

that which suits others; it is because one great element is left out of the system of education—that which appeals to the senses, to the power of observation—that which requires activity and manipulation; and while only the imaginative faculties and the memory are cultivated, which will suit some minds perfectly, and as the very food they want, others are left starving for want of the food which their nature requires.

I say, therefore, that in our age, when the importance of the study of Natural History is so manifest, by its many applications to the wants of man, I would add that one means of culture to our system of education, and add it as soon as it is possible to educate the teachers who may be capable of imparting the information; and that can be done easily by following the same wise method which has been followed in the introduction of every other branch. How was it when Physical Geography was introduced into our schools? One man went about from school to school to give instruction in that branch.

He had his pupils, and those pupils are now teachers. Do the same thing now. Select a few men who have the aptitude and the practical skill to teach, and let them go forth, to the Teachers' Institutes at first, and then into the schools. Let them show what can be taught, and very soon the information will be spread abroad, the ability to teach will be acquired, and in a few years we may have a system of education embracing that important branch that is wanting now, and which I believe to be really one of the most important additions which can be made to any system of education.

### Suggestive Hints towards Improved Secular Instruction (1).

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#### I.

##### First Lessons.

Having taken a considerable interest for some years in the daily teaching of my own village school, I am, from the success which has attended it, induced to offer the following outline of what is taught, and the manner of teaching it, to the attention of teachers in our elementary schools,—as being likely to be of some assistance, at all events to the less experienced among them, and perhaps not altogether useless to those whose qualifications and training in our Normal Schools may have better fitted them for their work.

And first, it is of great importance that the teacher should be able to interest the children in what they are doing; and this, if he take a lively interest in it himself, he will find no difficulty in doing, even when teaching what is looked upon as the mechanical part of reading; particularly if he know how to mix with it oral instruction of a conversational kind, and has any judgment in selecting subjects to talk to them about,—such as the domestic animals, birds, etc., and other things, with which they are brought in contact in their habits, manner of living, and how useful to man,—the one attaching itself to places, the other to persons; then perhaps relating some short and amusing anecdote of the dog or other animal, for which a good teacher would be at no loss, and would always see, from the countenances of the children, whether he was interesting them or not, and would go on, or leave off, accordingly.

And again, if a cow or horse is mentioned—drawing them into a description, leading them to contrast them,—a child will perhaps say: A cow is a four-footed animal. Teacher: Yes, but so is a horse; and then will point out something in which they differ: The child will then try again—a cow has got horns, but a horse has not; then the teacher will point out that some cows have no horns, and will lead them on into things, in which the cow and horse really do differ—such as the hoof; the cow having a cloven foot with two hoofs on one foot: what other animals have the same?—difference in the way of feeding; a cow chews the cud—ruminating: does the horse?—what animals do?—sheep, deer, etc.—What difference in their teeth; has a cow front teeth in the upper jaw? a sheep? a horse? etc. What do you call a number of cows together? what of sheep?—of deer?—of swine?—of bees? What are the habits of animals going many together? mention those you know which do so. The flesh of the sheep called what?—of the ox? The particular noise of the sheep, cow, horse, swine, etc.? bleats, bellows, neighs, grunts. The young of a cow? a calf;—and its flesh? veal. The young of the horse, what? a foal. Spell calf, calves: write

them down on your slates. And in this way children may be led into a tolerably correct idea of the thing in question, and will be partly able to describe it themselves; all this they tell again at home, which has its use.

There is something extremely pleasing and interesting to children in having their attention called to the habits—difference in structure—in covering—in manner of feeding—in fact, all possible outward differences, a knowledge of which can be acquired by the eyes and by the hands (seeing and feeling) of the beasts and birds about them; and of this a very strong proof is given, in what I have related in connection with my giving to a class of boys a lesson of the following kind, which was suggested by some observations in a book on Natural History, by the Rev. L. Jenyns, on the difference of the way in which animals with which they are acquainted rise. How does the cow get up?—hind-feet or fore-feet first? how the sheep? how the deer, etc.? Some will answer rightly, some wrongly; but all think and are alive to the question. Then pointing out to them; that all these animals rise with the hind-legs first, and that they belong to the class of ruminating or cud-chewing animals,—and that if it is true that in one, two, three, four, etc., particular cases of animals which chew the cud, that they rise in this way, whether it would not be likely to be true in all cases—showing them the way of putting at a general rule, from its being true in a number of individual instances.

Then again: How do the horse, the pig, the dog, etc., rise? hind-feet or fore-feet first? do they ruminate? have they front teeth in the upper jaw? The teacher would point out how they differ from the ox, the sheep, etc.

Children living in the country are very much alive to this kind of instruction; and I found that several of them in going home from school had observed the animals when rising, and gone out of their way to make them get up; thus bringing to the test of experience what they had been taught, and commencing at this early period, habits of observation on things around them; which, in after life, may add much to their happiness, and open out sources of enjoyment to them, to which they have hitherto been strangers.

Happening to mention that some observers of the habits of animals thought that sheep more frequently lie down on the left side than on the right, I find that many of them count a flock of sheep, as to the side they are lying on, when they see them lying down in the fold or in the field, and I have no doubt will, in time, have counted such numbers as may balance their opinions one way or the other.

Mr. Jenyns says, that he mentioned to a farmer, who had passed all his life among animals belonging to the farm, this difference in the mode of rising in the horse and in the ox—the sheep and the pig—and generally in the cud-chewing and non cud-chewing animals, but that he (the farmer) was not aware of it; and I recollect myself many years ago in college combination-room, a conversation arising as to whether a sheep or a cow, had a double row of teeth in front, similar to the horse, when, strange to say, although every one seemed to know that it was the case with the horse, yet not more than one or two were aware that the sheep had not; and so many doubts were started about it, that two young men of the party walked a considerable distance to a field where there were some sheep, and caught one of them in order to examine it.

When able to read with tolerable ease, and when they have acquired some idea of reckoning up small numbers, which they very soon do, it will be found extremely useful occasionally to call their attention to the number of letters in a word—pointing out which are vowels, and which are consonants; for instance in the word number—how many letters? six. How many are vowels? two. Then how many consonants: some will reckon by looking at the book; others, and these are the sharp ones, will reason, and say; as there are six letters, and two of them vowels, the remaining four must be consonants; making it a question in arithmetic.

In this way, very great interest may be excited; and when such words as *bounty*, *city*, *yearly*, occur, the teacher should point out, that at the end of words *y* is a vowel; at the beginning, a consonant; and then ask them to quote all the words they know beginning *y* or ending with *y*: this gives them great facility in acquiring words; such questions, as, What is the first letter in such and such a word—what is the last—how many syllables in the word—what is the middle syllable—what is a syllable made up of? Of letters—what is a word made up of? Of a syllable or syllables. This interests much more than the ordinary way of reading without observation, and keeps up the attention.

Again, call their attention to the page of their book—say it is page ten, eleven, twelve, or thirteen—how many leaves? five, five and a half, six, six and a half: and from this they very soon will gather that when the page is denoted by an even number there is

(1) This is the first of a series of extracts from the valuable book under that title.—London 1857, Groombridge and sons.—Paternoster Row.