

I offer a few words of humble advice : and, for brevity sake, I will suppose myself to be addressing a young friend.

1. Do not suppose that a satisfactory knowledge of Geology can be obtained in a short time, or by skimming over a book or two.

2. Necessary prerequisites are a knowledge of chemistry, mineralogy, and natural history, particularly comparative anatomy, conchology, and botany, according not only to the Linnæan artificial system, but to the natural arrangement of Dr. Lindley, or some other recent and eminent botanist. A profound intimacy with any one of these branches of science is indeed a work for a man's life; but where there is such a minute acquaintance with any one, a masterly knowledge of the others is easily and delightfully acquired, provided the due appropriation be made of *time* and *diligence*. But a general knowledge of essential principles, taking care that it be ACCURATE *so far as it goes*, may be acquired by pains-taking in the few inestimable years which usually follow a good school education.

3. Go into the field of actual search and observation : sea-cliffs, steep ravine sides, quarries, cuttings through hills for highways, canals, rail-roads, and well-diggings, or any accessible exhibitions of the faces of rocks. The great gravelly plain of London is destitute of good localities of this kind : yet the sand-pits of Woolwich yield a very good lesson. But the West of England, Wales, and the North, are the grand academy for these studies. A person who has made himself familiar with a few *good* instances, will be able, with the aid of books, maps, views, and sections, to form a mental idea of others ; which will be in its measure just, though of course far inferior to the impression of the actual objects. Mr. De la Beche's *How to Observe, in Geology*, will be found of great use.

4. Hand-specimens of rocks must be studied. There are many fine collections throughout the kingdom. I may mention Bath, Bristol, Brighton, Norwich, York, Scarborough, Leeds, Newcastle-upon-Tyne, Liverpool, and many other places.

5. For books, without involving the least prejudice against other valuable works, I take the liberty of recommending the following short list.

Prof. John Phillips's *Guide to Geology* ; 12mo. 1836, and his *Treatise on Geology* in the seventh edition of the Encyclopedia Britannica, and published separately ; Edinb. 1837. The latter work forms an excellent illustration of the preceding.

Mr. Lyell's *Principles of Geology* ; 4 vols. 12mo. the fifth edit. 1837. An admirable collection of facts, and which carefully sepa-