

THE STORY OF THE WRIGHTWOOD MARBLE

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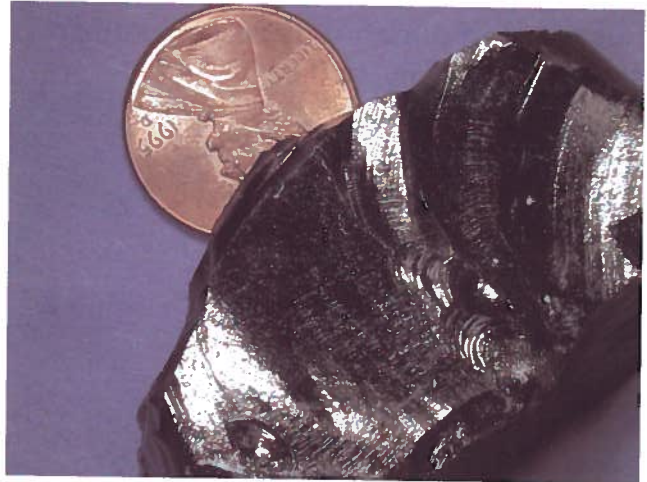
Rocks record stories that can be read if you know the language. Rocks reveal clues about the processes that created them.

Rocks come in three types, defined by the processes that produced them—igneous, sedimentary, and metamorphic. Igneous rocks form from molten material called magma. Igneous rocks are the original source of all other rocks. At one time or another, all parts of Earth were molten.

Some igneous rocks form below Earth's surface from slowly cooling magma. These are called **intrusive** igneous rocks. Other igneous rocks form from lava flowing from fissures and erupting from volcanoes. These are called **extrusive** igneous rocks. Lava cools quickly when it reaches Earth's surface.

These two basic kinds of igneous rock vary in texture and may vary in composition. If a rock cools quickly, it has a fine texture. The crystals are small. Basalt is an example of a fine-textured extrusive rock. It often forms when lava flows onto Earth's surface, where it cools quickly after coming in contact with the cooler air.

Sometimes lava cools so quickly that crystals have no time to form. A glass forms. Obsidian is a volcanic glass. Obsidian is a volcanic glass.



Obsidian is a volcanic glass. It is often dark-colored, but it can be light-colored if the minerals in the lava are right.

When rock forms underground, it usually cools very slowly. Crystals have time to grow larger. Sometimes the crystals of an intrusive igneous rock are huge, even the size of your hand.



This vesicular basalt cooled so quickly that holes were left from gas bubbles that were part of the lava.



This granite formed under Earth's surface. Slow cooling resulted in large, easily identified crystals of the minerals in the sample.