

aroused by the vivacious eagerness of the other members of the class.

5. Be sure that the words contained in each lesson, can be spelled by each child.

6. Require that some portions of each lesson be written by the children on their slates, and brought to the class at each recitation. Generally it would be well to allow the pupils to select the portion they will write.

7. It is better not to follow always the order of the lessons in the book, but to let the class occasionally choose their lessons.

8. Frequently turn back and read old lessons.

9. Give short lessons. Exercise the pupils in pronouncing each alternate word rapidly, the teacher pronouncing the other words.

10. Be cheerful, kind, animated, and interested yourself, if you expect your pupils to be so.

Provide your school with good blackboards, and with a set of reading charts or with Webb's dissected cards for primary classes. Use these thoroughly according to the foregoing suggestions, and your primary classes cannot fail to prosper.—*W. F. Phelps in Ohio Educational Monthly.*

2. MODES OF HEARING RECITATIONS.

The first that I shall name is called the concert method. This is practised chiefly in schools for very young children, especially for those who cannot read. There are many advantages in this method, some of which are not confined to infant classes. The timid, who are frightened by the sound of their own voices when attempting to recite alone, are thereby encouraged to speak out; and those who have had any experience with such children, know that this is no small or easy or unimportant achievement. Another benefit of the method is the pleasure it gives the children. The measured noise and motion connected with such concert exercises are particularly attractive to young children. Moreover, one good teacher, by the use of this method, may greatly multiply his efficiency. He may teach simultaneously fifty or sixty, instead of teaching only five or six; but, in estimating this advantage, one error is to be guarded against. Visitors often hear a large class of fifty or more go through an exercise of this kind, in which the scholars have been drilled to recite in concert; and, if such persons have never been accustomed to investigate the fact, they often suppose that the answers given are the intelligent responses of all the members of the class. The truth is, however, in very many such cases, that only some half-dozen or so really recite the answers from their own independent knowledge. These serve as leaders; the others, sheep-like, follow. Still, by frequent repetition, even in this blind way, something gradually sticks to the memory, although the impression is always apt to be vague and undefined.

The method of reciting in concert is chiefly useful in reciting rules and definitions, or other matters, where the very words are to be committed to memory. The impression of so large a body of sound upon the ear is very strong, and is a great help in the matter of mere verbal recollection. Children, too, are very sympathetic; and a really skilful teacher can do a great deal by this method, in cultivating the emotional nature of a large class.

Young children, too, it should be remembered, like all other young animals, are by nature restless and fidgety, and like to make a noise. It is possible, indeed, by a system of rigorous and harsh repression, to restrain this restlessness, and to keep these little ones for hours in such a state of decorous primness as not to molest weak nerves. But such a system of forced constraint is not natural to children, and is not a wise method of teaching. Let the youngsters make a noise; I had almost said, the more noise the better, so it be duly regulated. Let them exercise, not only their lungs, but their limbs, moving in concert, rising up, sitting down, turning round, marching, raising their hands, pointing to objects to which their attention is called, looking at objects which are shown to them. Movement and noise are the life of a child. They should be regulated, indeed, but not repressed. To make a young child sit still and keep silence for any great length of time is next door to murder. I verily believe it sometimes is murder. The health, and even the lives, of these little ones, are sacrificed to a false theory of teaching. There is no occasion for torturing a child in order to teach him. God did not so mean it. Only let your teaching be in accordance with the wants of his young nature, and the school-room will be to him the most attractive spot of all the earth. Time and again have I seen the teacher of a primary school obliged at recess to compel her children to go out of doors, so much more pleasant did they find the school-room than the play-ground.

Quite the opposite extreme from the concert method is that which, for convenience, may be called the individual method. In this method, the teacher examines one scholar alone upon the

whole lesson, and then another, and so on, until the class is completed.

The only advantage claimed for this method is, that the individual laggard cannot screen his deficiencies as he can when reciting in concert. He cannot make believe to know the lesson by lazily joining in with the general current of voice when the answers are given. His own individual knowledge or ignorance stands out. This is clear, and so far it is an advantage. But ascertaining what a pupil knows of a lesson is only one end, and that by no means the most important end, of a recitation. This interview between the pupil and teacher, called a recitation, has many ends besides that of merely detecting how much of a subject the pupil knows. A far higher end is to make him know more, to make perfect that knowledge which the most faithful preparation on the part of the pupil always leaves incomplete.

The disadvantages of the individual method are obvious. It is a great waste of time. If a teacher has a class of twenty, and an hour to hear them in, it gives him but three minutes for each pupil, supposing there are no interruptions. But there always are interruptions. In public schools, the class oftener numbers forty than twenty, and the time for recitation is oftener half an hour than an hour. The teacher who pursues the individual method to its extreme, will rarely find himself in possession of more than one minute to each scholar. In so brief a time, very little can be ascertained as to what the scholar knows of the lesson, and still less can anything be done to increase that knowledge. Moreover, while the teacher is bestowing his small modicum of time upon one scholar, all the other members of the class are idle, or worse.

Teaching, of all kinds of labor, is that in which labor-saving and time-saving methods are of the greatest moment. The teacher who is wise will aim so to conduct a recitation, that, first, his whole time shall be given to every scholar; and, secondly, each scholar's mind shall be exercised with every part of the lesson, and just as much when others are reciting as when it is his own time to recite. A teacher who can do this, is teaching every scholar, all the time, just as much as if he had no scholar but that one.

Even this does not state the whole case. A scholar in such a class learns more in a given time than he would if he were alone, and the teacher's entire time were given exclusively to him. The human mind is wonderfully quickened by sympathy. In a crowd, each catches, in some mysterious manner, an impulse from his fellows. The influence of associated numbers, all engaged upon the same thought, is universally to rouse the mind to a higher exercise of its powers. A mind that is dull, lethargic, and heavy in its movements, when moving solitarily, often effects, when under a social and sympathetic impulse, achievements that are a wonder to itself.

The teacher, then, who knows how thus to make a unit of twenty or thirty pupils, really multiplies himself twenty or thirty fold, besides giving to the whole class an increased momentum such as always belongs to an aggregated mass. I have seen a teacher instruct a class of forty in such a way as, in the first place, to secure the subordinate end of ascertaining and registering with a sufficient degree of exactness how much each scholar knows of the lesson by his own preparation; and, secondly, to secure during the whole hour, the active exercise and cooperation of each individual mind, under the powerful stimulus of the social instinct, and of a keenly-awakened attention. Such a teacher accomplishes more in one hour than the slave of the individual method can accomplish in forty hours. A scholar in such a class learns more in one hour than he would learn in forty hours in a class of equal numbers taught on the other plan. Such teaching is labor-saving and time-saving in their highest perfection, employed upon the noblest of ends.—*J. S. Hart in the School Room.*

II. Intercommunications with the "Journal."

1. QUERY TO TEACHERS.—NEW DIOPHANTINE PROBLEM.

The sides of a right angled triangle are 3, 4 and 5; what quantity added to the perpendicular, 3, will give the new hypotenuse a rational number, also if twice the quantity be added to the 3, the second new hypotenuse is rational?

JOHN IRELAND,
Teacher, Sec. 10, Garafraxa.

Answer will be published next month.

2. To the Editor of the Journal of Education.

SIR,—As several teachers have, from time to time, asked me for a solution of the equation $x + y^2 = 7$, $x^2 + y = 11$, I send you an examination of the generic equations to which these belong. I