

Rock Types

There are three groups of rock, defined by the manner in which they are formed. Individual rock types vary in their colour, hardness, texture and particle size as each contains different levels of mineral content.

	Formation	Examples
Igneous	Igneous rocks are formed by molten (melted) rocks deep in the Earth. Their molten state makes them less dense than surrounding rock and so they come to the surface in plumes, sometimes breaking through in the form of a volcano. Intrusive igneous rocks cool slowly beneath the surface, forming large crystals within their structure. Extrusive igneous rocks cool quickly on the Earth's surface, forming small and porous crystalline structures. Igneous rocks make up 65% of the Earth's crust and host a vast number of valuable mineral deposits.	<p>Intrusive</p>  granite  gabbro
		<p>Extrusive</p>  basalt  obsidian  pumice
Metamorphic	Metamorphic rocks are formed when either igneous or sedimentary rocks come under intense heat and pressure under the Earth's surface. This intensity changes the particle level composition of these rocks and new forms are made. Therefore most of these new rocks are associated with specific 'parent rocks'. Metamorphic rocks are generally very hard wearing, though they can form in layers which can be easily split apart, (such as slate). They make up roughly 27% of the Earth's crust.	 slate (from clay)  schist (from sandstone)
Sedimentary	Sedimentary rocks are formed when layers of eroded rock material are deposited into water bodies by rivers or glaciers. These deposits build up over time and over millions of years the layers exert a downward pressure which compacts and cements the new rocks, building crystals between the grains. These layers sometimes capture organic material (such as sea creatures or plants) between them, resulting in fossils, and fossil fuels in later years. Sedimentary rocks make up around 8% of the Earth's crust.	 limestone  chalk
		 sandstone  shale