The millstone-grit is a silicious conglomerate composed of the detritus of primary rocks; it contains rolled fragments of granite of various magnitudes, from the size of a pea to that of a large pebble, which are cemented together by a crystalline quartzose paste. Sandstones are associated with the grit, both having one common origin: the materials of which they are composed are clearly the detritus of granitic rocks, produced by the action of water. Fragments of shale, coal, red sandstone, stems of plants, &c. are occasionally found imbedded in the grit. The millstone grit, however, is but of limited extent, and in some localities is altogether wanting, or is superseded by chert, or sandy limestone.

The carboniferous or mountain limestone is of a sub-crystalline texture, and many varieties are sufficiently compact to bear a fine polish, their surfaces presenting sections of inclosed crinoidea, corals and shells. The prevailing hue is a light bluish-grey, the organic remains being of a pure white; but some varieties have a ground of pale red, while others are nearly black, the imbedded shells having a deep ochreous colour. The Derbyshire marbles, and those of St. Vincent's rock, at Clifton, are familiar examples of the finer varieties of the mountain limestone. It is largely developed over the central and northern parts of England, and the south-west of Scotland; and is the predominating rock throughout a great part of