answers do play a useful part for self-study), we, teachers have to do something to prevent our pupils from forming the habit of looking for answers before they try out the questions. Not that we do not like our pupils to check up their solutions, we feel that answers must be checked in a proper way—by substitution in solving equations, say.

One practical suggestion is to give a few supplementary questions every time our pupils are set to work. These questions should be of the same nature as those in the text. They may be given on the blackboard or better, printed before the lesson. Of course, no answers should be given. The sources of such questions are plenty at hand, as they may be those questions obtained from text books other than the one used in school.

Another means may be he'pful and that is to give tests as frequently as possible. In order to ensure that our pupils know their work, a test may be given after a topic or a subsection of it has been covered. Or in case the word "test" may frighten many a pupil, the test may be regarded as an extra exercise which may be carried out either at home or in class.

It is thought better to discourage our pupils to look at the answer provided by the book than to encourage them. One way of doing so is to point out, when there is a chance, the unnecessary simplification in answers. For instance, in the question of making k the subject of the formula  $n = 1.5 \, k$ , a

result of 
$$k = \frac{n}{1.5}$$
 is just as good as  $\frac{2n}{3}$ ;  $a + \frac{1}{a}$  is the

same as  $\frac{a^2+1}{a}$  in a question of a similar nature. If our pupils can be trained to work independently, one part of our aim of teaching mathematics is achieved.

#### MATHEMATICS CORNER

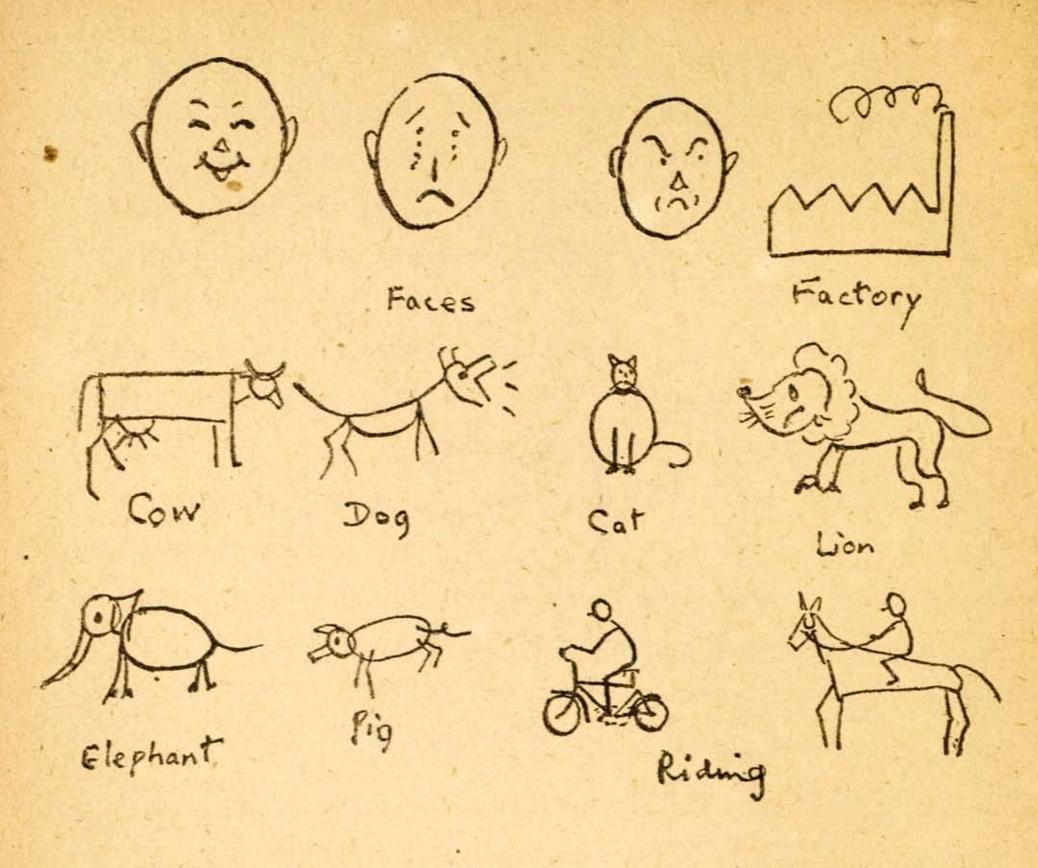
### Don't turn to the back of the book for answers

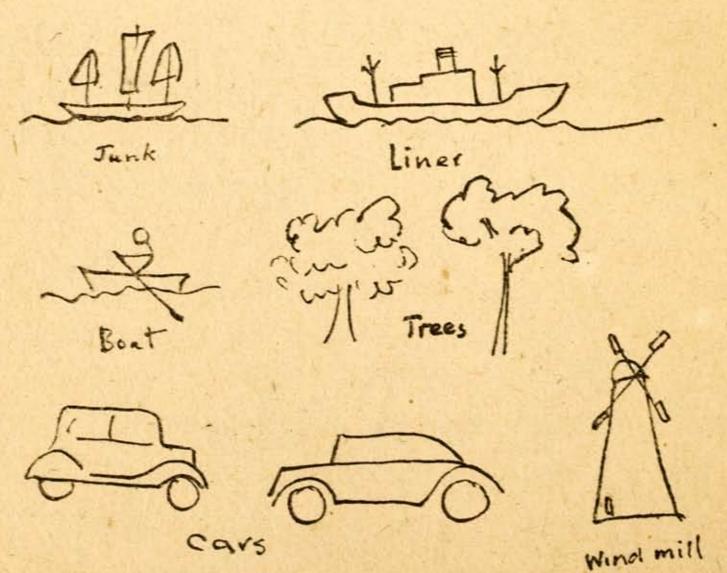
by H. H. O.

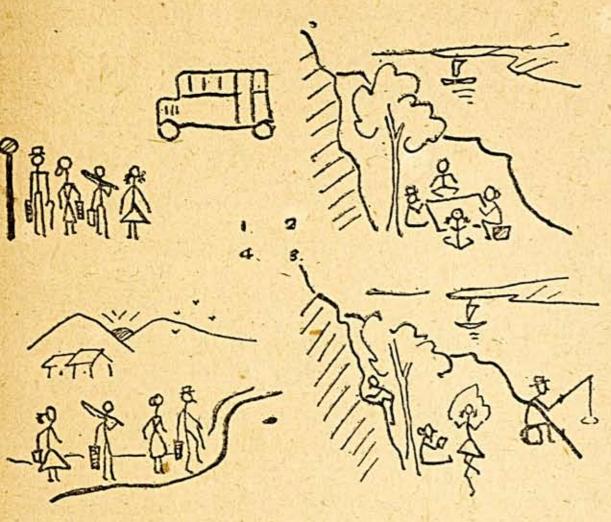
Much against the pleasure of every teacher of mathematics, a pupil, when asked to do his exercise in the subject always looks at the back of the book for the answers before he sets forth to find them. (Most English text books on Mathematics provide answers to the questions in the exercises). This habit is not uncommon among our pupils in secondary schools where English text books are used. There are, of course, reasons why answers are provided in text books, but our pupils never see to their merit and often find the solution from the answer instead of getting the result by way of solving the problem. They are not learning Mathematics in the proper way. Gradually they lose confidence in doing their work; they must know the answers beforehand and hence reap the fruit of failures in tests and examinations. What they are really doing is to show that the answers given by the book are correct. They do not realise that the answers given may sometimes be wrong!

The suggestion that the part on answers should be detached from our pupils' text books meets no approval from both parents and pupils and no teacher is willing to apply force in this act of destroying or damaging others' properties. On the contrary, the less-efficient members of our profession enjoy having this part in the text books. They say: "As the answers in the exercise books are correct, we just tick them. It makes our job easier!" They do not pause to think that the correct answer may be obtained in a wrong way.

Seeing that text books can never be abolished and having no power to stop the publishers to produce text books with answers (in fact, some publications are without answers and

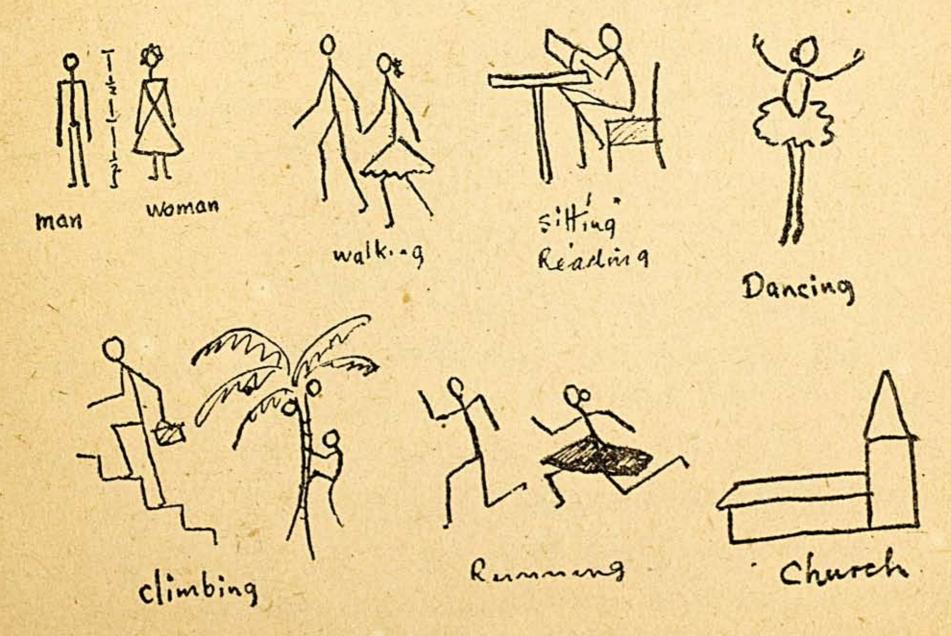






To conclude with there are some points that we should bear in mind when we make use of match-stick drawing in teaching. Firstly, we should only use them as aids from time to time, for anything that is repeated too frequently become a monotony.

Secondly, we should draw with colour chalk as much and as reasonably as possible because the sketches will be more arresting and appealing to the pupils. Lastly, it is better to have a visual picture or perhaps a simple sketch before we attempt to draw the sketch on the board for use.



suitable teaching aids. Of all the teaching aids that are commonly employed in the course of teaching, match-stick drawings are the simplest and quickest to prepare. To a teacher who cannot find enough time on his hand to prepare elaborate aids, simple sketches drawn on the board are a great help.

However this piece of writing is not meant to illustrate the use of match-stick drawings in teaching but to arouse in the readers an interest in using them as the simplest aids. Unlike other teaching aids the teacher will find an economy in time and money when he makes use of such drawings in teaching. Sometimes a simple sketch drawn on the board by the teacher at the appropriate moment can achieve remarkable results. Small children usually show great interest and wonder at the teacher's simple and quick drawings. Moreover the layout of the drawing is brought to their notice and consequently they can understand and perhaps appreciate much better. Very often suggestions may be taken in from the pupils. The teacher, for example may ask as he is building up the picture: 'What is the best colour for her skirt?' It is also good activity to ask some pupils to help to build up the picture if it is simple enough. It is very true that a non-artist will have confidence if he starts collecting sketches and practising drawing them from time to time. After all it is good fun to be able to draw.

In the teaching of oral or written compostion match-stick drawings can sometimes be taken as a substitute for wall pictures. Of course the sketches must be simple and within the pupils' experience. The following sketches may serve as an example.

has in mind to show them.

Secondly, the picture must be big enough for all the pupils to see clearly. It is quite useless to show a picture the size of which is equal to one shown in the text book. But how are we to get so many large pictures? The projector comes to our help, for we can enlarge pictures to a size which can be seen from any part of the class.

Thirdly, colour is an essential point, the picture used must be colourful so that as soon as it is being brought forth, the interest of the class is inmediately aroused.

Fourthly, a Geography teacher must take care that the picture he uses illustrates the real thing. For example, a photograph of a sandy and treeless area does not fully explain the term "desert" because it is not necessary for a desert to be sandy. Some deserts, though arid, are not sandy and signs of vegetation such as the cactus plants can be found. Though this may seem a minor point, its importance cannot be neglected.

If these points are not observed, then pictures are of practically no use if they are to be regarded as an aid in Teaching.

## Match Stick Drawing

L. M. B.

It is not without truth that a lesson with dull subject matter may, to some extent, be brought to life by the use of

criticised that many members have lost their interest and support in the Association's activities. However, action speaks louder than word. The success of this ball showed beyond any shadow of doubt that they are still giving, and will give, their support and help.

In our last edition, we dealt on the organisation of a mathematics hour. To our regret this scheme has come to a standstill on the ground that suitable experts of mathematics are still unavailable. If there is the real reed we are doubly willing to offer any assistance within our ability. We must express our deepest apology to all the enthusiastic mathematicians.

If the readers look closely at the contents of the present edition, they will be conscious of the fact that there is a shortage in articles. The successful publicity of the Agora solely depends on all members for their substantial help—their valuable contributions. Let us pray that more contributions will rush to our aid. Why not try our hand at writing 'something' when we are free?

Once more it is our sincerest hope that all will enjoy a more prosperous and successful year.

### The use of Pictures in the Teaching of Geography

In teaching, especially in Geography, pictures prove to be a very good and effective teaching aid. But if the pictures are not properly chosen, they do not serve the purpose.

Several points must be noted when the teacher wants to use pictures to illustrate or explain his lesson. Firstly, the picture must show a single unit only. A picture may be very well painted, but if it shows too many things it only leads to confusion as the pupils do not know exactly what the teacher

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### EDITORIAL

Kung Hey Fat Choy!

We hope we are not too late in offering all the readers our hearty greeting though the deafening yet thrilling reports of the fire-crackers have already faded away. The long cold winter is drawing to its close because the smiling spring is going to come, bringing new life and new hope to everything under the sun. So to our book of teaching experience we have added a page. We must have been planning how to fill our next page with more records of success and satisfaction. We can only do this by improving on our teaching methods and techniques. May this be our greatest wish for this coming new term!

We must congratulate on the great success of the Chinese New Year Ball held at the Ruby Restaurant. It is the first ball ever since our association has come into existence. Over two hundred past students and friends were present, spending their evening amid the voice of joy and gaiety. We have been 香港銅鑼灣怡和街八十四號三樓 電話:七八零七八

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