

The following comparison of the growth of a wheat-plant and that of a crystal will serve to shew the manner in which organic and inorganic life is contrasted. After describing the corn-field, turning from its tender green blades to the full ear the Professor continues: "In so far as this is a process of growth, accompanied by the assumption of a definite form, it might be compared with the growth of a crystal of salt in brine; but on closer examination it turns out to be very different. For the crystal of salt grows by taking to itself the salt contained in the brine, which is added to its exterior; whereas the plant grows by addition to its interior; and there is not a trace of the characteristic compounds of the plant's body, albumen, gluten, starch, cellulose or fat, in the soil, or in the water, or in the air."

The illustrations and diagrams contained in Dr. Foster's *Physiology* are taken from the more elaborate and yet Elementary Lessons in Physiology by Prof. Huxley (published by Macmillan, 11th Edition, 1878) to which it avowedly serves as an introduction. Formed as it is upon this model we are not surprised to find it a clearly written and easily understood manual, besides being well qualified to excite an interest in the student and a desire to push his researches further.

Peculiar difficulties attend the man who attempts to make the science of Astronomy interesting within the bounds of a primer. Mr. Norman Lockyer has done his best in this little volume. Perhaps it would not be too much to say the best possible, but the difficulties remain insuperable. The simplest problems of Astronomy demand the same grasp of mind as is exacted by its more complicated questions. To understand the primary movements of the moon or our own earth the pupil must really master the meanings wrapped up in the terms axis, ecliptic, plane, equator, etc. Too many children never can conceive an axis otherwise than as a knitting needle stuck through an orange, and the machinery of lines and planes which appear in plates to indicate the orbits and

revolutions of the planets gets firmly fixed in the youthful mind as an actually existing framework or scaffolding upon which the universe may be supposed to run. We do not wish to be understood as impeaching the method of teaching astronomy by means of these imaginary lines. They are, of course, essential to its due understanding, but we regret that from the nature of things so much stress has to be laid upon fictions, and that the labour of learning them should impose such a burden upon immature minds as to prevent the imagination from readily grasping the fact of their non-existence. The equator has a great deal to answer for, and has probably received as much implicit faith as any other myth that ever numbered up its thousands of blind believers. We have felt that an uneducated man would derive benefit from the perusal of almost any of these Primers, even if his studies stopped there. In this case, and unless he could push his reading further, we should think it best for him not to take up the subject at all, and in saying this, we need scarcely add that we do not attach any blame whatever to Mr. Lockyer.

Professor Geikie's *Geology* we can praise without reserve. It goes to the right point and remains there. All it seeks to do is to rouse an intelligent interest in the stones and earth beneath our feet, and to shew how rock and ravine speak to us with voices as loud as those with which the stones in the Arabian tale called after Prince Bahman when he climbed the enchanted hill in search of the talking bird, the singing tree and the golden water. The fancies of the East are indeed surpassed by that natural magic which has locked up the secrets of the far distant past in the hardened mud of by-gone ages, and preserved the record of a rain-shower on the sand, when granite palaces have mouldered to decay.

Mr. Geikie avoids all encumbrance in the shape of unnecessary nomenclature and terminology. You will search his pages in vain for the word "Palæozoic." He contrives to give a good idea of a fossil without lugging in the *Pterodactyle*. The only