

of the numbers in the largest number they can mentally grasp as a whole. Now begins the real work of teaching number. We will suppose that your pupils know three; then begin with four.

USE all the objects possible in teaching a number, that are of immediate use to children. Keep this truth distinctly and fully in your mind, at whatever stage of number or arithmetical teaching your pupils may be: all knowledge of number is absolutely founded upon the limitations of things by ones, and that these limitations must be made by the learners for and by themselves. These limitations by ones must be made at first with objects, after which they can be made without the presence of objects, but the mental object is precisely the same with or without objects. Either the objects themselves must be before the learner, or the subject-objects so clearly in the mind that the presence of objects are not necessary to the right mental action. In the latter case the presence of objects *weakens mental action*.

SUGGESTIONS for teaching four.—*The number as a whole.* Teacher—Show me four blocks, four shells, four pebbles, four shoe-pegs, four leaves, four flowers, four animals, four lines (in forms), four sides, four corners, four squares, cubes, triangles, oblongs, edges, pictures, panes of glass, trees, bushes, fingers, boys, girls. Have pupils make inch, foot and yard measures out of pasteboard or wood. Have them hold a foot measure in one hand, and draw parallel lines a foot long on the blackboard. Have them draw four vertical, then four horizontal and four oblique lines, testing lengths with their measures. Draw one line four feet long and test it with the foot rule. Do the same with the inch measure. Have pupils make inch and foot squares out of pasteboard or wood, and draw them as they did the linear measures. Draw four squares in an oblong; make longest sides horizontal; make them vertical. Make the sides equal (a square). Have pupils arrange the square inches in different forms by drawing them.

FORM, colour, and number may be taught together, to great advantage, in teaching number. Paper-folding is an excellent means of teaching form, colour and number at the same time. Use linear, square and cubical measures at every step. It is a good plan to have all the geometrical forms made in wood and variously coloured. Have pupils show four blue cubes, four red squares, four yellow triangles, four green oblongs, four red rhomboids, four orange balls or spheres.

TEST the sense of hearing by rapping four times on the table, stamping four times, tapping a bell four times, etc. Have pupils do the same. Test the sense of touch by having pupils close their eyes and taking fours of things from the table. Have pupils find fours of objects around them, in nature and art. They will discover that a dog has four legs; a waggon, four wheels; a pane of glass, four edges; etc.

WHEN a distinct concept of four is in the mind begin the analysis. Teacher—Tell me what you can find in four. (Different kinds of objects should be on a table or desks.) Pupil—I see two blocks in four blocks. Teacher—Show me the two blocks that you have found in four blocks. Teacher—How many twos can you find in four blocks? It is difficult to imagine the answers of children. They may be very slow in saying, "there are two twos in four." Teacher—How many twos have I in my hand? Pupil—One two. Teacher—How many twos on the table? Pupil—One two. Teacher—Now, how many twos are there on the table? Pupil—Two twos (perhaps). When a child discovers the twos in four, what has he discovered? $4 \div 2 = 2$; $2 \times 2 = 4$; two 2's = 4; $4 - 2 = 2$, and he can easily infer that $\frac{1}{2}$ of 4 = 2. Teacher—How many twos did you find in four blocks? Find two twos in four shoe-pegs, four squares, four marks on the board. Make four marks on the board so that I can see the two twos. Draw four birds. How many twos make four? Show me with lines, squares, cubes, etc. Who