

the use of x instead of long verbal phrases—and the expression of an arithmetical statement in the form of a simple equation may often make a question easier both to understand and to solve.)

At all stages in the elementary school the "mental" and oral work should, as far as the staffing and the circumstances of the school permit, predominate over the written "sums," the written work being designed mainly to teach the child to express clearly the several steps in his calculations, and thus to lead to clear thinking, and also at the latter stages to enable him to solve questions involving somewhat higher numbers than the ordinary child can manage without the aid of paper. There is, however, no reason why in all the classes of the Junior and Senior Divisions children should not be required to write down the answers to the sums done "mentally," and at all stages to write down as "tables" the facts they have learnt from their practical work in counting and measuring. No question should be set in any class that could not arise in actual everyday life, or that is far removed from the experience of the child.

Accuracy in arithmetical calculations is, of course, of prime importance in the practical affairs of life, and quickness comes next; there is no royal road for acquiring accuracy and quickness: the real secret of both is to be found in constant practice in the use of numbers within the comprehension of the child, applied to questions on such matters as might arise in actual everyday life. As every teacher is aware, there is no known substitute for this constant practice.

DRAWING AND HANDWORK.

The instruction in drawing should be directed to the cultivation of the pupil's power of graphic expression. Since complete graphic expression calls for careful observation, critical judgment, and some degree of manual dexterity, it should be the aim of the teacher to lead the pupils through practice and experience to observe accurately, and to record as faithfully and as truly as possible the results of their observations. To this end the instruction should from the first be correlated as far as practicable with other subjects of the school course, and with modelling in clay or plasticine and other forms of educational handwork. No explanation of any real form should be considered thoroughly satisfactory unless accompanied by an intelligent drawing. In other words, drawing is to be regarded as a means of assisting expression in the child's daily life and study, and should for this purpose be taught as a language rather than as an art. At the same time every effort should be made—*e.g.*, in connexion with nature-study—to arouse in children an appreciation and love of beauty in form and colour.

With a view to stimulate and cultivate the inventive and imaginative powers, the pupils, especially in the lower classes, should be encouraged to illustrate stories and incidents with which they are familiar, to make sketches of things in which they are interested, and to make drawings from their own imagination.

In all classes free drawing is to be practised. The pupils' drawings, whether on wall or desk boards, on brown, tinted, or white paper, whether carried out in coloured crayons, chalk, pencil, or water colour, whether in mass or outline, light and shade or colour, should be direct representations of natural and fashioned objects. Since nothing should be allowed to come between the pupil and what he is representing, diagrams and copies either drawn or printed should be used but sparingly, and wherever practicable avoided altogether. The pupil's record of what he sees should be the result of his own impressions, not those of some one else. Blackboard sketches and drawings by the teacher should be confined to illustrations of methods and principles, and should not take the form of diagrams to be copied or to show pupils what they ought to see. The use of the slate and slate-pencil for exercises in drawing should be discouraged. The brush should be regarded from the first as a drawing-instrument. Brush drawing should not be treated as a thing apart from the ordinary drawing-lesson. The representation with the brush of meaningless forms should be avoided.

The objects for representation should be selected with due regard to the end in view and to the capacities of the pupils. Throughout the course the principle of proceeding from the greater to the smaller, and from the simple to the complex, should ever be borne in mind. The selection made must include both natural and fashioned objects in about equal proportions. In the selection of natural objects a seasonal or some other rational order should be followed with the view of arousing and sustaining the pupils' interest. In the selection of fashioned objects preference should be given to those that are simple, interesting, within the experience of the children, and fashioned for some actual purpose in life apart from the drawing-lesson. The following, among others, may be regarded as suitable objects for study in the Junior and Senior Divisions respectively:—