

Igneous

Igneous rock is formed directly from magma. There are two types of igneous rocks, intrusive and extrusive. Intrusive igneous rocks are formed when magma is trapped within Earth. The magma cools slowly because of the surrounding rock. These rocks are coarse grained. An example is **granite**. Extrusive igneous rocks, on the other hand, are formed when magma reaches the surface of Earth and cools quickly. Mineral crystals cannot grow very large during this rapid cooling, so the rocks are fine grained. Texture can vary. Examples are **pumice** and **obsidian**. Igneous rocks are the most common rocks found in Hawai'i.



Sedimentary

Sedimentary rock is formed from sediment—pieces of other rocks that have broken into smaller particles from the action of wind, ice, or water. These particles are washed away and accumulate at



the bottom of rivers, lakes, streams, or oceans. Over time, layers stack up on top of each other. The layers are compressed and eventually turn into rock (lithify). Examples are **sandstone**, **shale**, and **limestone**. Some sedimentary rocks are formed from layers of mineral crystals or the remains of living material such as shells or plants.

Metamorphic

Metamorphic rocks are rocks that have changed into another type of rock. Metamorphic rocks can be formed from sedimentary, igneous, or other metamorphic rocks. Pressure or heat causes



them to become compacted, changing them into something new. The grains in metamorphic rocks are often flattened. Sometimes the new rock looks very similar to the old rock, but sometimes the change is dramatic. Examples of metamorphic rocks are **marble** (metamorphosed limestone), **slate** (metamorphosed shale), and **gneiss** (from different rock types).