

11. COMPOSITION OF THE ROCKS AND STRATA.—The superficial crust of the globe is composed of numerous layers and masses of earthy substances, of which combinations of iron, lime, and silex, or flint, constitute a large proportion; the latter forming forty-five per cent. of the whole. Those strata which have been deposited the latest, bear evident marks of mechanical origin, and are the water-worn ruins of older rocks; as we descend, materials of a denser character appear, which also exhibit proofs of having been subject to the action of water; but when we arrive at the lowermost in the scale, a crystalline structure generally prevails; and while in the newer strata, trees, plants, shells, and other remains of animals and vegetables are found in profusion, in the most ancient rocks all traces of organic forms are absent.

12. CLASSIFICATION OF ROCKS.—In the infancy of the science these remarkable facts gave rise to an ingenious theory, which, however, from being founded on insufficient data, has proved untenable. Still it may be convenient to notice the hypothesis, since the terms employed are still retained in the nomenclature of geology. Agreeably to this theory, the mineral masses of which the crust of the earth is composed, are separated into three groups.

13. PRIMARY ROCKS.—1st. *The Primitive* (now called *Primary*) *Rocks*; such as granite, sienite, porphyry, &c.: these are of a crystalline structure,