

Rocks

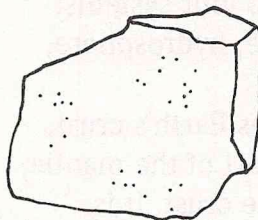
What are the main types of rocks?

A **rock** is a solid made of minerals and other materials. The three main types of rocks are igneous, sedimentary, and metamorphic. They are classified according to their composition and texture. A rock's composition depends upon the minerals that make up the rock. A rock's **texture** depends upon the size, shape, and arrangements of its grains. Rocks can be fine-grained, medium-grained, or coarse-grained.

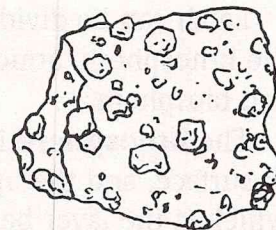
Igneous rocks form when magma cools and hardens. Sometimes the magma cools and hardens on Earth's surface. Magma that flows onto Earth's surface is called **lava**.

Intrusive igneous rocks such as granite are coarse-grained. They cooled slowly beneath Earth's surface and had time to form large grains. **Extrusive igneous rocks** such as basalt are fine-grained. They cooled quickly on Earth's surface and formed small grains.

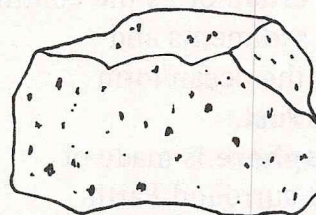
Sedimentary rocks form from **sediments**, which are small pieces of rock, soil, and other materials. The sediments are compacted, or squeezed together, and cemented into a rock. **Clastic sedimentary rocks** such as sandstone are made of pieces of rocks and minerals. **Chemical sedimentary rocks** such as limestone



Fine-grained



Coarse-grained



Medium-grained

form when minerals dissolve in water. The dissolved minerals crystallize out of the solution. **Organic sedimentary rocks** such as coal form from the remains of once-living things.

Metamorphic rocks are formed by heat and pressure. Metamorphic rocks are classified as **foliated** or **nonfoliated**. In foliated rocks, heat and pressure arrange the minerals in the rock into layers. In nonfoliated rocks, the minerals are not layered.

Show What You Know

Match each type of rock with the processes that formed it.

- | | |
|---------------------------|-----------------------------|
| 1. _____ sedimentary rock | a. heat and pressure |
| 2. _____ metamorphic rock | b. cooling of magma |
| 3. _____ igneous rock | c. compaction, or squeezing |