

horse had four legs, one on each corner and a tail in the middle, behind.

Years ago pupils began the study of arithmetic and other branches by learning a series of definitions. I was taught that arithmetic is the science of numbers and the art of computation. To make this perfectly clear, I had further to learn that science is knowledge systematized and explained. I have never forgotten these definitions and I think I never will, though it took years to make them full of meaning. That was the day of the old education, when the mind was early furnished with a store of true and matured forms to which a growing experience gave greater significance; the day of faith in text-books and lesson hearing. There was but little illustration, objective teaching, or stimulation of the perceptive faculties.

Then came the light of the new education. No more memorizing; out with the text-books; in with the objects,—splints, beans, shoe-pegs, corn, sand, stones, numeral frames, charts, globes, pictures, colours, moulding boards, anything and everything—the more the merrier. The child will now learn by doing. All over the country the festive educator beamed with joy as he heralded the era of “things before words.” “Create a need for a term before giving it.” “Never tell a child anything it can find out for itself.” These principles are so incontestably true, *with limitations*, that the poor teacher must perforce accept them. It is their acceptance without limitation, that has led to the over-elaboration so characteristic of the primary work of to-day.

The teacher at first snuffed dubiously at the boxes of new and untried apparatus. She of the old régime had her trade to learn over again. The mighty work of “developing”

began. The child was told nothing that by hook or crook could be squeezed out of him. The plan is, develop what you want to teach the pupil, that is, get him to tell it to you, and then feed him on his own strippings. Hours for developing, but not one minute for direct telling. Be fertile in devising means of illustration. Seek to make the simple, simpler. Have your pupils boom along impelled by the joy power. That primary school in Vienna supplied with \$25,000 worth of apparatus for illustrative purposes is held up as an ideal. I visited a class of beginners where the teacher had a case of twenty-two different sets of objects for number work, to say nothing of devices for teaching reading and language. $2 + 2 = 4$,—a fact great in its simplicity. But bring on the splints and counters, the shoe-pegs and corn, the teacher in a flurry of enthusiasm; and see the unfortunate fact put through the agony of development. “Nine” is before the class. It is to be developed. Momentous occasion! The class is worked up to a pitch of expectant enthusiasm. The child, after skilful manœuvring, is led to see that this number is made up of nine ones. They are counted and fondled lovingly—almost personified. It is then separated into two fours and a one—poor little *one*, he has no brother! So the development proceeds, if any time remains.

Arithmetic becomes number work; geography, place lessons; grammar, language lessons; spelling, talking with the pencil. Technical terms and difficult words are rendered into baby talk and nursery gabble. Courses of study are overhauled, so that the simple may precede the complex, and each teacher grades her work with the same view. The teacher acquires a power of detecting shades of difficulty, and always pro-