to enable the pupil to feel that he understands, and to assure the teacher of this fact; but it is not necessary that the pupil should acquire such facility as never to make a mistake before proceeding. The higher parts of arithmetic and algebra themselves afford exercise in the lower.

Nor is the practice of setting a number of exercises all precisely alike in method and difficulty one to be commended. It cultivates a dull, mechanical habit, tending to divorce the understanding from the work of the student, and is thus contrary to the first law of teaching. Exercises should rather be arranged on the plan of a ladder, each perceptibly rising, in some minute particular it may be, above the preceding. The rungs of the ladder may, and for some pupils must, be placed very close together.

Examples should be employed in order to guide the pupil to discover a method that is yet unknown to him. These can scarcely be too simple; they should be first oral, afterwards written. Successive examples, almost identical may here be used to facilitate the pupil gathering for himself what the method is—making his own rule, in fact. After the method is once grasped, as much variation should be thrown into the examples as the knowledge and power of the pupils permit.

The next recommendation I will make is—(3) *Vary non-essentials*. In geometry, for instance, change the letters of the diagram, invert the diagram as to the right and left or up and down, or place it askew; take care that it does not illustrate only a particular case. Vary the language of explanation; do not permit a reproduction either of your phrases or those of the book; encourage the pupil to use his own language. It is not a real knowledge that can only find expression in a set form of words. In arithmetic sometimes use vulgar, sometimes decimal fractions, in the same sort of questions; in explaining local value, do not adhere to the scale of ten. In algebra we should not confine ourselves to the use of particular letters, and we should guide our pupils to see that the general propositions of algebra are true for expressions of any complexity. It seems superfluous to emphasize this direction, but experience tells me that it is needed. I have known a pupil who thought he knew that $(a+b)(a-b)=a^2-b^2$, puzzled by $[\sqrt{(1+x)}+1][\sqrt{(1+x)}-1]$, not realizing that a might be $\sqrt{(1+x)}$ Is it not also a common mistake to "cook" quadratic equations so that they shall always have rational roots?

We should be ever ready to invent new plans and systems of teaching; there is a great charm in novelty, and many little devices succeed for a time just because they are new. A system when old and stale, even if intrinsically better, is often not so efficacious as an inferior one when new.

This leads to the next piece of advice—(4) *Make a programme, but don't be a slave to it.* It is well for us to make a programme, and to consider beforehand how much we mean to get through in a term or in a lesson. But, as the unforeseen always happens, our system should be sufficiently flexible to permit of variation.

Moreover, but this I put forward with some uncertainty, there are occasions when the interest of our pupils is particularly excited, when they are capable of more vigorous or more prolonged attention than usual; may we not take advantage of these opportunities to go ahead of our programme, even to take something out of its natural order, to strike while the iron is hot? I perceive a danger in this—the danger of desultoriness. Cool reason would seem to say that our eager pupil must be told that now is the proper time to treat of the subject