scholars', 2*d.* to 6*d.* Longmans.) An excellent series.

Exercises in Arithmetic and Mensuration. P. Abbott. (3*s.* 6*d.*; with answers, 4*s.* Longmans.)

Longmans' Junior School Arithmetic, Mental and Practical. Fcp. 8vo, 1*s.*; with answers, 1*s.* 6*d.* This Edition has the following new features: 1. An Appendix of the Dutch Weights and Measures used at the Cape, with a large number of Examples. 2. A New Chapter upon Mensuration, which will include the Mensuration of the Circle and Right-angled Triangle, and will cover the work laid down for the School Elementary and Higher Examinations. 3. A Series of School Elementary and School Higher Examination Papers.

Longmans' Praktiese Rekenboeken. Boeken voor Onderwijzers en Leerlingen. (Boek I, Voor Leerlingen van 7 tot 9 jaar oud. 4*d.* Boek I, Voor Onderwijzers. 1*s.* Boek II, Voor Leerlingen van 8 tot 10 jaar oud. 4*d.* Boek II, Voor Onderwijzers. 1*s.* Boek III, Voor Leerlingen van 9 tot 12 jaar oud. 4*d.* Boek III, Voor

Onderwijzers. 1*s.* 4*d.*) L. W.—Van de Onderwijzers-en Leerlinge-Boeken van deze serie zijn Nos. I, II, III in het Hollands; Nos. IV, V, VI, VII, zijn in het Engels.

The Teaching of Practical Arithmetic to Junior Classes. J. L. Martin. (2*s.* 6*d.* Harrap.)

The Beginner's Arithmetic, 1*s.* 3*d.*; *The Intermediate Arithmetic*, 1*s.* 6*d.*; *The Senior Arithmetic*, 2*s.* 6*d.* (Harrap.)

*Class Teaching and School Management.** J. Gunn. (3*s.* 6*d.* Nelson.)

The Art of Teaching. D. Salmon. (3*s.* 6*d.* Longmans.)

The Primary Curriculum. F. H. Hayward. (5*s.* Ralph Holland & Co.)

Principles and Methods of Teaching. J. Welton. (4*s.* 6*d.* University Tutorial Press.)

*Regulations for Primary Schools.** Transvaal Department of Education.

The Teaching of Arithmetic. Scottish Education Department.

Suggestions for the Consideration of Teachers. English Board of Education.

CHAPTER XIII

THE TEACHING OF SINGING

"Blest be the song that brightens
The blind man's gloom, exalts the veteran's mirth.
For the tired slave, song lifts the languid oar,
And bids it aptly fall, with chime
That beautifies the fairest shore
And mitigates the harshest clime.
. . . . . .
Nor friendless he, the prisoner of the mine,
Who from the well-spring of his own clear breast
Can draw, and sing his griefs to rest."—WORDSWORTH.

". . . the truest, simplest, usefullest . . . music . . . the truest, that in which the notes most closely and faithfully express the meaning of the words, or the character of intended emotion; again, the simplest, that in which the meaning and melody are attained with the fewest and most significant notes possible; and, finally, the usefullest, that music which makes the best words most beautiful, which enchants them in our memories each with its own glory of sound, and which applies them closest to the heart at the moment we need them."—RUSKIN.

SINGING, properly taught, is for both teacher and children one of the most enjoyable of school subjects, and the time given to it should be regarded as a time of relaxation rather than of work. It is also one of the most educative of school subjects. Like the performing of measured movements in physical drill and the reading and reciting of poetry, it stirs the emotions and the imagination and at the same time subjects them to control. The enjoyment is most keen, and the educative process—shown in a growing sensitiveness to harmony and rhythm—is most sure when in the songs chosen for singing, tuneful music is wedded to noble words. Song is one of the best and earliest possible means of awakening in children a sense of pleasure in beauty; and it has the additional

value of lending itself to out-of-school practice, thus linking classroom exercise with home pleasures. This association is so important that we should make a point of encouraging our pupils to sing their school songs at home.

Our singing lessons may and should give our pupils a sense of fellowship with us in enjoyment, tending to make our government of them more easy, not during singing lessons only, but at all times. The sharing in any pleasure of a high order makes for those friendly relations that should be part of our educative aim.

Pleasure in singing discourages a taste for lower pleasures, and if our pupils learn to feel it during their school years, they will be less likely, later, to find enjoyment in questionable ways of amusing themselves. Children who leave school with some knowledge of music and some power of musical expression may find in most towns and villages an opportunity of extending the one and exercising the other, and so of adding to their social pleasures.

But these results will not be brought about unless we remember that our pupils' pleasure in their singing lessons is bound up with the *singing of songs*. They will soon lose interest if we have any other aims than those of enabling them to sing more songs and prettier songs, to sing them better, and to feel more enjoyment when they hear a good song well sung by some one else. All our teaching must have one of these ends in view—not only in our own view, but also in our pupils'. We must remember, too, that throughout their school years most children like singing themselves better than listening to others. They will be content with the pleasure of listening, occasionally; but, generally speaking, what we sing to them ourselves or get someone else to sing to them, should be meant as a model for them to try to imitate in the not too distant future. Of course, if our pupils have heard and practised singing very little it will be wise to sing songs to them pretty often, to awaken their interest in singing and their desire to sing; but when they can sing, we may be sure that they will want to do so as much as possible. Our own singing, then, should be reserved for special purposes, such as helping them to feel the "spirit" of a song we are teaching them, or to show them beforehand what will be the result of some necessary drill.

Our aims, of course, will decide our practice. For little children the quickest way of learning to sing is to learn by ear. But just

as they only learn to speak (which, also, they do "by ear," that is by hearing and afterwards imitating) after having heard the speech of others for a considerable time, so they will only begin to sing when they have heard a good deal of singing. If their mothers and sisters have sung to them throughout babyhood they will have learnt to sing a little, before coming to school; but because all children do not have singing mothers or sisters we shall find it necessary in infant classes to let the children hear us sing many songs—pretty songs with easy, "catchy" tunes and simple words. Nursery rhymes set to music are very suitable. We should invite the children to join in the singing as soon as they feel that they know the tune, and though we may suggest that they should "listen again" if we find that they are singing out of tune, we must be careful not to discourage their early efforts. The tune will come by degrees—sooner, in most cases, by their trying to sing than by their listening merely. We shall hear which notes are wrong and can sing those over and over again.

Lessons in the Sub-Standards should be given up to this chiefly. The notes which form the alphabet of music should be taught later, just as the teaching of reading is put off until the children have learnt to talk and taken part in story-telling. The infant school is the place for teaching by ear. We must let the children learn in this way as many good and pretty songs as we have time for. This is "learning to talk" in music, and it must come before learning to read as it does in language. Reading cannot be taught successfully until the children are able to speak fairly easily.

Even in the standards singing by ear should not be given up altogether, though less time can be spared for it when our pupils begin note-reading. Until they can do this with ease at a fair rate of speed the earlier method will be the quicker way of teaching new songs, and as we have seen it is important that many songs should be learnt. We can, moreover, make use of songs taught in this way to give further training. We may, for instance, help the children to make out their rhythms and afterwards have them written down; and we may also use the tunes for the exercises on open vowel sounds that are a necessary part of voice-training. A third possible use is that of choosing certain of the phrases as ear tests, the children being required to write them down or point them out on the modulator.

Whenever our lessons deal with the theory of music we must

remember that all we teach our pupils must be taught with the aim of helping them to enjoy more their singing and hearing of songs. Without some knowledge of the theory of music there can be no development of their power to render and enjoy music; but we must never lose sight, nor allow them to lose sight, of the reasons for which we teach any part of it.

Modulator work and time notation are usually started in Standard I; but both should be regarded as the word-building of singing.

When taking the preliminary time and tune drill, we should have a song in mind to which we mean to apply it. The following [1] is suitable:

{| m :m | f :s | s :f | m :r | d :d | r :m | m :r | r :— |

{| m :m | f :s | s :f | m :r | d :d | r :m | r :d | d :— ‖

There is no difficulty in either notes or time; and with a very little preliminary drill the song could be almost read at sight, and would arouse far more interest and effort than the isolated time and tune tests which are too frequently all the reading of music that the Standard I exercises afford. There is nothing better than a well-known tune for modulator practice. In singing, as in reading, it should be our aim to get away from the dry drill-work to interesting passages as soon as possible. The best time tests and the best tune tests will be those which are taken from good songs.

In giving ear tests we should bear in mind that they demand the reverse process to note-reading, and occasionally should require note-writing of the children in answer to them. We should not give these tests at random, for music must be looked on as having meaning. It contains phrases and sentences as reading does, and ear tests, like those in time and tune, should be given in phrases—necessarily short, at first—in order to bring out the meaning. In this part of musical training, again, we shall be most successful when our tests, instead of being isolated, are given during the teaching of songs. They should concern themselves with rhythms as well as with the pitch of notes.

With regard to note reading the early method of teaching should be continued throughout the Standards, the exercises merely in-

[1] Taken with slight simplification of time from Curwen's *Sunshine Songs*, Part 4, No. II, "Song should breathe."

creasing in difficulty with the progress of the pupils. This graduation of the work is the important point. We teach reading by the same method throughout the standards, but the pieces read are graduated in difficulty and mere drill work is given up more and more as we make progress, though some—for special purposes—is always retained. So it should be with singing. Each new song should be a little in advance of the last, and whatever is new in the notation should be taught beforehand by means of drill. But, if we always remember that drill in singing is just the word-building of reading, we shall naturally use it only as needed, and drop it as soon as it has served its purpose.

The similarity between reading and singing and the consequent similarity of method in teaching the two subjects being borne in mind, the need for a musical reader will be felt.[1] In early reading books the plan consists of drills by means of spelling lists followed by passages based on each—first a drill and then a passage, the former assisting in the reading of the latter and both graded in difficulty throughout the book. A good musical reader should be written on the same plan ; necessary drill in notation—either given or indicated to be taken on the blackboard—then a song applying it ; then a step forward in drill in preparation for a step forward in song and so on throughout. Of course it does not follow in the case of the musical reader any more than in that of the ordinary literary reader that the children should never be given practice outside the book. All songs of suitable nature and difficulty are open to them for this purpose, just as are all suitable stories for reading. The purpose of the reader in both cases is to treat difficulties systematically, and to train the taste—in the one case for good literature and in the other for good music.

Blackboard exercises should follow the plan of a good musical reader. They should not be mere tests set for the purpose of seeing whether the children can perform them, without any reference at all to the musical side of the work. So-called time tests must not be merely length-of-note tests ; for time in music involves rhythm. The same care is needed in setting blackboard exercises in time and tune. Too often the notes are set down in haphazard fashion, and their length is decided in the same way. We must have a melody running through our mind when writing

[1] The *Cape Union Sight Singer through Song*, Schofield & Sons, Huddersfield, England, is recommended.

them, and keep thinking how it will sound when sung. What should we think of a reading book made by throwing the words together at random, or to include all the difficulties possible for their own sake without regard for the sense? But this is what is done in such tests. They are opportunities for musical gymnastics, but they are not music. Everything tends to become a "test"; we have time tests, ear tests, note tests, and teaching very frequently has to give way to them. Testing is good in its right place; but it is mainly the examiner's work, and it should, as a rule, be left to him. We should use it only when we wish to see if something that we have taught has been learnt—not in a nervous endeavour to find out whether the children are ready for the inspector. Teaching should consist of training, not of testing; and when testing is necessary it should be done with regard for the aim of training. Music should be tested by means of music, as reading is tested by means of reading, and not by means of drills.

What is the aim of the musical training referred to above? Why do we teach reading? Chiefly to give our pupils power to feast their minds on all the best that has been written, and also to give them the inclination. Reading lessons in this sense are a means, not an end. Our pupils are to care to read only what is worth reading, and we shall make them appreciate such literature if we love it ourselves and feel the need of their doing so. It is the same with music. In both cases we are really aiming at character through what we know to have an influence on character —the experience of an uplifting enjoyment that appeals both to the senses and to the mind.

With this end in view we must teach as many good songs as possible. What is a good song for school children? First, the music must be good; and it can be good and simple at the same time. The words must not be beyond their powers of understanding and appreciation, for the song must have present value, that is, must appeal to the children at their present stage of development. It must be also of enduring value—one of which they will not tire, but which, when they are older, they will still enjoy, whether it is sung by themselves or by others.

Here, perhaps, is the place to say a few words to encourage those who are despondent or lack confidence in their musical power. There is no teacher worthy of the name who cannot understand the educational aim in teaching music. - No

teacher should be discouraged and give up because he cannot play, or even if he cannot sing. If he grasps the educational importance of music he will be urged to train himself; and very few are hopeless musically. Moreover a poor musician with the right aim is likely to do more good as a teacher of singing than a good musician without it.

If character-training is the purpose of teaching singing, then it should go without saying that all the children in every class must have the benefit of it. Yet it is not an unknown practice for certain children to be excluded from the singing lessons because in the teacher's opinion "they have no ear for music" and perhaps "spoil the singing of the others." Are there, one wonders, sufficient grounds for this opinion? It may be true that the ear is undeveloped in children who sing out of tune; but this, surely, is reason for giving them not fewer singing lessons or none, but more—as many as time can be found for in odd minutes snatched at the beginning or end of the school sessions or during recess. As singing is both a pleasurable and a healthful exercise, there is absolutely no objection to the practising of a singing class of backward pupils in the playground at playtime. In class these backward pupils may be enjoined to sing softly listening to the others. Even were it necessary to stop their singing altogether for a time they should still be admitted to the singing lessons—not set to "do sums" or "learn spellings" in the time—that they may have the pleasure of listening and the benefit of such ear-training as it affords. It will often be found that the child whose ear is considered most defective finds a keen pleasure in singing songs. This is surely a reason for reconsidering the decision as to his musical hopelessness. Such apparently hopeless cases should be tried individually once a quarter, as there is always a possibility of the sympathy between ear and voice developing. The keenness of an ear for music is so much a matter of training received even before school years begin, that we must expect wide differences in this respect between one child and another. The child who has been sung to sleep in infancy by soft lullabies in his mother's voice, and who has been accustomed to the lilting of nursery rhymes and jingles in his early games with her, will be far in advance of the child whose babyhood has known no such happy influences. Children, again, who have had some oddity of tone or some initial difficulty in picking up tunes, and have been checked or laughed at on account

far behind the main body of the class through lack of
the nervous shyness such treatment causes. There is,
more reason for devoting special time to them. No
ıy the name will sacrifice the individual needs of back-
o the desire for a better general effect or to the deter-
gain a good report.

. has been proved that children can be taught to read
: at a very early age, the training in formal sight-
ld not begin too soon. The Sub-Standards may
age be given to preparatory work—to the teaching of separate musical signs (printed in large characters) and the informal association of them from time to time with the sounds for which they stand. Almost more beneficial, however, at this age—allowing as it does for muscular movement—is the association of sounds with hand-signs. The tonic sol-fa notation is the one best adapted to this stage of the work, but we should aim at developing the power to read the older staff notation not only on account of the immensely larger amount of music written in that notation, but because of the help it may for this reason give to pupils who are learning some musical instrument. It will be found, in practice, that the staff notation may be successfully troduced in Standard IV. It should not be attempted before is, as it is too complicated for younger scholars. In teaching, ch step in the staff notation must be explained by the corres-
nding step—previously learnt—in the newer notation. The aching of reading at sight only demands on the part of teachers trained ear; and, as this is within the reach of all who earnestly ıltivate it, success waits upon effort.

Care and cultivation of the voice during school years are imperavely necessary in order that the adult voice may not be injured, ut may come to its full power and beauty. The first essential of ood tone is correct breathing in pure air, and for this reason the practice of breathing exercises in a well-ventilated room is a preliminary of the singing lesson that must never be omitted. Great care must be given to voice production through exercises in *attack* and *release*, for strengthening the thin (or "head") register, for giving flexibility, and for promoting the tuning and blending of voices in class practice. Not only will these exercises give agreeable tone to school singing; but by preserving and developing the natural qualities of their voices, they will make it possible for the

pupils to join choral societies when school years are over and thus to continue their musical education in later life.

In the absence of proper instruction, children are apt to form the bad and injurious habit of singing only in the lower register. As this lower, chest (or "thick") register cannot be forced above its natural limits without doing injury to the voice, it is very important to train children in the right use of the different registers. When an ascending scale is sung, a change in the quality of the voice occurs, it will be noticed, when C^1 or D^1 is reached above which the higher head (or "thin") register is used. This is the proper voice to cultivate in children. Practice for a few minutes daily will ensure its use if the exercises set begin on D^1, E^1 flat, or E^1 and continue downwards, and if the pupils are enjoined to sing softly. Good vowel sounds for practising "thin" register exercises are oo (as in too) and o (as in oh). The exercises should be taken slowly as well as softly. For the best results in singing, continuous daily practice is needed, several short lessons in the week being better for voice-training purposes than one or two long ones.

A very important part of voice production deals with the clearness of words in singing. While musical tone is produced by dwelling on the vowel sounds, clearness of words depends upon the clearness with which consonants are sounded. Good singing will show both these qualities. Consonants in singing must be very clearly uttered in order that the word may be distinctly heard by those who are listening. A little more effort must be made than in speaking or reading, partly because the dwelling on the vowels tends to "crowd out" the consonants in words, and partly also because, as the music takes part of the hearers' attention, the words must be forced upon them.

Singing in unison rather than part-singing should be the general rule in school practice; but as part-singing is a useful musical accomplishment in adult life, there should be occasional practice of rounds, catches, and part-songs. In the case of part-songs it should be borne in mind that the compass of the different voices will usually vary very little in a class of children, and that only two-part pieces, and even of those only such as have not a low alto, should be used. Three-part songs will be apt to strain the voices of those who take the first and third parts. The distinctively treble and alto notes of voices do not develop till a later age, and

to force them earlier would be to spoil the voice irremediably. The children who sing alto one day should sing treble the next or their head register notes will remain undeveloped, and those of their chest register be unduly exercised.

So far we have not considered fully the important matter of the choice of songs. National or "folk" songs which express in homely language the joys and griefs of a people, their love of home and country, of sport and of the simple pleasures of rural life, are among the best if their words are suitable. This, however, is not always the case, and care must therefore be given to the choice of them. South Africa cannot at the present stage of her history offer her children many such songs; but, remembering what has been said of guarding against narrowness and want of international sympathy, we shall see the advantage, while keeping an open ear for what the home country may have to offer, of choosing them in the meantime from other sources—from among the songs of England, Scotland, Wales, Ireland, Holland, Germany and France.[1] These songs — "the early and spontaneous uprising of artistic power in a nation"—composed in a simpler age than our own, make an immediate appeal to the simple emotions of childhood, and so may be effectively rendered by young pupils:

"The songs chosen for infants should be musically as simple as possible; but it is not necessary that infants should understand all the words they sing, as the chief appeal is not to the intellect, the training of which is the purpose of almost every other subject in the curriculum; but through the spirit of song to the unconscious mind of the child. . . . Scholars in the higher classes may usefully sing carefully selected songs from the music of other countries and these (apart from their value as music) may be so chosen as to convey an impression, truthful as far as it goes, of the characteristic traditions and traits of other races." [2]

To the national songs there may be added for the higher classes a few selected songs from the great masters (such as are used in Training Colleges) for the cultivation of taste. These, like most

[1] The *Cape Union Sight Singer through Song* contains over 600 songs of all nationalities, and these are graded and so suitable for use throughout the schools.

[2] English Board of Education's *Suggestions for the Consideration of Teachers.*

of the songs used in the school, should, for the reasons given, be generally arranged for unison singing.

While for school entertainments and other such occasions songs which are not classical may be allowed, the choice should always be made with care, after due deliberation on the question whether "the best" will not serve the purpose of the entertainment equally well. Much of the music published for performance on such occasions is without educative value, and in music as in literature "even the good is the enemy of the best."

The foregoing suggestions, of course, make no attempt to do more than indicate the broad lines on which the teaching of singing should be conducted. A handbook on the subject is an absolute necessity for teachers of singing, and a very practical one will be found in *The School Teacher's Music Guide*. This contains a chapter on breathing and voice production; explanations and instructions for the teacher who may not have had much opportunity for studying the tonic sol-fa notation; numerous examples of the tonic sol-fa method applied to the staff as well as to the letter notation; hints and devices for the help of the teacher who wishes to avoid getting into a rut, and to adopt fresh ideas for stimulating the musical perceptions of his pupils, together with a number of exercises for improving the teacher's own executive skill.

FOR FURTHER STUDY

*The School Teacher's Music Guide.** Venables. (2*s.* 6*d.* Curwen.)
The Theory of Music for Students and Teachers. Lightfoot. (2*s.* net. Ralph, Holland & Co.)
The Mechanism of the Human Voice. Behnke. (1*s.* 6*d.* Curwen.)
Children's Voices. Maskell Hardy. (2*s.* 6*d.* Curwen.)
*Practical Lessons in School Singing.** Maskell Hardy. (2*s.* net. Charles & Dible.)
The Theory of Music. James Rodger. (2*s.* 6*d.* Curwen.)
*The Primary Curriculum.** F. H. Hayward. (5*s.* Ralph, Holland & Co.) *The Chapter on School Music.* H. Millward and E. A. Tyler.
*Principles and Methods of Teaching.** J. Welton. The Chapter on the Teaching of Music.
*Sight Singing through Song.** R. Dunstan. (Part I, Books I, II, and III, 1*s.* 6*d.* net. Part II, Books IV, V, VI, 1*s.* 6*d.* net. Complete in one volume, 2*s.* 6*d.* (Schofield & Sims, Huddersfield.)
*The Cape Union Sight Singer through Song.** A. Lee. (3 vols., 6*d.* each. Schofield & Sims, Huddersfield.)

*Suggestions for the Consideration of Teachers.** English Board of Education. The section on Singing.

The Teaching of Music. Scottish Education Department.

Voice Training in Speech and Song. Hubbert. (1*s.* 6*d.* University Tutorial Press.)

The Voice. W. A. Aikin. (7*s.* 6*d.* net. Longmans.)

A Manual of Music. T. Keighley. (1*s.* sewed; 1*s.* 6*d.* cloth. Longmans.)

CHAPTER XIV

THE TEACHING OF DRAWING

"So, in drawing, as soon as you can set down the right shape of anything, and thereby explain its character to another person, or make the look of it clear and interesting to a child, you will begin to enjoy the art vividly for its own sake, and all your habits of mind and powers of memory will gain precision; but if you only try to make showy drawings for praise or pretty ones for amusement, your drawing will have little of real interest for you and no educational power whatever."—RUSKIN.

"From the immediately practical point of view, it may be said that a child has not been properly educated unless he can grasp, through mind and eyes, sufficient of the characteristics of the forms he sees around him to enable him to draw them as readily as he can write or repeat the words that he hears. . . . On no account must drawing be practised for the mere purpose of producing pretty pictures: it should be regarded as a vehicle to assist expression in the child's daily life and study. All drawing should be taught as a language, not as an art, and be used as an instrument, not as a plaything."—W. W. RAWSON.

"Nor do we regard drawing as a mere accomplishment or an accidental gift the possession of the few. Like speaking and writing it is a means of expression, and therefore a necessary factor in all true education. Moreover, it is one in which children naturally delight, and may even be said to rival both speaking and writing as a vehicle of thought. . . . As a method of expression it is facile and exact, and as the world owes much to its great artists, so the schools owe much to the great teachers who have given this art its true place in the curriculum."—H. B. MADAMS.

THE subject of drawing from the teacher's point of view resolves itself into two main branches—drawing by his pupils as a means of expression, and his own drawing before the class as a means of illustration.

As regards the teaching of the subject, the existence of manuals of drawing, which every teacher should have, makes any instruction on methods here, unnecessary. We need to see, however,

how an intelligent application of drawing to the other subjects of the school course may be made to further the ends of education generally.

We have learnt that education to be successful must work in harmony with natural instincts and tendencies. Moreover, it must be constantly kept in touch with what the pupils see and hear going on around them and with what they feel. The desire to show by means of drawing what he has seen and thought about is an inborn instinct in man, and to it we owe, in large measure, our knowledge of the early history of the human race. Drawing came before writing as a means of expression, and in the picture records which were made before written ones may be read the early story of man. These, scanty though they are, are valuable, and the more so from the fact that they were made from no other motive than that of forming a record of forms, facts, events and ideas. No desire to create a good impression falsifies them. While on one side these crude record drawings gave a later alphabet, on another they developed into ornamentation—patterns in bead work, and designs on wood, bone, and clay utensils, and on weapons and walls.

It is because man has always tried to express himself by this means that children should be taught to draw. Any instinct seen to be strong in the childhood of the race will be found to be strong likewise in the childhood of the individual in any age. Proof that this one exists in the children we teach may be seen in their untaught efforts to express themselves in form, whether it be by moulding houses and castles in sand, by chalk drawings on wall and pavement, or by the hidden pencil sketches that enliven dull lessons. In older children this instinct seems to weaken. Why? The answer is of great moment to all who teach. It is from want of exercise that arises from weakening of interest. Children are never interested in drawing as a mere process; but at the outset they take to it, because it is the only means at their command for showing their interest in things. When in our lessons we make too much of the way the drawing is to be done, our pupils are taken too far from the things drawn to remain interested. Failure to keep up their interest in things; too early adoption of abstract methods of teaching; undue stress on the mere handwork and processes of drawing—these are the causes of the weakening of children's instinct for drawing. Through such mistaken methods

we fail, with far-reaching results, to make use of their first strong impulse towards self-expression.

To some extent, no doubt, at this later age expression by means of writing will have begun to take the place of drawing, but at every stage of their growth, our pupils should be able to draw well enough to express what they wish to express by that means. This for the reasons pointed out is not the case with the great majority of children. We see, therefore, the need for a rightly grounded and carefully graded course of training. Without such a course, a natural instinct, meant to be developed for use and enjoyment, tends to weaken and at last to die out. As teachers we are closely concerned with this matter.

The art instinct of children has a double value. It is, first, a means of expression, and secondly, an aid to memory. As a description of any concrete thing, a truthful drawing is far more effective than any verbal effort can be. The most exact language cannot compete with even a rough sketch that seems to put the thing itself before us. Similarly, if we wish to find out how far a child has profited by certain lessons—as, for example, on a railway system; on the position of an army in battle; on the characteristic features of some plant or animal form—no answer in words is so satisfactory as the few lines of a simple drawing which put the matter beyond doubt. As an aid to memory it is valuable, because the habit of forming picture records—as, for example, of a thing seen or of a road travelled—is the least laborious and the surest way of remembering. In some people the habit of visualising is natural. Where it is not, frequent practice in memory drawing, which shows the need for closer observation, is the best way of cultivating it. We may prove for ourselves in the classroom this second use of drawing. Verbal descriptions—as of the windings of a river, the features of a building, or the details of historical costumes—usually fail to impress themselves on the memory. If, however, instead of describing them in words we sketch on the blackboard the features we wish to impress, we shall find that our pupils are better able to remember them. The memory is more sure and full when the children themselves reproduce our sketches.

Considering drawing, then, as a means of expression, we must realise that it needs cultivation in the same way as speaking and writing do. Before our pupils can express themselves well in any

of these ways they must have clear and exact ideas. Incorrect mental images are fatal to clear thinking. The need of ensuring correct views of form from which they will obtain the ideas for later expression becomes, therefore, of first importance. While a child's way of seeing, if he is untaught, is always right as far as it goes, he does not, in the absence of training, learn to observe more progressively.

The first view of form is the object in mass, with outline, proportion and colour defined. Smaller details are observed later, perspective later still, and light and shade, colour tints and texture last of all.

From this we see the necessity for a graduated course to bring the child step by step to the power to express an object truly in detail. A graduated course of design lessons is also needed so that our pupils may be able to invent forms as well as to imitate them. By its means also they will have opportunity, through varied repetition, for the practice that develops dexterity without deadening interest.

From the truth " as with the race so with the individual " comes the indication of right method in teaching. In South Africa we have opportunities of studying the drawings of a very primitive people. The rock-paintings of Bushmen show us that the first subjects of expression are the objects of closest interest. As in the dawn of civilisation appetite made the strongest claim on the actions and ideas of men, the representations that have come down to us through the years are of the animals they hunted or pastured for food. The Bushman's thoughts are plainly centred upon the things to be drawn, and not upon the drawing to be made. In this we have the key to all natural treatment of drawing. Had a Bushman been led to suppose that difficulties of a mechanical nature were to be laboriously overcome, he would not have drawn. A like tale is told by the Kafir hunting story pictured on the bowl of a tobacco pipe.[1] Both have the same message for us. The objects we provide for children to draw must be such as interest them, being closely connected with their experience of nature and life. Another truth they teach is that the tool and the surface used in drawing will always affect to some extent the resulting picture, and must be taken into account when any drawing is required from children. Thus with a fine point they will picture in outline, but with brush, crayon or chalk they can represent mass.

[1] See p. 2 of *A Manual of Drawing*, Part I, by W. W. Rawson, A.R.C.A.

The old opinion, that only a few exceptionally gifted children can be taught to draw, must be given up by teachers of drawing. All we can say is that in drawing, as in other things, one child may do better than another. Moreover, just as in reading, writing and arithmetic the backward children can be helped to do better, so, in the case of drawing, every normal child may reach a fair level of attainment. It is strange that this was not realised earlier, for drawing bears such a close relation to writing, an art which the dullest pupils have been expected to master since the first establishment of elementary schools.

The modern effort to bridge the gulf between lessons and life is furthered by a scheme of drawing which aims at developing the natural powers of eye and hand. Natural powers do not as a rule disclose themselves until called into use—"the wider the range of early education, therefore, the more likely is it that a natural vocation will be followed in after life." Drawing widens the scope of education. Success in many arts and crafts depends on such accurate observation and skilful execution as it cultivates. There are, therefore, great possibilities of its being the means of introducing pupils to careers of usefulness, in which they may excel through natural aptitude.

The modern method of teaching drawing enjoins the early correlation of the subject with other school studies. It forbids the use of "copies of objectless and meaningless forms," on the ground that "they make no appeal to the knowledge possessed by the pupil." Moreover, however right a drawing of even a well-known natural form may be, if it is not made as a result of the child's own observations, it means nothing to him. Drawing taught and practised on the new lines enables the children to learn by doing. This is the way in which the human race has been educated from its earliest days. Man in his most primitive state felt a desire to express what he saw in Nature. His power to appreciate form, though limited at first, increased with every effort towards expression. So with the child to-day: every honest effort to see truthfully, accompanied by an effort to show faithfully, finds its reward in added power to do both. Under proper conditions of teaching, continuance in these two efforts will enable him at last to read and reproduce the characteristics of forms around him as easily as he can read and transcribe the written forms of words in books.

As has been pointed out, the materials used in drawing influence

both the result and the method used to obtain it. The following methods are included in most modern schemes for the teaching of the subject.

Free-arm drawing on large paper, wall or board surfaces is the most suitable exercise for young children when they first begin to draw. At the outset we do not want to force a child's attention from things to drawings. It is therefore desirable to treat the actual drawing as freely as possible. Large scale of work, a soft material that enables an impression to be set down readily, and the knowledge that mistakes can be easily corrected—these are the chief advantages of blackboard drawing for the early stage of instruction.

Freehand drawing is the natural development of Free-arm drawing as the children gain control over the finer muscles of the hand and fingers. It is suitable for desk-work. Coloured crayons and tinted paper should be used, and care should be given to the choice of colours. In this method of drawing a threefold aim should be pursued—training of the hand in making lines at various inclinations; of the eye in judging simple distances; and of the mind in determining quickly the characteristic forms of objects upon which recognition depends. In infant classes all drawings should be as large as possible, both for the reasons given above, and also because the larger the drawing the easier it is to detect and correct errors.

The transition from chalk and crayon work to brush drawing gives opportunity for finer training of the children's colour sense. At an early age they are only able to appreciate crude colours in large masses; but, as they grow older, they may be led to see the beauty of softer tints and less harsh contrasts of colour. Both in dress and in house decoration there is evidence of want of colour-training; and brush work offers an opportunity of supplying it. It should, of course, be based upon natural schemes of colouring, and may be brought into relation with nature work through lessons on the rainbow and the spectrum. A colour wheel would be very useful at this stage for providing secondary colours through combination. In its absence a home-made colour disc, spun on string, may be made to serve, and valuable training in, and exercises on, the matching and blending of colours may be given. From the third Standard year some mixing of colours by the children themselves should be permitted as another experiment in obtaining secondary colours, and they should also make scales of colour to familiarise themselves with varying tones.

In addition to the colour training it may afford, brush-drawing trains the children in the use of a finer "instrument." The control of the flexible point of the brush makes for precision and dexterity. This form of drawing, too, like blackboard drawing, lends itself to the rapid recording of the general impression of a form while it is still strong.

Until quite recently outline drawing of flat copies was the only sort of drawing exercise practised in elementary schools. Wiser counsels have resulted in the introduction of mass drawing and its use, particularly in the early stages, for the concentration of attention on the actual bulk and shape of objects. Outline drawing tends to fix attention on the shape of the lines enclosing mass, and mass drawing is a good corrector of this tendency. Outline work, as the easiest mode of suggesting the shape of an object, has, of course, its value, and children turn to it instinctively when drawing with any sharp-pointed instrument. The gradual understanding of the nature of outline will come through the necessity of supplementing the rendering of masses. In the lower standards, where the children are only learning to write the alphabet of drawing, such lines as have occasionally to be used alone must always be moderately thick to express the mass of the object they represent. When teaching children how to draw objects which may be shown by the use of straight lines, we should choose such as may be represented by fairly thick lines, *e.g.* a toast-rack or a gridiron.

Ruler drawing is closely associated both with practical arithmetic and with various branches of manual training. The drawing lesson proper, however, is the best time and place for ensuring correct method. The pupils must learn to measure objects accurately, and then to draw them, either actual size or accurately, according to some simple scale.

Part of the purpose of ruler work is to give confidence to the pupils by letting them have mechanical aid in certain exercises before requiring entirely freehand work of them, and to prepare them for the scale drawing and geometrical drawing of the upper standards. The work must never be allowed to become merely mechanical—the objects chosen should be such as only allow of certain measurements being taken by ruler, leaving scope for free judgment of proportion and free drawing of curves in completing the exercises.

The drawing of geometrical models is valuable as illustrating

the principles of construction and perspective. It is commonly deferred until the pupils have gained, through the examination of many forms during the simple object-drawing of lower standards, the power to deal with constructed forms of a more elaborate nature. Where a school does not possess conventional models they may be made in cardboard. Rightly used, the models are useful, because they represent the simplest forms of certain typical constructions, and so can be made very helpful in suggesting the proper way of dealing with more complicated examples of such constructions. In addition to the geometrical models, sets of common objects should be used.

In considering the drawing of natural forms, it may be well to show how such drawing is complementary to that of manufactured objects which is carried on side by side with it. Each is a useful corrective to certain tendencies developed by the other. Too rigid adherence to the drawing of things made with hands is apt to lead to a formal and mechanical treatment likely to destroy the feeling for natural form which it is one of the first aims of the training to cultivate. On the other hand, constant attention to natural forms which through their innumerable variations do not reveal any very apparent constructive plan to the eyes and minds of young children, tends to a certain looseness and inaccuracy of drawing. A child, for example, may make a drawing of a leaf that is a very fair representation of that type of leaf, although it is by no means a faithful showing of the particular specimen with which he was provided. From the point of view of training and the observation of principles, this is unsatisfactory; and a corrective must be applied. The proportions of a simple artificial form are less subtle, and the reasons for such proportions are more apparent than in the case of natural forms. For this reason hand-constructed forms are taken first and are continued later side by side with natural ones.

In infant classes drawing, whether of natural or artificial forms, is not regarded as a separate subject, but is used as a means of associating word and idea in connection with reading lessons, nature work, story and song. The printing of the name of the object beneath the drawing may, as time goes on, be made to lead up to formal lessons in writing. Throughout these lessons, the joy with which children made their earlier untutored efforts and regarded the results of them, must be preserved.

In the standards, the drawing of natural forms will serve to

show the principles underlying beauty of form in nature. These principles should be taught gradually as successive examples bring them to the notice of the children. In such teaching the provision of specimens must be ample in order that the truths concerning them may be impressed upon the minds of the children. There should also be a constant reference to the mode of growth. The form that is studied in the classroom should, earlier, have been studied in its natural surroundings. Thus the drawing lesson will be closely linked up with the nature work of the school.

Pattern drawing or design is directed towards showing that certain discovered arrangements of natural form are beautiful in themselves and are sources of beauty in art. The first exercises draw attention to the effect of repetition as a principle of beauty. Later exercises show that nature avoids the monotony that would come of unvaried repetition by resorting to alternation and group-series.

As the pupils come to see that pattern drawing is in every detail closely related to nature, they learn to appreciate the principles upon which design is based. They find that it must be ruled by natural law and not by personal fancy. But this knowledge should not bind them to slavish imitations; it is in the stimulation of invention and the cultivation of imaginative vision that part of the value of design work lies. The joy of it always rests to some extent on the freedom with which taste may be exercised in the arrangement of colour and form. The value of design in developing dexterity through repeated practice without deadening interest has already been pointed out.

Memory drawing has certain well-defined uses which mark it off from other exercises. Its main purpose is to train the children to visualise form at will. It concentrates observation on what is essential to a truthful representation. A new lesson should, as a rule, open with a memory exercise which tests the children's grasp of a previous one. Only a few minutes should be given for this, as the value of the work lies in the directness of thought and rapidity of expression it cultivates.

From the foregoing principles and methods of practice we may summarise the aims of modern drawing. Briefly these are: to teach the pupils to see truthfully and show faithfully, thus giving them command of a graphic means of expression; to lead them to appreciate beauty of form, arrangement, and colouring; to train

them in manipulative skill and dexterity, and to cultivate imagination and invention.

We come now to a consideration of the value of drawing to teachers, as a means of illustration and in correlation with the other subjects of the school course. It is hardly too much to say that lack on a teacher's part of this power of illustration robs his lessons of quite one-half of their effectiveness. A large part of the waste in teaching comes from the listlessness of the children; and those who have watched a class quicken into interest as the teacher, chalk in hand, steps to the board with a "See, it is like this!" know for themselves one good way of stopping the leakage. Children learn best when they are seeing and when they are doing, and least when they are merely listening. One reason for this is that words depend for their meaning on the ideas associated with them, and that it frequently happens that words used in one sense by the teacher are understood in quite a different sense by the children, or cannot be understood by them at all because the underlying ideas are wanting. It can easily be seen how such a misunderstanding at the beginning of a lesson will, during its course, lead the children so far astray from the path of our thought that understanding becomes impossible and listening sinks into listlessness. Of course, when it is said that children learn only when they are seeing and when they are doing it is borne in mind that there is a mental vision and a mental activity, as well as that concerned with the eye and hand. But children must perceive through their senses before they can see with their minds, and of the gateways of knowledge the eye is the broadest and the oftenest used. The mental images called up by words are often blurred and indistinct; they are often, as we have seen, also "untrue" in some particular; and much confusion results which can only be cleared by illustration. To *illustrate* a subject, a lesson, or one's meaning is to throw light upon it; and by far the best and readiest way of doing so is the use of graphic means. If a teacher has the power to show vividly the image which is present in his mind and which he wishes to raise in the minds of his pupils, no confusion can possibly result. The usefulness of drawing in this connection is only limited by the capacity of the teacher.

In blackboard illustration, even to a greater degree than in any other drawing, the mind should be concerned with the idea to be expressed—not with the drawing as a drawing. It is the

teacher's power of conveying information by means of drawing that is in question here, not his power of draughtsmanship except in so far as the latter is an aid to the former. As in other memory drawing, rapidity of execution is important. There is not time during any lesson for fine, detailed work that takes long to do. Boldness and simplicity are, in addition, aids to clear expression. We must be sparing with our lines; the fewer used to convey an idea, the more forceful will be its representation. Whenever possible, we must make use of mass colouring; it is easier than outline, more striking, truer. The wording which accompanies a blackboard sketch should be clear and well-formed. Verbal and graphic illustration then unite to give the strongest possible impression, and the blackboard scheme, left exposed, will quietly continue to instruct when the lesson is over.

By reason of its illustrative value, drawing bears an intimate relation to all the subjects of the school course. It is, indeed, an indispensable aid to the successful teaching of most of them. At the very beginning of school life it is needed to aid in the association of word and idea. Its use not only serves to make meaning clearer but adds life and interest to all lessons which aim at the cultivation of speech and reading power. Little children who are incapable of abstract thought are stimulated to one observation after another by a bold sketch in colour, while their own subsequent efforts to show by chalk drawings some of the things they have talked of help them further forward. Story and song can be invested with more living interest by the same treatment. The approach to formal writing lessons must be made by way of drawing. Before children have developed the fine muscle-power which enables them to control a pencil, they should be taught to draw the printed forms of letters in fine sand, using pointed sticks for the purpose, while all their drawing at this stage is an aid to the later forming of script letters in which curves and straight lines are combined. The practical arithmetic demanded at the present day requires, on the part of both teachers and children, command of graphic means of expression. Measurements have to be taken and recorded, diagrams drawn to represent fractional parts, and graphs made for all sorts of purposes. In all this work the training in ruler drawing will be found a powerful aid in securing readiness, neatness, and accurateness of expression. Drawing may be made to lend aid also in composition lessons. A

new interest is added to these, in the children's minds, when they are called upon either to illustrate their compositions, or to write on the subject of some effective and suggestive sketch. Graphic and verbal expression are so closely allied that stimulation by the one meets with ready response in the freer flow of the other. Blackboard sketches of familiar things make the right approach to those compositions on pictures which many teachers have found to yield happy results. In later grammar lessons, again, we may make use of drawing as a means, the only one except actual demonstration, of illustrating the commoner errors in grammatical construction. From the very outset drawing is necessary to the teaching of geography. Children must draw a plan of the schoolroom and be made familiar with a plan of the immediate neighbourhood of the school. They need to be taught in an introductory lesson to distinguish between a plan and a picture, and no wordy explanation will make the difference so sharp and clear in their minds as will the drawing on a horizontal board of the plans of a few familiar objects of simple form and the contrasting of these with pictures of them rapidly sketched on another board placed vertically. Again, before they can make intelligent use of a map the children must reduce to scale some real piece of country—playground, garden, or field—and represent it and its features by a drawing.

In later geography, whatever branches may be the subject of study, the need for the use of drawing for purposes of illustration is so great that it has become an essential part of the teaching. For drawing in geography is no longer confined to the making of maps. Any sketches—as, for instance, of plants and animals, of characteristic race features of the inhabitants of other lands, of their dress, their tools and weapons, of buildings and of scenes—which may help the children to realise the conditions of life in far countries will be a means of increasing interest. If the children are accustomed to make written notes only on the right-hand pages of their notebooks, and are encouraged to fill those on the left hand with sketches of the sort suggested, to supplement the information given by their maps, the making of them during home-study will vary reading and memory work agreeably and usefully.

In the same way the history lesson offers opportunity for interesting and educative illustrative drawing. Drawings that show sites and buildings of armies in battle, and maps to show conquest and ex-

ploration—old maps as well as modern ones—drawings of the weapons and costumes of various ages, are fitting objects for graphic expression. For the history of South Africa, reproductions of Bushman paintings, of distinctive headgear and dress worn by different native tribes, of early forts and other defences, suggest themselves as specially suitable. Without this illustrative work, history teaching can never be what it should be.

When we come to the consideration of nature-study in connection with drawing, we quickly realise that the relation between the two is so close that it is almost impossible to regard them as independent subjects. The nature student who has not the power to make records of his discoveries by drawings, loses half the value of his study. There is no branch of the work that does not call for it, and it is even more necessary to the teacher than to the student. Drawing, on the other hand, owes much to the study of natural forms, for it is from these that the draughtsman gains his knowledge of those principles of beauty in nature on which all right art-work is founded. The two subjects are thus seen to be mutually helpful; and to attempt to teach the one independently of the other is to lose the full value of both. Drawing is not less essential in all educational handwork. It is, indeed, the foundation of all branches of manual training. It must lead up to and accompany them all; is equally important to the woodworker in all his planning and to the needlewoman as the basis of all her work in design.

Some of us, perhaps, hesitate to draw for illustration on account of the defectiveness of our work. We should conquer this feeling. The children will be too much taken up with the idea expressed to criticise the drawing, and will be far more benefited by the attempt, than harmed by its failure to reach a high standard of artistic excellence. Many teachers and lecturers illustrate admirably just through having in the beginning ignored the fact that they were unable to draw well. Ease and improvement follow upon use. The fact to be grasped and acted upon at the outset is the fact that lines can be made to express ideas.

FOR FURTHER STUDY

*A Manual of Drawing.** W. W. Rawson. (Part I, 2*s.* 6*d.* Part II, 5*s.* Longmans.)

Elements of Drawing. Ruskin. (1*s.* 6*d.* George Allen & Sons.)

Drawing. O. Polak and H. C. Quilter. (2*s.* 6*d.* University Tutorial Series.)

The Making of School Illustrations.* Nancy Smith. (4*s.* 6*d.* Charles & Dible.)

Hayward's Primary Curriculum.* The Chapter on Drawing. By H. B. Madams.

Suggestions for the Consideration of Teachers. English Board of Education.

Story Illustration for Children. O. Marks. (2*s.* net. Charles & Dible.)

Historical Illustration.* H. W. Donald. (A. B. C. D. 1*s.* 6*d.* each Charles & Dible.)

CHAPTER XV

EDUCATIONAL HANDWORK

"Educational handwork trains both on its intellectual and on its moral side what we may best describe as the *practical capacity*, the power of adjusting means to ends."—H. THISELTON MARK.

"Not one of the child's school lessons brings him nearer to reality, and hence nearer to a true interest, than his manual training lesson; nor is there any better means of realising Herbart's great idea of an æsthetic revelation of the world."—H. W. SMITH.

THE provision made for the teaching of various branches of educational handwork in public elementary schools may be looked upon as a response to the demand, made frequently during the last fifty years, that school work should be more practical in its nature. This view, however, fails to appreciate the full purpose of the training; for, though a preparation for the activities of life is a part of the aim of manual training, it is its educational value no less than its practical usefulness which has led to its being included among school subjects.

There is no need to decide which is the more important aspect of handwork—the educational or the practical. The training of hand and eye which shows in ability to cut cloth, or carve wood, or shape metals as the need or wish arises, is of value in later life. On the other hand, manual training so strengthens and develops intelligence and character that, were there no practical purpose served by cultivating it, every wise scheme of education would provide for doing so.

The educational value of handwork for Sub-Standard classes has long been recognised, and manual occupations are provided for infants as the best means of cultivating both muscular control and mind power. In senior classes, again, the practical usefulness of such training has made a place for it in elementary courses—woodwork or metal work being prescribed for boys; and—in addition to

needlework—cookery or laundry work for girls. But in the junior school there has been little provision made against a need that is greater from eight to twelve years of age than at any other time. Apart from needlework and drawing junior scholars have too frequently had no means of exercising in school those muscular powers which, trained to some extent in the infant room, have been developing with their growth, and demand further employment. The provision of such employment by a graduated scheme that takes account of this need, and sets suitable exercises for all classes from the sub-standards to the highest, is a reform that may be expected now that the educational value of handwork is coming to be more generally appreciated. While difficult exercises in wood and metal are beyond the powers of boys, and the more advanced cookery and laundry practice unsuitable for girls, in the middle years of school life, constructive work in paper and cardboard would give the necessary training to the one, while there are various forms of housewifery which might be adapted to the needs of the other. These, with the care of pets and the gardening operations which nature study opens to both, would meet the case.

For the youngest children manual occupation must be some form of play-work which does not task too heavily their undeveloped powers. While the use of the kindergarten "Gifts" at once suggests itself, some of these are not suited for school use even in the lowest classes. Froebel, in inventing his occupations, was providing for the needs of children from the very early stages of infancy, and the elementary ideas that some of the "Gifts" were designed to convey have been grasped by most children before they enter an infant school. Some of the later "Gifts," again, provide material, the use of which requires adjustments of small muscles which are not under the control of children of four and five years of age. As we watch their fumbling efforts to pick up and lay down again in particular positions the fine sticks of Gift VIII, we realise that for these there should be substituted something which will give the same training without causing too much strain—wooden bricks, laths or slabs, for instance, of a size which small fingers can easily manipulate. We must consider the use of the "Gifts," as of any other apparatus, in a common-sense way. We must not think it necessary to adopt all or any one particular "Gift" simply because Froebel invented an occupation with it and modern infant teaching is expected to follow the lines laid down by him for the

education of little children. What is necessary is that we try to discover the truths about child nature which underlie his system, and then see how we may best act in accordance with these truths, whether by using his prescribed apparatus or not. Very often this will need adapting to suit special circumstances. Sometimes it will have to be rejected altogether.

If the materials chosen are such as can be dyed, or painted in several bright colours, they may be used in colour-training. This change of use is very desirable; for apparatus which cannot be made to serve more than one purpose makes for monotony, and this must, at all costs, be avoided in the teaching of young children.

"Children seem to take a special delight in using things for purposes quite different from those which they were designed to serve. They then become real toys, which may be used for one end or another as fancy dictates. If we can design toys which will serve equally for games of building or for exercises in colour, or for counting, or for other employments, we shall be acting in the way in which the child naturally behaves. Whatever special use we may make of such simple apparatus, we must always find time at certain periods of the day for the children to do just what they like with it. From their spontaneous games and amusements we shall learn much as to what they like. We need opportunities for learning from our pupils as well as for teaching them." (J. Gunn, *The Infant School.*)

But, while on the one hand there should be variety in the use of one form of apparatus, there should also be different kinds; for "something new" is the constant demand of child nature. Uniformity, formality, monotony, the repetition to-day of what was done or shown yesterday, is weariness and futility in the infant room. And variety of apparatus is not hard to obtain. Shells, coloured cardboard shapes or cotton reels, coins, large beads, and beans—all these and many others can be made to delight the children while serving our purpose. Although simple apparatus can be cheaply bought nowadays, a glance through an illustrated catalogue will often prove so suggestive that we shall need to make little or no outlay of money. As a general rule we make the best—that is, the most educative—use of apparatus which we obtain or design by our own efforts. The value of sand and clay in providing play-work for very young children must not be overlooked.

After this first stage the children should pass from occupations

of the purely play type to others which are more formally educative —to the constructing, arranging, or working of decorative or useful schemes of form and colour, such as paper-folding, mat-weaving, bead-threading, and embroidering in outline. Clay, or some other plastic material for moulding, and prepared wall-surfaces and chalk for drawing should now take the place of the more easily manipulated sand. Free exercise with the material should still be allowed, that the inventive powers of the children may have scope and their minds have freedom to develop according to their native endowments. From this stage in choosing occupations we must ask ourselves not only whether they are suited to the present age of our pupils, but whether they will admit of development in later years. Modelling and drawing easily pass the double test, for while they give delight and train expressive skill in the youngest children, they are capable of being developed, as power increases, through all the school standards and beyond them. Paper-folding, again, is a good preparation for later paper-cutting and cardboard-modelling, and the folding of materials for needlework. Mat-weaving leads on to cane-weaving, and embroidery to needlework. No rule, however, can be given that will serve at all stages as a test for admitting or excluding individual exercises; but this general guiding principle must be borne in mind—"that no occupation is of much educational value unless it leads somewhere or has the germ of growth within it." This remembered, the individual teacher is the best judge of the individual exercise; for she alone knows what she can develop from it.

When the second year is reached it will be advisable to concentrate on fewer occupations; for greater skill and accuracy are required as the approach to the standards is made. Modelling and drawing, as the most educative of employments and the most suited for expressional work, must be continued. In addition, paper-cutting, for its training in the use of edged tools, and for its relation to later constructive work in paper or cardboard, and cane-weaving for its admirable effect in developing dexterity of finger-movement, and for its usefulness, are also suitable. Needlework, as a distinctive occupation for girls, begins in this class with needle, thimble, position and knitting drills, and hemming and knitting stitches. With regard to the latter it must be seen that the materials and the stitches in hemming are of a texture and size that remove all fear of eye-strain. In all sub-standard classes—and, indeed, through-

out the school, but particularly up to, and including, Standard IV —the care of pets and the tending, under supervision, of flower-beds or of seeds and seedlings grown indoors should be continued.

Standard I may suitably continue the occupations of the sub-standards. Such development as is found to be possible should be in the direction of constructive work in paper and cardboard Drawing and needlework should be continued progressively.

It is possible that owing to the greater amount of formal work to be accomplished in Standard II and upwards, a need to drop all occupations but drawing and neeedlework will be felt; but this would rob the children almost entirely of a most educative form of work at a time when nature is urging them towards the accomplishment of material and practical results. At all costs the endeavour must be made to find time for occupations which will suitably bridge the gulf between those of the infant room and those of the highest standards. For both boys and girls they may take the form of exercises in paper-cutting and cardboard-modelling. The last is one of the cheapest forms of educational handwork, few tools being required, and the materials costing little. As regards difficulty, it stands between the easier modelling of plastic materials suited to infant classes, and the harder carving in wood which employs boys from the fifth standard up. Further, it can be carried out at the ordinary school desks on a piece of board supplied for the purpose. Except in the case of a few of the strongest models, which will require glue, paste should be used. A special table with a rough surface should be provided for the paste-pot or glue-pot, and most of the fixing should be done at it. Each child should have a large envelope in which to keep unfinished work. The envelopes should be kept by the teacher in a general locker, should be distributed at the beginning, and collected at the end of each lesson.

In order that the work may have its full educative value, neatness and careful adjustment must be required in all exercises, while decorative treatment should be introduced to give play to the artistic instincts, and scope be allowed for invention.

The exercises may pass from simple geometrical forms in the flat, through solid geometrical forms (*open*, as, for example, pin- or pencil-trays, pen-racks, wall-boxes; and *closed*, as, for example, the square pyramid and prism) to more advanced work in the

making of such articles as standing photo-frames, watch-stands, pipe-racks, letter-cases, wall-pockets, etc.

From some of these exercises the girls might be withdrawn for special instruction, where provision can be made for it, in simple forms of housewifery as, for example, the washing of dishes; the sweeping and dusting of a room; bed-making and the preparation of clothes for the laundry classes by separating woollens from cottons and coloured articles from white ones; the peeling of potatoes and paring and coring of fruit for cooking; the testing of eggs and milk, etc.

For the upper standards a course in woodwork or metal work is usually prescribed for boys and one in needlework, or, where housewifery centres or other facilities exist, in cooking or laundry work for girls. As woodwork and needlework are the two crafts most generally taught, a few words on the principles and purposes underlying their teaching will be in place here.

I. Woodwork

We may glance first at some of the facts which have given to this form of handicraft its place of importance among manual occupations for boys.

With regard to the advantages to be claimed for woodwork, the Editor of *Manual Training* expresses himself as follows in Chapter XII of *The Primary Curriculum :*

"Wood is clean and easy to work; cheap and convenient to buy; lends itself to infinite variations of form, and, to a lesser degree, of colour; brings us, perhaps, into closer touch with nature than any other material; and can be made the basis for the greater part of geometrical science, and for a large part of art culture.

"Wood comes into the manual training room in a less prepared state than metal or cardboard, and needs throughout a greater number of tools for its manipulation. It lends itself to all requirements of the constructive faculty. It is a material of three dimensions, but is within rather more severe limits of manipulation than is metal, owing to its fibrous structure."

Reasons underlying the choice of this form of handicraft are to be found, then, in its economy; in the opportunity it provides for the gaining of direct knowledge of nature and of one of the most useful sciences; in the scope it offers for muscular, and, through

that, for mind and character-training; in its lending itself so readily to the construction of articles of practical usefulness; and in its conferring the power to continue this productiveness.

But these advantages of course cannot be enjoyed by the pupils unless the teaching of the subject fulfils certain conditions.

Important among these conditions are the fitting of the work-room and the care of material and tools. There should be for each scholar at least four feet of bench space and two feet to allow of freedom of movement in front of the bench. The necessary bench tools should be supplied to each scholar, and a proper place in which to keep them provided. Additional tools that will be required by the pupils from time to time should have a place given them within reach of all.

Attention should be drawn to the nature of the tools and the proper ways of using them should be taught. In classes for older boys demonstrations to illustrate the correct way of sharpening edged tools and keeping them in order should be given, while in the highest class the boys themselves should be entrusted with the task of keeping them ground and sharpened.

The teaching should include lessons on various kinds of hard and soft woods; and care should be given to seeing that the pupils know the various parts of the trees producing them and the conditions affecting their growth. Where native woods are used it is desirable that the boys should be familiar with them in their natural and living state, and be able to tell, broadly at least, the conditions as to site, moisture, etc., that they require and the localities which supply these. The processes of felling, lumbering, sawing and seasoning should be taught in such detail as is found to be practicable; and some instruction should be given on the chief commercial woods—their habitat and mode of growth. Markings and grainings should be studied in the specimens in use, and common flaws should be shown and commented on. In distinguishing the harder and softer woods their respective uses should be told and the difference between heart-wood and sap-wood pointed out. Visits to local plantations of the Forest Department should be made where possible, that the pupils may have opportunity of studying a variety of trees undergoing cultivation. Tree-planting by the pupils themselves should be carried out where practicable.

Discipline in the workshop must needs differ in some respects

from that of the classroom, though there, as elsewhere, if the pupils are furthering their own work without interfering with that of anyone else, the class is well-disciplined. The boys must be able to obtain tools and material, make comparisons with a model, or consult a fellow-worker. The teacher must feel that he has them all in hand, or, what is better in the case of older scholars, that they have themselves in hand; but an atmosphere favourable to work can be maintained without any of the oppressiveness of rigid discipline.

Orderliness in management of bench and tools during work, and in the replacing of the latter when work is done, is, however, an essential part of workshop discipline. To keep things "shipshape," should be the aim of each boy. There is no better way than "the way they have in the navy," for maintaining this necessary order, and it is one that boys can emulate without any feeling of effeminacy. A neat bench with all tools and materials in place should be required of every pupil at the close of the work-period.

Like every other subject of school-instruction, this form of handicraft lends itself to correlation. With arithmetic and geometry it is so closely associated as to seem only a practical application of part of their teaching. Whenever reference is made, as it must often be made, to the wood in its tree life, it merges into nature study, while the processes by which it is prepared for commerce and its trade use bring it into touch with geography. When the woodwork instructor is also the class teacher, such opportunities as the class lessons afford for broadening the bases of the subject, should always be seized in the interests of intelligent work.

II. Needlework

The existence of many good text-books on needlework and of special pamphlets and notes concerning the teaching of the subject makes it unnecessary to consider here the matter and method of individual lessons. But, since the aim and general principles guiding successful teaching must be mastered by all teachers during training, these two points come within the scope of this book.

"The aim is to fit girls for what Herbert Spencer calls the 'activities of life.' The natural future of girls is marriage. The

house-mother should be able to make her own and her children's clothes, knit her husband's socks and darn the stockings of the household. She should be able to exercise ingenuity in making the most of the material she is cutting out, in adapting old clothes, in patching, mending and fitting. Moreover, she must be able to do all these things easily and quickly, so that they do not become too great a burden. She should exercise good taste in her purchases." (Transvaal Education Department's *Regulations for Primary Schools*.)

While bearing in mind this ultimate aim of practical usefulness in after life, teachers must so arrange the course of needlework lessons that it is suited to girls varying in age from six to sixteen. It must, in its beginnings, put no undue strain on the youngest pupils, and must be graduated in difficulty throughout, so that at each stage the girls find in it full employment for their powers. As a form of educational handwork, it must aid in developing these powers.

Girls under six years of age should not be taught to sew. The delicate finger-work required even for stitches of fair size is too great a tax on the undeveloped muscles of their small hands, while many medical men are convinced that needlework cannot be undertaken at this age without risk of injury to the eyesight.[1] Training in free-arm and free-hand movements will, however, be found useful about this time. The needle, thimble, position and knitting-pin drills prescribed for Sub-Standard classes provide such training. The practice of knitting with coarse wool on pins of a moderate thickness, does not entail the risk mentioned in the case of sewing, and the proper manipulation of knitting pins and wool—a matter requiring much practice before ease and speed can be combined with correct holding and moving—affords muscle-movement admirably suited to the powers and needs of girls just passing out of infancy.

At all stages of the work very fine stitches on very fine material will tend, under certain conditions, to cause a strain on the eyes; but no strain need result if the eyesight is normal when these conditions are avoided. The first of them is poor or ill-directed light; a second, too long continuance of such sewing at a time; a third, wrong methods of working and work holding. As for all other occupations demanding close use of the eyes, the light must be

[1] Children with weak eyesight require special consideration and special care in teaching. In some cases they should be excused altogether.

sufficient without being too strong, and should fall from the left rear —over the left shoulder—of the worker, not from the front. As regards position, the work must be held up, but not too closely, to the eyes : a distance of from about nine to twelve inches is right. The head must not be allowed to droop over the work. As regards the method of working, in fine materials the counting of threads must not be practised. This may be necessary when a stitch is first being learnt on canvas or some other coarse material, but must be given up as soon as it is mastered and is being used on fine material. Not only is it injurious to eyesight, but it is a practice altogether faulty from the point of view of hand and eye training.

Care must be given to seeing that the girls handle their work properly. Materials must be held lightly, and the fingers of the right hand must not be closed tightly over the needle and cotton. The cotton must not be grasped in the fingers, but left hanging loose. It should be seen that the girls do not take more than eighteen inches of cotton. In the lowest classes twelve will be long enough. The pupils should be warned not to sew with dirty cotton ; but, if they need to be constantly changing it, the reason should be found.

There is, perhaps, no other subject which shows so clearly as needlework does the effect of early training, and none which offers better opportunities for influencing character. If we let these pass, and give all our thoughts to getting good stitches, part of the purpose of our needlework teaching will be unfulfilled. Before giving a lesson to junior pupils we should make a point of seeing that they have made proper preparation for it—that their hands are clean, especially the nails ; that their frocks are clean and, if dark coloured, covered by a sewing apron or sewing bag; that their hair is tied back so that it cannot fall forward over their work ; and that they have brought their thimbles. In the case of senior girls, training should have done its work in these respects ; but we must of course know, though a formal inspection should be unnecessary, if a girl has been neglectful in any one of these particulars. Our teaching should have further influence on character, through an aim to check extravagance, encourage economy, and develop forethought.

Every possible effort should be made to render the class teaching attractive and to awaken in the girls an enthusiasm for that side of homework which is shown in the skill of an expert needlewoman. The interest of girls in dress may be used for this purpose, for the

connection between the art of dress and the art of needlework is very close, and the two should develop together. As constant work on specimens and garments that take a long time to finish may damp the ardour of young needlewomen, we should encourage our pupils to apply what they learn in school to the making of their dolls' clothes at home. From time to time we might appoint an afternoon for these to be brought to school to be examined and criticised. Enthusiasm can also be aroused by the dressing in class of a doll or dolls to be sent to the children's ward of some local hospital. The plan has the further advantage of cultivating an attitude of thoughtful kindness towards less favoured children. Where the school itself draws its pupils from a very poor neighbourhood, the destination of the dolls dressed in class might be the school Christmas tree. Permission to work on one of the garments during a certain period of the afternoon's lesson might be given as a reward for specially good work. By this plan the girls may finish a number of garments that should be similar to their inspection ones in every point but size, and they will benefit by the extra practice and experience.

It is possible for teachers of upper standard classes to influence their pupils in matters of dress and taste during the time given to needlework—to discourage the wearing of " fine " materials of poor quality, and to encourage a style of dress which is simple, neat and fresh, and (a point often overlooked) suited to the wearer's occupation. The cutting-out lessons will yield opportunity for awakening an appreciation of the natural lines of the human figure, which appreciation, if more generally felt, would go far to correct errors of tight clothing. While ready-cut paper patterns for home use are easily procurable nowadays, school training is needed to show the reason for each straight line and curve, and to teach the various devices for fitting garments to the figure in such a way that movement may be free. The instruction should also enable the pupils to adapt a bought pattern to an individual figure. Lessons on colours and materials are also desirable. While art needlework is not provided for in the code, it might be made, in the case of certain scholars who have fulfilled the code requirements, a further means of cultivating the sense of beauty in form and colour. Their design work in drawing would thus be put to practical use.

When our pupils are able to work for part of an afternoon with little verbal instruction, the reading aloud of a good story or poem

by a girl who can read distinctly, pleasantly and fluently, might be permitted.

FOR FURTHER STUDY

Manual Training for South African Schools. F. T. Morrison. (3 Books, 1s. each. Longmans.)

Hand and Eye Training. Stanley and Blackburn. (3s. 6d. Longmans.)

Manual Training and Education. C. M. Woodward. (3s. 6d. Scribner & Welford.)

Manual Training for the Standards. C. S. Young. (6s. 6d. Bean and Sons, Leeds.)

Drawing and Cardboard Modelling. W. A. Milton. (7s. 6d. Juta.)

Clay Modelling, Elementary and Advanced. Alex. Gordon. 1s. 6d. net. Charles & Dible.)

A Manual of Stichwork. A. H. Goldfinch. (1s. 6d. Longmans.)

*Needlework and Cutting Out.** Agnes Walker. (5s. Blackie.)

A Textbook of Needlework and Cutting Out. Elizabeth Rosevear. (4s. 6d. Macmillan.)

The Service of the Hand in the School. W. A. Bone. (3s net. Longmans.)

Educational Needlecraft. M. Swanson and A. Macbeth. (4s. 6d. Longmans.)

*Complete Course of Needlework, Knitting and Cutting Out.** T. M. James. (6s. Longmans.)

The Cutting Out of Garments. J. E. Wilkins. (2s. 6d. Charles and Dible.)

The A.B.C. of Cutting and Making Garments. B. L. Blackmore. (2s. 6d. net. Longmans.)

Practical Dress Cutting. A. J. Reeve. (2s. Longmans.)

Pamphlets, etc. published by the Cape Department of Education.

"Regulations" for Primary Schools, Transvaal Education Department; Section on Needlework. (Swan Sonnenschein.)

The School. J. J. Findlay. Home University Library. (1s. Williams and Norgate.)

The Infant School. J. Gunn. (3s. 6d. Nelson.)

The New Movement in Education. H. Thiselton Mark. (1s. Fisher Unwin.)

*The Primary Curriculum.** F. H. Hayward. Chapter XII, by H. W. Smith, and Chapter III, by B. L. Blackmore. (5s. Ralph, Holland & Co.)

*Principles and Methods of Teaching.** J. Welton. Chapter XV, by E. L. Melville. (4s. 6d. Oxford Tutorial Press.)

Suggestions for the Consideration of Teachers. English Board of Education.

CHAPTER XVI

PHYSICAL EDUCATION

"A sound mind in a sound body is a short but full description of a happy state in this world. He that has these two has little more to wish for, and he that wants either of them will be but little the better for anything else."

—LOCKE.

THERE is no need at the present day to insist upon the importance of giving a certain amount of definite physical training to school children. What is more necessary is, that we should remember that such exercises are only one aspect of physical education. Favourable conditions of ventilation, of lighting, of classroom and schoolroom accommodation, must also be regarded as essential. Moreover, we must recognise that a strict supervision of posture during reading and writing, as well as an arrangement of lessons that provides change from headwork to handwork and from work to recreation, has an important effect on bodily health.

For the moment the training of mind and character is not our chief concern; but we must not lose sight of the closeness of the relation between body, mind and character. When it is more generally realised to what an extent mind and conduct are reacted upon by the body, it will be seen how powerful a weapon physical health is in the battle of life.

From this it follows, as a matter of course, that every teacher should receive such training in the best methods of physical culture as will enable him to know the value, from a health point of view, of every exercise he gives his pupils. The value of drill as an aid to discipline is without doubt great, and well-performed physical exercises make an attractive display; but their effects on bodily health are more important, and these should be kept in view when schemes are planned. No exercise is valuable in this sense unless it has some definite beneficial effect on the body, and

no teacher is competent as an instructor in physical drill who is unable to judge of such effect.

With regard to the effect of school routine on physical health, a word or two may be necessary. The body cannot carry out properly certain of its functions if it is not active; and any school system which requires children to restrain their bodily activities through the whole of a session, and allows them to assume cramped positions over their work, is warring against that health which it tries to promote by its organised physical exercises.

There is another drawback to be reckoned with, and one which it is less in our power to control. This is the evil effect of bad home conditions with regard to air, cleanliness, food and rest. Even here, however, as we have seen in an earlier chapter, we must do what we can by action and influence to remove or improve conditions which interfere with bodily well-being.

At this point it may be well to reconsider what are the conditions of health. The first is a sufficient and constantly renewed supply of fresh air to act, together with personal cleanliness, in purifying the system from the effects of its waste products; the second is a sufficiency of wholesome food to repair waste and build up the body; the third, a sufficiency of rest and sleep to repair mental waste and restore the powers of the mind. These may be looked on as the underlying conditions of physical health and growth; but there is something further needed before they can have their due effect in producing it—namely, exercise. For "development is produced by exercise. . . . If we wish to develop the hand we must exercise the hand. If we wish to develop the body we must exercise the body. If we wish to develop the mind we must exercise the mind. If we wish to develop the whole human being we must exercise the whole human being." (Bowen's *Froebel*, Great Educator Series, p. 48.)

In a country like South Africa, where fresh air is easily obtainable even in our largest towns, the first necessity at all events, is within reach of all. Yet we know that in many small and over-crowded homes the children suffer from a want of it at night, when, of all times, it is most necessary. A sensitiveness to cold, which unhealthy habits of living have caused, or perhaps the desire for greater safety, results in the fast-closing of all windows at nightfall; and the children in consequence sleep too heavily, and rise unrefreshed. Something may be done in this matter by

so accustoming the children to deep breathing of fresh air in well-ventilated classrooms—which happily are the rule rather than the exception nowadays—that their need of it becomes so insistent as to bring about a change in home conditions. The desire for cleanliness is also largely a result of habit. If personal cleanliness is insisted on in school—and, thanks to the modern provision of lavatories, it can be insisted on—the children will soon come to recognise the greater comfort arising from it, and will strive after it even in adverse circumstances at home. Direct instructions, given in occasional hygiene lessons, on these two points will also be necessary.

With regard to food, we know, of course, that mere sufficiency is not enough. It must be wholesome and varied as regards the food elements it contains, in order that the different tissues of the body may receive nourishment. To yield full benefit to body and brain, it must be well cooked and well served. We know that in many homes ignorance and poverty render this impossible. Something may here be done by teaching domestic science to girls from homes of this class. But such teaching, if it is to have any effect, must take account of the conditions under which the girls will have to manage homes in the future. The provision for school classes of all manner of cooking apparatus and expensive foodstuffs, which the pupils will be unable to afford, will be likely to act as a discouragement when they find themselves face to face with the problem of providing meals for a family on a strictly limited income. With suitable and general instruction in home science in this generation, we may hope for the partial removal in the next of the physical harm resulting from unsuitable and ill-cooked food. In the meantime, since it is as hopeless to attempt to work unnourished bodies and minds as to drive an engine without fuel, some provision may have to be made by school, church, or town authorities for the proper feeding of poor children.

The necessity of rest in sleep must also be taught in hygiene lessons; and the fact should be emphasized that not only the amount of sleep, but the nature of it and the time at which it is obtained are important. Young children should have not less than eight hours' sleep, and of this amount at least three hours should be obtained before midnight. To be refreshing, sleep must be light and unlaboured; and this it cannot be unless the air of the bedroom is kept pure by the continuous passing of heated and impure air from inside through openings near the ceiling, and the

incoming of cool fresh air through openings near the floor. A window open a few inches at top and bottom, if there is a door or chimney opposite with a ventilator above it to draw the air through the room, will provide the necessary means of escape and renewal; and it should not be difficult to devise some means of fastening the sash to the frame so that safety from intrusion may be enjoyed with healthful conditions.

We come now to the question of proper exercise. Any form of exercise given under any conditions will not serve to promote health, but only that which is suited to the nature of the part being exercised, related to its strength at the child's stage of development and given at the right time under proper conditions.

It is absolutely essential for the planning and supervision of such exercise that we have some knowledge, gained from a simple textbook or reader, of the build of the body, and of its processes and mode of growth. More particularly we must know the broad truths concerning the growth of the mind in relation to the growth of the body. We must know that all action—the word is here used in its broadest sense—within the body is performed and controlled by means of the brain and nerves, and be able to conceive of the nerves of human beings as belonging to a series of systems. We may for our present needs distinguish actions as belonging to the *lowest*, *middle*, or *highest* nerve centres. The nerves of the lowest centres which control such involuntary and automatic physical actions as breathing, the circulation of the blood, and the processes of digestion, start at birth into full activity, needing no control on the part of the mind. Those of the highest centres, on the contrary, which have to do with purely intellectual activity—*e.g.* thinking, resolving, discriminating—are relatively undeveloped and unorganised at birth, and only become organised gradually through conscious, *directed* effort. Besides the lowest and highest centres, there are the middle centres, less fully organised and active than the one, more fully than the other, and differing even among themselves in their degree of development, and in the time and rate at which they reach full and perfect activity. Among these, developing in the order in which they are mentioned, are the centres which bring the hand and eye into sympathetic action, and those which control the legs and feet in walking, and the lips and other speech organs in talking—broadly speaking, those which govern all the voluntary muscular movements. At a later stage these centres for muscular

action, which are in the brain, are brought into relation with each other, so that sensations in one centre may give rise to, or call up, those in another—*e.g.* the sight of an orange may suggest its taste; the creak of a waggon may raise a vision of the waggon and span trekking; the touch of an object may tell us its form, or the smell of a favourite dish in cooking may call up the taste. It is with the training of these middle centres that the mental education of early years, and physical education throughout its whole course, are principally concerned; for, while education can do little to aid the development of the lowest centres, it can do much to modify the action of the middle ones, and through them to react upon the highest of all. It is through such reaction that physical drill has its secondary, educative importance in securing "alertness, decision, concentration, and perfect control of mind over body."

With regard to the early training of these middle centres, the work done recently at the Montessori schools is particularly interesting and suggestive. In these we are told:

"Various items in the way of motor-training—buttoning and unbuttoning, tying and untying, hooking and unhooking, lacing, and so forth, are all a part of the lessons of the little ones. . . . They are lessons which the child works out for himself. He is allowed the pleasure and the triumph of finding out how to do things. To a certain extent imitation comes in, since he sees the other children doing these things. There is also a regular system of sense-training for which some of the materials used are the regular kindergarten gifts. In other cases they are . . . every-day objects which are adapted to the purpose. . . . In the plays and lessons constant use is made of the principle of establishing the associations between visual, muscular, tactile, and auditory sensations. For example in the sight-training the children have a set of cubes graded from large to small. They are given these to pile up in the graduated order. They are taught to run their fingers along the outlines, and thus connect the muscular, tactile, and visual sensations. Then they have blindfold games, in which the blocks are piled wholly by the sense of touch, the children finding a great delight in discovering, when the bandage is taken from their eyes, that they have 'seen with their fingers.' For training the colour sense a series of tablets, or silk-winders, wound with either silk or wool in eight colours, is used. Each colour is represented in eight

different intensities, and various games are played with these tablets until the children grow expert in matching and grading them. There are also some exercises in discrimination of sounds, tastes, and smells, though the two last are of less importance educationally. All this sense-training finds an immediate application in practical life."

As a result of these muscular and sense exercises :

" In her first school Dr. Montessori found that the children from three-and-a-half to four-and-a-half years old were already fairly expert in the preliminary training. They could dress and undress themselves. That is, they had learned to apply practically their various exercises in buttoning, unbuttoning, lacing, tying, &c. ; they had learned to be neat in person ; they had had considerable sense-training, and they were eager for something more : in fact they clamoured to be taught to read and write, and the experiment was tried with surprising results." (Theodate L. Smith in *The Montèssori System.*)

For the lowest centres, then, we can do nothing beyond correcting defects of nature and environment ; and giving them the material and means for free growth by provision of healthy conditions in regard to air, food, clothing and rest. But by such well-chosen and properly graded exercises as are described above much can be done in the later stages of infant life to develop the middle centres which have to bring the various voluntary muscles and organs into sympathetic action. Being only partly organised at birth, these centres require training to fit them to fulfil their functions, to adapt them to the ends—seeing, handling, walking, hearing, talking, drawing, moulding, shaping, folding, fitting, carving—for which they are the means. Such preparation for formal education must be a child's first schooling. To set him, on his entry into school, to struggle with formal reading, writing and arithmetic, would be to neglect the middle nerve centres at a time when they are naturally most active, and, therefore, most ready for direction ; and, at the same time, to make demands on the highest centres for activities which they are not ripe to perform. More than this, if Nature's time for the development of the middle centres is passed by without provision being made for their proper exercise, no amount of it at a later age will have equally good results.

At this point we may return to the subject of an ordered scheme

of physical exercises, which we had to leave in order to consider briefly the necessary knowledge of physiological facts, without which we are unfitted either to plan or to supervise such exercises.

The aim of such an ordered scheme is twofold. There is on one side the aim to secure, maintain, and, if possible, improve, the bodily health and build of the pupils, and on the other the aim to develop, as a result, alertness of movement and of mind—decision in action and concentration of effort, leading to perfect mental control of bodily activity. While these aims may be distinguished as physical and educational, it is impossible entirely to separate the exercises which have the one from those which have the other aim in view. As a general rule those directed to a physical end are simple, and are taken early, while those which have educative purpose combine several movements, and have a later place. Each fulfilment of the physical aim has, however, its educational value as well. To go back to what has just been written, the exercises with physical aim develop the lowest and middle centres, those with educational purpose the highest, but all are interdependent.

Following the classification of the English Board of Education's syllabus, we may divide exercises with physical aim into nutritive, corrective, and controlling. The nutritive exercises are those which, acting upon breathing and circulation, the activities of the lowest nerve centres, stimulate through them the digestive processes, and so improve the body's chances of nourishment. Of these nutritive exercises there are three subdivisions. One includes large movements, particularly of the lower limbs, with immediate effect shown in breathlessness and an increase of the heat of the body. Running, jumping, and skipping are natural forms of these movements; and, where children indulging in them have a sufficient supply of fresh air and nourishing food, they result in a stimulation of the building-up processes which makes for a strong and healthy physique. The unnatural restraining of activity, in some degree inseparable from the conditions of school life, renders the provision of such exercise necessary in the intervals of lessons; and it is better if it can be taken in the form of play. Running games, with skipping for girls and jumping for boys, should particularly be encouraged. Where these are out of the question, marching—in slow and quick time and at the double—must take their place. Another division includes exercises, the main effect of which is on the muscles engaged in respiration. Their aim is to make lung

action slower and deeper. Breathing exercises and those movements of the arms which tend to increase the space enclosed by the chest walls are types of them. These bring us to what is unquestionably the most vitally important of all forms of physical exercise, while it is perhaps the most neglected of them all in school practice—lung culture. In the report of the Royal Commission on Physical Training (Scotland) it was stated by an eminent physician that "if we can introduce exercises that will develop the lungs we shall not only make [the child] fit for everything it attempts in after life, but we shall probably do a great deal to abolish what men are so anxious to abolish now, the curse of consumption." There is little doubt that efficient breathing would do much to preserve the life and health of those who suffer from lung diseases. It is a known fact that singers live longer and are healthier as a class on account of the constant exercise of their lungs through the deep breathing that singing demands; and vocal exercises in school, rightly performed, play an important part in the development of physical health. Full deep breathing, with proper chest expansion, results in strong healthy lungs. Like all habits, this vitally important one is most easily and efficiently acquired in youth. Better respiration also means better digestion and nourishment, and a stimulation of all the organs concerned in the discharge of impurities from the system, as is seen in the clearing of the skin which follows upon it. It promotes, too, a healthy warmth of the body, which makes light clothing sufficient even in cold weather; and finally, it is one of the best means of straightening the spine and preventing chest deformities.

The first condition of good breathing is a proper carriage of the body. The chest should be held well forward by a slight inward arch of the back, while the lower trunk should be supported in an erect position by the muscles provided for the purpose. Such a position will bring the front of the chest and the tip of the toes into a straight line with one another. Constantly maintained, it gives ease, grace, and strength to the body, and should be taught to all children. They should be encouraged to get it before a glass, and to practise it until it is maintained always—naturally and unconsciously.

In view of the vital importance of breathing exercises a few are given below. They are suitable for use before or after the customary physical exercises, or as preliminary to speaking, reading, or singing lessons.

A. Simple Breathing Exercises

Note.—Exercises should be regulated by the teacher—either by hand movements or by numbers. Breathing-in must at all times be through the nose, the channel provided for the purpose. In the absence of thorough cleanliness, and through want of attention to colds and other ailments causing partial stoppage of the nasal passages, many children learn in infancy to breathe through the mouth. Of these quite a large proportion, through continual neglect, develop actual obstructions to correct breathing. Any difficulty experienced by the pupils in this matter should be the subject of careful inquiry. If there is permanent stoppage of the nasal passages, the child should be examined by a doctor in order that the matter may be put right. The presence of adenoids may often be detected through the habit it leads to of keeping the mouth open—the dropped lower jaw giving a vacant, unintelligent expression to the face. They should receive immediate attention. When nasal breathing becomes the rule the power of attention on the part of certain children will be found to improve, and their general intelligence to increase. It is thus of the greatest importance educationally, as well as from the health standpoint.

In every case the exercise should be executed in a perfect manner by the instructor before the learners are allowed to attempt it. In all physical exercises a good example is of great importance.

Exercise 1. Slow Breathing-in.

Breathe in slowly in such a manner as to bring all the muscles of the chest into play. The first responsive movement is a forward one of the body below the waist. This is then converted into an outward movement of the ribs, and finally into an upward and forward one of the breast-bone—the chest capacity being thus increased in three directions. Repeat ten or fifteen times, resting between each.

Exercise 2. Slow Breathing-in—Quick Breathing-out.

Breathe in as fully and deeply as possible; then with mouth wide open let the air escape immediately, but without force. Both movements must be easily and regularly performed with a short rest after each respiration. After three double movements take at least three ordinary breaths. Repeat twelve times.

Exercise 3. Panting Breathing-out.

Breathe in as before, and then instead of breathing out steadily

do so in puffs. The lengths of the puffs and the intervals between them may be varied, but the class should be kept together, their action being regulated by the teacher. Repeat six times.

Exercise 4. Singing Breathing-out.

Breathe in as before; sing quietly and evenly doh, ray, me, ray, te, and then breathe out remaining breath quickly.

B. Breathing Exercises with Movements

Exercise 1. Stand at attention. Breathe in as the trunk is slowly stretched back; breathe out as it is bent forward.

Exercise 2. Stand at attention. Set the shoulders back slowly, strenuously breathing in meanwhile; breathe out as they are brought forward. This strengthens the muscles, holding the shoulders in position, and so is an aid to correct carriage.

Exercise 3. Stand with arms stretched out sideways, level with shoulders, palms up. Raise them slowly until the hands meet overhead, breathing in slowly the while. Breathe out as the arms are returned to the horizontal position. Rest. Repeat.

Exercise 4. Stand with arms stretched out in front level with the shoulders, palms facing. Force the arms outwards and backwards as far as possible, keeping them level and breathing in the while. Breathe out as the arms are brought back to starting position. This is a capital exercise for strengthening the muscles of the back.

These exercises well executed each day, about halfway through morning school, independently of the usual drill lessons, will more than repay the time spent on them. Performed under proper conditions—in the playground or in a well-ventilated classroom, with doors and windows as widely open as the weather will allow—they will be found not only easy but exhilarating. As imitative movements they should be used in the lowest sub-standard class, for the formation of a habit of correct breathing is among the most important and beneficial of infant-school exercises.

The *third* subdivision of nutritive exercises includes those which involve the lifting of weights, or pulling against resistance, thus acting powerfully on breathing and circulation. They are, however, quite unsuitable for young children, as they demand sustained effort. Even for older pupils they should only be used in the form of exercises with light dumb-bells.

The *corrective* exercises have for their chief aim the correction, as far as possible, of certain bodily defects which, where care is not taken, are made worse by the conditions of school life. Among these exercises are *head-and-trunk backward-bending*—to correct the effect of the cramped position frequently assumed over desk-work; and *heel-raising*—to correct flat-footedness. With regard to the former, however, it is quite clear that little can be done in the short periods of physical exercise if between them the children are allowed to reassume injurious postures. As was said at the beginning of this chapter, attention to position during ordinary lessons must be looked upon as an essential part of our scheme of physical education.

There remain the *control* exercises, which are on the border line between the exercises with physical and those with educational aim. These exercises act chiefly on the nervous system, and are directed to acquiring control over muscular movement by the nerve centres. The balance exercises belong to this class. Among natural forms dancing, cycling, skating, tennis, cricket, football, and the boys' pastime of walking on stilts may be instanced. When first attempted, all these exercises—both the natural and artificial balance movements—require concentration of mind. The effort is at first laborious, and mastery is only gained at the cost of considerable fatigue. But the fatigue becomes less with continued repetitions, and at last the exercises seem to be almost self-performed. Their value as educative exercises ceases at this point, but their physical effect continues, and is even increased. The same exercise, therefore, may be taken for two different reasons—in its early stages for its educative value, and, after mastery, for its physical effect. The times at which, and the way in which, the exercises are taken must be decided with reference to this difference of purpose.

During each week there should be for each class two or three periods, in which new exercises are taught and treated, as regards insistence or concentration of attention and effort, like other school lessons. The length of these lessons must be suited to the age of the children, and such an arrangement of the exercise be made as will demand a due amount of effort without causing strain, while greater accuracy and precision must be exacted after repeated practice, and from older children. That the educational effect may be maintained, new movements or new combinations must be introduced—though gradually—up to the end of the course. A suitable succession of exercises should be arranged on the guiding

principle that rapid and vigorous movements should be taken for a short time only, and be followed by slow and steady ones for reducing temperature and breathing.

The Board of Education's Syllabus provides—after preliminary class arrangements and elementary starting positions :

Arm Flexions and Extensions.	Head and Trunk Exercises.
Balance Exercises.	Forward and Backward Bending.
Shoulder Exercises.	Turning and Sideways Bending.
Lunge Exercises (*unsuitable for young children*).	Marching ; Jumping.
	Deep Breathing Exercises.

In each formal lesson an exercise, or exercises, from each main group should be taken.

In addition to the formal lessons, daily exercise through simple, rapid movements previously mastered, should be given as relief from hard mental exertion, or a prolonged keeping of one position. The effects of such exercises are not lasting, and therefore to be of benefit they must be repeated three or four times in a session. These, for the saving of time, may be taken in the desks, though this will render a good many exercises unsuitable. They will be found to have a recreative effect on children who have been sitting closely to a task for a considerable time. The breathing exercises suggested are among the best for this purpose.

The exercises in the English Board of Education's Syllabus are intended for children from seven to twelve years. They underrate rather than overrate the physical capacity and endurance of normal children of this age ; but in cases of insufficient feeding or constitutional weakness individual children should be excused from the practice of them. Breathlessness may be a sign that an exercise is beyond a child's physical capacity ; and inquiry should follow any noticeable sign of it. It may point to unsuitability of dress, or may prove a case for exemption, or even for medical advice.

Suitable physical exercises for infants have been indicated in the account of the Montessori schools' practice. To these must be added breathing exercises, and some of the simpler exercises of the Syllabus may be included. Marching, singing with action, and frequent plays and games form, of course, part of every infant-school scheme. In the formal exercises accuracy and precision must not be looked for at first. These can only come when the middle centres have had some degree of training.

In the Montessori schools, exercises both for development and

for grace of movement are given, the system providing for the normal development of natural physical movements—walking, breathing—and aiming at the correction of any apparent faults. The exercises are adapted to the strength and build of the body at this period, and special regard is paid to the relative weakness of the legs. Much is accomplished by means of plays and games. The pendulum play—in which the children sit on stools around a rubber ball hung by a cord and, leaning forward in turn, strike it with the hand—exercises with good effect the muscles of the back while avoiding all strain on the legs. This play might easily be adopted in our own infant rooms.

Music should not be played while exercises are being learnt by older children; but may be used after they have been mastered. During the learning process it takes away from the educative value, for the rhythm acts as a stimulus and lessens the need for that effort of will that is required for gaining control of the nerve-centres. For younger children it may be used more frequently, as it has the effect—valuable at this stage—of lessening fatigue; but even in their case it should sometimes be given up in order that more real effort may go to the mastering of the exercises.

While the physical exercises of the syllabus are such as can be performed in ordinary easy dress, the adoption by girls of a light loose tunic over knickers gives greater freedom of movement for drill, and should be encouraged. Drill shoes—light, heelless and rubber-soled—are almost a necessity.

A few directions for guidance in the conduct of the lessons follow:

We must be able to conduct the exercises in all formal lessons without reference to a handbook; and before any exercise is practised by the class we should perform it ourselves as perfectly as possible, or choose, for the special smartness of his movements, a scholar to do so.

We must see that our directions are clear and concise, well-worded and correctly delivered.

After directions we must have all exercises performed, at first, to distinct words of command. Later, they may be regulated by numbers or hand-movements. The manner of command has such an effect on performance that it is of great importance. The words of command should be those given in the syllabus, and each command should be preceded by a caution. The command therefore consists

of two parts—one of warning, and one which is to be immediately followed by action. The cautionary words should be given slowly and distinctly while the command itself, which should as a rule be a single word, should follow a slight pause and be given sharply or with prolonged smoothness as the exercise demands, *e.g.* Eyes—*Right !* (sharply), Trunk backward—*ben-n-nd !* (slowly and smoothly).

We should give no directions and make no corrections while the class is in a strained position. Where these are necessary, the class must first be recalled to an easy posture.

Finally, we must remember—in the closing words of the introduction to the Syllabus—that " there is no part of school work in which the spirit and intention of the teacher are so clearly seen in the performance of the children, as in physical exercises."

For us, as for the children we teach, physical health is the only base on which sound mind-work can be built ; and for us, as for them, it can only result from proper conditions of life in regard to fresh air, food, cleanliness, exercise and rest. These conditions have already been considered and all that remains to be done is to emphasize one or two points which are sometimes disregarded.

To provide for the entry of fresh air into our living and sleeping rooms is not of itself sufficient ; we must also provide for its entry into our lungs. This we may do by means of the exercises in deep breathing described on an earlier page. We should continue them until deep breathing becomes a habit. When the action goes on of itself night and day—purifying the blood, cleansing the skin and stimulating the digestion—our bodies will be in a state to gain full nourishment from the food we take and to turn it to the best account in all forms of muscle and mind work.

Food is of equal importance, and we should know sufficient of its principles, and of the principles of cooking and serving it to save us from becoming the victims of those who do not. It is only possible to emphasize, here, the necessity for a sufficiency of green vegetables and fresh fruits, which should form a part of every day's food ; and the " liverish " effect of starchy and fatty foods eaten to excess.

It must be remembered, too, that the state of the body at the time of eating has almost as much to do with digestion as the food itself. We should make a practice of getting home from school

for a meal about half an hour before we expect to sit down to it, especially in the case of the heaviest meal in the day; and if fatigue from the morning's or afternoon's work is making itself felt we should spend this half hour resting. We should not do any mind work at this time—should not, for instance, attempt to get up one of the afternoon's lessons. We should not—even if we live or dine alone—let ourselves get into the habit of reading at meal times. We should drink between meals rather than during them. This applies particularly to cold water and to tea if meat is being eaten.

We must take sufficient exercise for the needs of the body—not, certainly, less than an hour daily; and should take it, whenever possible, in the open air. The time for artificial forms of exercise is over. Even earlier, they are only meant to supply the place of natural forms, to correct defects and faulty tendencies, and to relieve, during school hours, the strain of long continuance in one position. Walking is one of the very best forms of exercise, and those of us who walk for an hour daily will have no need to fear that our health will suffer for want of exercise. But some part of our exercise should be taken, if possible, in the form of games, for the social intercourse arising out of them gives a zest to exercise which makes it additionally beneficial. Above all, we must consider that we have failed in our duty if we have not taken a full hour in the day for some form of recreative exercise. Time must be saved for this, however busy we are.

Six to eight hours' daily rest in sleep should be our aim. Again, as in the case of food, the conditions under which it is taken are of the greatest importance. Refreshing sleep can only be had in a well-ventilated room. It is better not to go to bed straight from hard mind work; but to give the brain time to settle into quietness after a lengthened period of activity. Good physical health can only be maintained by taking due care to secure the right conditions. And we owe the taking of this care to the children we teach. Nervousness, irritability, gloom result from undermined health; and afflicted by any one of these we cannot go "blithely on our business all the day"—cannot meet our pupils with that cheerful pleasure in our duty of teaching them which they have a right to expect.

FOR FURTHER STUDY.

*Syllabus of Physical Exercises for Use in Public Elementary Schools.** (7*d*. Eyre & Spottiswoode.) English Board of Education.

The Children. Darroch. "Social Problems" Series. (1*s*. Jack.)

Old English Games and Physical Exercises. F. Kirk. (2*s*. Longmans.)

Youth, its Education, Regimen and Hygiene. Stanley Hall. (6*s*. 6*d*. Appleton.)

*Principles of Physical Education and Hygiene.** W. P. Welpton. (4*s*. 6*d*. University Tutorial Press.)

The Montessori Manual for Parents and Teachers. (2*s*. 6*d*. Heinemann.)

Scouting for Boys. Baden Powell. (1*s*. Pearson.)

The Girl Guide's Guide. Agnes Baden Powell. (1*s*. Nelson.)

*The Complete Text Book of Physical Exercises.** With music. Isabel Murray. (3*s*. 6*d*. G. Bell.)

CHAPTER XVII

CONTINUATION OF EDUCATION AFTER TRAINING

"Youth shows but half.—"—BROWNING.

"When men are rightly occupied their amusement grows out of their work as the colour petals out of a fruitful flower."—RUSKIN.

"There are three great questions which in life we have over and over again to answer: Is it right or wrong? Is it true or false? Is it beautiful or ugly? Our education ought to help us to answer these questions."—AVEBURY.

"The morning drum-call on my eager ear
Thrills unforgotten yet; the morning dew
Lies yet undried along my field of noon.
. . . . . .
But now I pause at whiles in what I do,
And count the bell, and tremble lest I hear
(My work untrimmed) the sunset gun too soon."

R. L. STEVENSON.

OUR consideration of the work of the school and the interests of the child ends with the last chapter, but the personality and culture of the teacher are so closely bound up with both, that these now call for thought.

The training which it is possible for student-teachers to undergo during the three years in which they study and practise at college or centre, can do no more than start them on the road which the educator has to travel. When they leave college behind, this road stretches in front of them—climbing over many a hill of difficulty, going down into many a valley of depression; a lonely road in places, but offering companionship and comradeship from point to point; refreshed, too, by green shade, brightened by wayside flowers, made musical by the noise of running water; having blue mountain ridges and shining, purple peaks on its far horizon, keeping sometimes within sound of the sea, and leading on and on into the City of Happy Childhood.

Let us turn from the difficulties, the depression and the loneliness. What is the companionship offered us on our road of life and work? It is the spiritual friendship of great educators who have passed along the road before us, and it is offered to us in books—records of their lives left by themselves or made by other men and women. We should read both biographies and autobiographies, for as Quick, in his *Essays on Educational Reformers*, reminds us:

"Some of these men have no great talent for speech or writing and they try to express the truths they see, not so much by books as by action. . . . But sometimes the man of genius has a great power over language, and then he finds for the truths he has seen, fitting expression, which becomes almost as lasting as the truths they tell. . . . If the historian of education is asked 'What did Montaigne do?' he will answer, 'Nothing.' 'What did Froebel say?' 'He said a great deal, but very few people can read him and still fewer understand him.' Both, however, are and must remain forces in education. Montaigne has given to some truths imperishable form in his *Essays* and Froebel's ideas come home to all the world in the Kindergarten."

We should learn to know some of these educators, then, through their words and some through their works made known by the words of others.

Probably the two men whose companionship will be most helpful to us in general class-teaching are Froebel and Herbart, two German teachers who lived, taught and wrote in the first half of the nineteenth century. Both, as it happens, belong to the former of the two classes distinguished above, being men of genius but without the gift of simple, lucid expression to make their ideas clear to the ordinary reader. As Froebel was concerned chiefly with the teaching of infants, it will be well to pursue his acquaintance first. What is written of him in *The Infant School* may serve to introduce us to him. We need, however, to know him better than we can learn to do through what is written there, and must turn to some more detailed "Life" of him. After this, it is possible that our wish to learn all that he can teach us will lead some of us to try and read his *Education of Man* and his autobiography.

Of Herbart's educational theories and practice a little has been said in Chapter III, but this is a bare introduction. The writers of *The Infant School* and *The Art of Teaching* may help to make him

better known and to give the desire for still closer acquaintance. This we may gain from the *Herbartian Psychology* of Professor Adams, from *The Student's Herbart* of Mr. F. H. Hayward and from the *Introduction to Herbartian Principles of Teaching* of Miss C. I. Dodd.

But other companionship is offered. In Pestalozzi (1746–1827), whom both Froebel and Herbart visited and of whom both learnt, we shall learn to know a teacher who experienced all the difficulties encountered by those of us whose work lies, as his did, among children of the lowest peasant class. We may be sure then of his sympathy and help. Long before our day he looked at his pupils and

"... asked himself what was needed to raise them. Knowledge would not do it. 'The thing was not that they should know what they did not know, but that they should behave as they did not behave'; and the road to right action lay through right feeling. If they could be made conscious that they were loved and cared for, their hearts would open and give back love and respect in return. More than this, they must be taught not only to respect their elders but also themselves." (Quick: *Essays on Educational Reformers*.)

With Pestalozzi, too, we can come into closer touch through his own writings. His *Leonard and Gertrude* is a tale written by him in response to the urging of friends, to describe the life of the peasantry he knew and loved; to show why they were so wretched, and how their wretchedness might be relieved. This book, of which there are four parts combined in an English translation by Miss Eva Channing, will be found not only helpful but amusing. "All good teachers," we are told, "should read it with care, and if they thus read it and catch anything of the spirit of Pestalozzi, both they and their pupils will have reason to rejoice." If we despair of making any impression on our pupils, Pestalozzi will tell us that:

"The first development of the child's powers should come through his participation in the work of his home; for this work is what his parents understand best, what most absorbs their attention, and what they can best teach. But even if this were not so, work undertaken to supply real needs would be just as truly the surest foundation of a good education. *To engage the attention of the*

child, to exercise his judgment, to raise his heart to noble sentiments, these I think the chief ends of education."

and that :

"The entire absence of school learning was what troubled me least, for I trusted in the natural powers that God bestows on even the poorest and most neglected children. I had observed for a long time that behind their coarseness, shyness, and apparent incapacity, are hidden the finest faculties, the most precious powers ; and now, even amongst these poor children by whom I was surrounded at Stang, marked natural abilities soon began to show themselves. I knew how useful the common needs of life are in teaching men the relations of things, in bringing out their natural intelligence, in forming their judgment, and in arousing faculties which, buried, as it were, beneath the coarser elements of their nature, cannot become active and useful till they are set free. It was my object then to set free these faculties, and bring them to bear on the pure and simple circumstances of domestic life, for I was convinced this was all that was wanting, and these faculties would show themselves capable of raising the hearts and minds of my pupils to all that I could desire."

Of French educational writers there are three to whom we should give attention—Rabelais, Montaigne and Rousseau. The first two (born in 1483 and 1533 respectively) should be studied in the light of the Renaissance, and the first essay in Quick, which treats of it, will be found useful for this purpose. The short essay (V) on Rabelais may serve to make us acquainted with the educational ideas—chief among them the idea of learning about things from the things themselves, and of giving attention to physical education—put forward in the scheme for the schooling of Gargantua, though extracts from his writings [1] would usefully supplement this. The teaching of Montaigne—who would have us turn from mere bookishness in education, put wisdom before learning, stop stuffing the memory with words and discover and use the riches of our own minds—is also briefly summarised in Quick's essay VI, while there is a complete translation of Montaigne's own *Essays* into English.[2] Rousseau takes us forward again near to the time of the

[1] As, for instance, those given in *The Teacher's Rabelais*. Geraldine Hodgson. (1*s*. Blackie.)

[2] In 3 vols. in *The World's Classics*. (3*s*. Oxford Press.)

Swiss and German reformers. He died in 1778, eleven years before the outbreak of the French Revolution, which his writings helped to bring about, and five years before the birth of Froebel. His general attitude towards the educational practice of his day is written of in *The Infant School*, and at considerably more length by Quick, who lays emphasis on the fact that Rousseau was "the first to base education entirely on a study of the child to be educated." But we should read parts, at least, of his *Émile* for ourselves. A man who boldly declares "Everything is good as it leaves the hands of the Creator: everything degenerates in the hands of man," is sure to prove a stimulating companion.

There are two sixteenth-century English schoolmasters and one teacher and writer of the seventeenth century who should not be neglected—Ascham and Mulcaster, and Locke. These are dealt with in *Educational Theories in England* (H. Thiselton Mark), and Quick has essays on all of them. Ascham is interesting as the Latin tutor of Queen Elizabeth and Lady Jane Grey; as one of the first teachers to revolt against the flogging practices of his time, and by reason of his attempted reform of language teaching. The quotation at the head of Chapter VIII is from his great work *The Scholemaster*, published in 1570. Mulcaster is remarkable as having advanced three hundred years ago many of the arguments used by educational reformers of the present day. As Quick says:

"The latest advances in pedagogy have established (1) that the end and aim of education is to develop mind and body; (2) that all teaching processes should be carefully adapted to the mental constitution of the learner; (3) that the first stage in learning is of immense importance and requires a very high degree of skill in the teacher; (4) that the brain of children, especially of clever children, should not be subjected to pressure; (5) that childhood should not be spent in learning foreign languages, but that its language should be the mother tongue, and its exercises should include handiwork, especially drawing; (6) that girls' education should be cared for no less than boys'; (7) that the only hope of improving our schools lies in providing training for our teachers. These are all regarded as planks in the platform of "the new education," and these were all advocated by Mulcaster."

Unfortunately, Mulcaster's own style in writing is fantastic and

affected to a degree that proves irritating to most readers. His *Positions* [1]—the first word of a long title—is his great work.

Locke, who was a private tutor, is perhaps of less interest to class teachers; but there is much of value for us in his *Thoughts Concerning Education*, the reading of which should follow a study of Quick's essay on him. As a physician he gave an important place to physical education:

"His experience had shown him that the health of children was often spoiled by too much pampering and tenderness. It is his opinion that physical strength consists chiefly in the ability to endure hardships. He speaks in praise of swimming and of being as much as possible in the open air and as little as possible by the fireside, "even in winter." The clothing should be loose and free, the diet plain and simple, and there should be no stint of sleep in early childhood." (*Educational Theories in England.*)

Among later English writers on education we should turn sometimes to Herbert Spencer, who advocated the acquiring of scientific or natural knowledge, as opposed to mere book-learning, and would have schemes of education determined by the answer to the question: What knowledge is of most worth? He has been misunderstood in some quarters and misjudged in others; but his voice has been influential in giving a more practical turn to education and urgent as to the teacher's need of creating "a pleasurable excitement" in his pupils.

Arnold of Rugby and Thring of Uppingham, two great English schoolmasters of the last century, looked on character-forming as the first of their duties. Their companionship will be helpful to us who are engaged in the same work.

But there are great educators who have not been concerned with either the theory or the practice of education in schools. The great poets and prose writers and scientists are educators even though they never wrote or uttered a word about education. Their companionship is offered too, and we should avail ourselves of it as often as we can. Their subjects are life and character, and these must be more to us than lessons are.

It is an innumerable company, and when we first find ourselves

[1] Positions, wherein those Primitive Circumstances be examined which are ecessary for the Training up of Children either for Skill in their Book or Iealth in their Body.

in it we may hesitate, not knowing what companionship to choose. But if we remember where our road leads the choice becomes easy, and we turn first of all to the child-lovers—the brothers Grimm, Hans Andersen, Charles Lamb, Charles Kingsley, Lewis Carroll, Robert Louis Stevenson, Andrew Lang, Kenneth Grahame, Mrs. Ewing, L. Allen Harker and Edith Nesbit ; to the creator of Peter Pan and the writer of the *Just-So Stories* and *The Jungle Books*. We are not likely to feel the need of further introductions, for each writer will make known to us others whom he himself loves.

Of two—Ruskin, and Robert Louis Stevenson, named among the child-lovers—we should make friends early, for some of their words are addressed to youth especially. In *Sesame and Lilies* are three lectures : *Of King's Treasuries, Of Queen's Gardens*, and *The Mystery of Life and its Arts*. The first is addressed particularly to young men, and Ruskin tells us in his preface, that it :

" —tries to say that, life being very short, and the quiet hours of it few, we ought to waste none of them in reading valueless books ; and that valuable books should, in a civilised country, be within the reach of every one, printed in excellent form, for a just price ; but not in any vile, vulgar, or, by reason of smallness of type, physically injurious form, at a vile price. . . . As no person in decent circumstances would put on his table confessedly bad wine, or bad meat, without being ashamed, so he should not have on his shelves ill-printed or loosely and wretchedly-stitched books. . . . And I should urge upon every young man, as the beginning of his due and wise provision for his household, to obtain as soon as he can, by the severest economy, a restricted, serviceable, and steadily—however slowly—increasing series of books for use through life ; making his little library, of all the furniture in his room, the most studied and decorative piece ; every volume having its assigned place, like a little statue in its niche, and one of the earliest and strictest lessons to the children of the house being how to turn the pages of their own literary possessions lightly and deliberately, with no chance of tearing or dogs' ears."

The two following lectures, he says, were :

" — written in the hope of awakening the youth of England (for he was an Englishman writing in England), so far as my poor words might have any power with them, to take some thought of

the purposes of the life into which they are entering and the nature of the world they have to conquer."

So we see how closely they concern young men and girls—which to Ruskin means that they may, if they will, be kings and queens—whose work is so intimately bound up with " the mystery of life and its arts."

The book in which Robert Louis Stevenson addresses himself to youth declares in its title, *Virginibus Puerisque*, that it is written *for girls and boys*.

But with whatever definite intention books may have been written for us, it cannot of itself make them ours. Our reading of them must accomplish that. We must not be content to read them once, or ten, or fifty times, and then to put them away on our shelves and forget them; but, as we read them through the first time, should mark the passages that strike us, and then read *in* them constantly—read this page because we liked it; that one because we felt that we understood it so well; another, because we didn't understand it at all, but know that, being written for us, it has some meaning which it may be dangerous for us to lose; another still, because, while understanding, we disagreed with it. It may be that we are wrong. It will be well to read it again after having thought the matter over. Ruskin states very definitely why he wrote *Sesame and Lilies*. What was the purpose of Robert Louis Stevenson in writing *Virginibus Puerisque?* He wrote, one feels, for girls and boys in order to help them. Having himself passed through the adolescent stage of life to which they have come, he knew its pleasures and its pitfalls, its difficulties and its delights, and he wished to help them to increase the one and avoid the other, to overcome the one and enjoy the other, and to use and benefit by all. Ruskin, on the other hand, wrote for the youth of his own nation first, but of other nations too, if such should read him, to show them how they might help the world. Yet there is, after all, but little difference between the two motives, for there is a law of benefits—of help, among the rest—which requires that they be passed on. If we have gained help in one place, we must give it in another, and so with the rest of benefits. Where Stevenson then writes gaily, but with serious purpose, his *Apology for Idlers*, or *On falling in love;* on *Crabbed Youth and Age*, or on *Truth of Intercourse*, though he may nowhere

hint it, he none the less means that the good we get from his experience, wit and truth shall be given again. His purpose is, therefore, the same as Ruskin's, who earnestly and, as he himself says, passionately, tells us what is wrong with the world, and urges us to take some thought and make some effort, so far as lies in us, to put it right.

But while we are making our way along the road in close companionship with these two writers, for there is no danger of our out-growing them, we should be widening our circle of companionship, and this chiefly among the poets. The greatest of each nation —Homer, Shakespeare, Dante, Virgil, Petrarch, Victor Hugo, Goethe, Vondel—we should seek in their chief works ; and should also get to know Spenser, Milton, Wordsworth, Keats, Shelley, Browning, Swinburne and Tennyson ; Horace through his Odes, and Heine through his Lyrics. Among the American poets we should make acquaintance with Longfellow and Lowell, and meet with the lesser English (or Dutch) poets, at least in collections and anthologies.

And what of comradeship on the road ? With all who are now making their way to the City of Happy Childhood we have some degree of comradeship, and these, too, form an innumerable company. They may teach in the same school with us or in other schools, in the same country or in other countries ; they may not teach at all. We may meet them daily or very frequently during our working days, or infrequently only, during holidays and at gatherings of teachers ; we may only hear or read, in the organ of our own teachers' association or in other educational journals, in newspapers or in letters, of the work they are doing ; but the sense of comradeship will be there and it will make us glad. This spiritual comradeship goes farther. In one of his poems (*The Palace* in *The Five Nations*, Methuen & Co.) Rudyard Kipling tells us of " a King and a Mason " who, wishing to build a palace, set about digging its foundations :

—Presently,
under the silt,
I came on the wreck of a palace such as a King had built.
There was no worth in the fashion—there was no wit in the plan—
Hither and thither, aimless, the ruined footings ran—
Masonry, brute, mishandled, but carven on every stone :
" *After me cometh a builder. Tell him, I too have known.*"

He tells them how he took all that he found for his own purposes:

Yet I despised not nor gloried; yet as we wrenched them apart,
I read in the razed foundations the heart of the builder's heart.
As he had risen and pleaded, so did I understand
The form of the dream he had followed in the face of the thing he had planned.

These palaces, I think, may stand in a figure for our own work of teaching. We take a new class determined to "build" well, and as soon as we set about laying our foundations we come on the work of the teacher who had it before us. We may see "no worth in the fashion—no wit in the plan"; but even then, as we make what use we can of his fashionings, that seem to us so much less worth than our plannings, all that is unsatisfactory in them seems to carry a chill warning to us:

"*After me cometh a Builder. Tell him, I too have known.*"

and as we go on with our work, meeting our own difficulties, disappointments and discouragements, we begin to discern more clearly:

"The form of the dream he had followed in the face of the thing he had planned."

Then:

"When I was a King and a Mason—in the open noon of my pride,
They sent me a Word from the Darkness—They whispered and called me aside.
They said—'The end is forbidden.' They said—'Thy use is fulfilled,
And thy palace shall stand as that other's—the spoil of a King who shall build.'"

"I called my men from my trenches, my quarries, my wharves, and my shears.
All I had wrought I abandoned to the faith of the faithless years.
Only I cut on the timber, only I carved on the stone:
'*After me cometh a Builder. Tell him, I too have known.*'"

We, too, in the end, are called from the work we began with such high hopes of success. We have served our turn; we are not pér-

mitted to finish, and we know that to him who comes after, our work will seem as worthless and witless as to us, in our early pride, seemed that of him who went before. There is no resisting, and we make our plans for going; but the thought in our heart will speak from our unfinished work, most of which, we know, will fall to pieces behind us as did "that other's":

"*After me cometh a Builder. Tell him, I too have known.*"

The whole poem breathes the spirit of a comradeship of which we all have some knowledge, the comradeship of apparent failure, and it has in its very sadness the seeds of strength and sympathy.

So, as we journey along the road our culture may grow and our personality develop through the companionship and comradeship that may be ours on the way. And the road offers more than these. It offers us friendship—"the refreshment of green shade"—which should be a further educative influence in our lives. We should widen all our social relations as much as possible and deepen one friendship. Ruskin tells us that "the true strength of every human soul is to be dependent on as many nobler as it can discern, and to be depended upon by as many inferior as it can reach." We must, that is, in the matter of this greatest of benefits, as in all others, be ready to give as well as eager to gain. "The only way to have a friend is to be one," for:

"The end of friendship is a commerce the most strict and homely that can be joined, more strict than any of which we have experience. It is for aid and comfort through all the relations and passages of life and death. It is fit for serene days, and graceful gifts, and country rambles; but also for rough roads and hard fare, shipwreck, poverty and persecution." (*Emerson.*)

The road offers, too, wayside flowers for our gathering—the smiling looks of children lifted to us in some pause of their work or play; and the noise of running water—the sound of their happy laughter. The mountains of endeavour—giving sometimes on the shining peaks of success—beckon us, and in our ears beats from time to time that music of humanity which is as the surge of the sea.

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