

Types of Rocks

Rocks are not all the same!

The three main types, or classes, of rock are **sedimentary**, **metamorphic**, and **igneous** and the differences among them have to do with how they are formed.

Sedimentary

Sedimentary rocks are formed from particles of sand, shells, pebbles, and other fragments of material. Together, all these particles are called sediment. Gradually, the sediment accumulates in layers and over a long period of time hardens into rock. Generally, sedimentary rock is fairly soft and may break apart or crumble easily. You can often see sand, pebbles, or stones in the rock, and it is usually the only type that contains fossils.

Examples of this rock type include **conglomerate and limestone**.

Metamorphic

Metamorphic rocks are formed under the surface of the earth from the metamorphosis (change) that occurs due to intense heat and pressure (squeezing). The rocks that result from these processes often have ribbonlike layers and may have shiny crystals, formed by minerals growing slowly over time, on their surface.

Examples of this rock type include **gneiss and marble**.

Igneous

Igneous rocks are formed when magma (molten rock deep within the earth) cools and hardens. Sometimes the magma cools inside the earth, and other times it erupts onto the surface from volcanoes (in this case, it is called lava). When lava cools very quickly, no crystals form and the rock looks shiny and glasslike. Sometimes gas bubbles are trapped in the rock during the cooling process, leaving tiny holes and spaces in the rock.

Examples of this rock type include **basalt and obsidian**.

WHAT TO LOOK FOR:

Here's a chart of some of the key characteristics that can help you identify the rocks within these three main classes.

Crystals

Small, flat surfaces that are shiny or sparkly, like tiny mirrors.

Fossils

Imprints of leaves, shells, insects, or other items in the rock.

Gas bubbles

"Holes," like Swiss cheese, in the rock.

Glassy surface

A shiny and smooth surface, like colored glass.

Ribbonlike layers

Straight or wavy stripes of different colors in the rock.

Sand or pebbles

Individual stones, pebbles, or sand grains visible in the rock.



