

SCIENCE FALSELY SO CALLED.

Now that we have an outline of oral lesson work on nature in our common school curriculum, many people think we should begin soon to feel the beneficial effects of such a system. But we fear such are doomed to disappointment. The mechanical teacher who possibly has the best disciplined school in the district, who is a perfect drill in arithmetic, spelling, geography and the like, may be a complete failure as a science teacher. Much more likely is the one with little system, and no power of drill. Most astonishing misconceptions of the purpose and nature of this portion of the course have appeared in quarters whence better should be expected. The teacher in the graded school wants to know just exactly what the pupils are to be examined upon. The principal prescribes so much of some book. The pupils can now be prepared for examination. Every question is in the book. To the mind of the teacher and the principal there is nothing absurd in this—it is only fair. Or, if it looks like cram, why it is the council of public instruction which is to blame. They object to all this science-teaching any way. Science teaching! why it is simply dogma cramming. A theology without a God and without a nature—mythological anti-science. *Book Question:* "What is the difference between a cricket and a horse?" *Answer:* The cricket has no backbone, the horse has." It is a matter of faith not of sight. The little boy thought the cricket's backbone was stiffer than the horse's, from his experiments with them. But the teacher tells him the correct answer for the examination is directly the opposite of his observations. The boy submits, and tries to learn science by remembering the unseen and unknown difference. *Question:* "What is the calyx made up of?" *Answer:* "Sepals." But when you give the little fellow a buttercup and ask him to pull off all the sepals and count the number of them, he looks all over the plant, wondering where the sepals really might be. *Question:* "What is thunder?" *Answer:* "The noise attending the passage of electricity between the earth and a cloud." The answer is rolled out simultaneously in chorus at the public examination with a vim suggesting a current of cloud electricity. But all their knowledge was discharged in that one bolt. There was no science, no correlation of facts, simply words. Many a time and oft did miniature thunderstorms and lightnings play in their golden hair as the vulcanite comb was drawn through it, or the cat's fur was made to crackle and sparkle in the dark. But what in the thunder had such child's play to do with the grading examination? Any teacher found drilling scholars to memorize any such answers

as science teaching should be dismissed. It is totally subversive of the very object for which such work was prescribed. How, then, should principals examine pupils in common school grading. We would suggest questioning somewhat as follows: "What minerals have you examined in school?" The amount of ground covered will be indicated by the answer. Then select one on the pupil's list, and question him as to the properties which his examination should have revealed. A half a dozen good oral object lessons, each on minerals, plants, animals, physical properties, chemical properties, natural phenomena, etc., per term, might be all the time devoted to this teaching. By all means let them be object lessons, and let the teacher select the objects from those most common or of most importance in the particular locality. The only limitation we would recommend is so many lessons on each sub-division to prevent the total neglect of any portion. But let the particular objects be left to the taste and circumstances of the teacher. Do not lecture them on the insects of South America, or cause them to memorize facts about those of France. Teach the pupils to observe and know our own. Teach them to *observe*. And the grading or promotion examination on nature lessons, according to our idea, should not be a test or measure of the amount of facts memorized, but of the amount *systematically observed*. Under such a system "Nature Lessons" will not be an anti-scientific cram, but a relief from mnemonical work and therefore a rest to the pupil. It will not over-crowd the teacher, because it does not fix an absolute amount of work to be done, but only a certain amount of attention which will allow of the free exercise of the teacher's own originality. The teacher should be a student of nature, whose heart is in the work. Those who wish simply to earn a little money for a few years, will want to know only just how much of a certain book the pupils "must be made to learn." The object of nature lessons is to stimulate the young citizen to be an accurate observer, to read correctly his environment, to discover as much as possible of the truth of nature, to know its laws, so as to obviate the penalty of transgressing them, and to gain the advantage of making them his servant.

Mr. W. F. Ganong, M. A., of Harvard University, Cambridge, Mass., is collecting information and will publish shortly an article on the origin of geographical names in New Brunswick. He would be glad to receive any information from those who are specially interested, and who may have in their possession any facts bearing on the subject.