



MAKE YOUR OWN SEDIMENTARY ROCK

This set of activities teaches students about limestone, sandstone, and marble – common geologic features in and around Birmingham. Limestone, sandstone, and marble can be found in various applications throughout the region.

Activity 1

This activity is a simple way of understanding how limestone is formed. Limestone is among the most important and abundant types of sedimentary rocks in Alabama. Limestone rocks are made from the mineral calcite which came from the beds of evaporated seas and lakes and from sea animal shells. This rock is used in concrete and is an excellent building stone for humid regions. It is also used as a flux for refining iron ore. It is one of three ingredients in the Birmingham region that contributed to the growth of the iron industry.

Add ¼ cup of Epsom salts to a mason jar. Fill the jar with various earth materials, described below. Add water until about two inches remain at the top of the jar. Seal the lid and shake until all the materials are thoroughly mixed. Check on the jar every hour or so to see which are settling first and to watch as layers are formed. Once the layers are established, carefully pour the water out of the jar. Let the homemade rock dry completely.

What You'll Need...

- Mason jar with tightly – sealing lid
- Various earth materials – leaves, twigs, pebbles, and sand work well
- ¼ cup of Epsom salts
- Water

Activity 2

This activity allows students to create homemade sandstone, and to shape it into interesting sculptures. It demonstrates how sand is the main ingredient in sandstone, and that it is cemented together by water and a mineral like calcite, represented in this activity by cornstarch.

Sandstone, like limestone, is a sedimentary rock that is often found alongside limestone. Sandstone forms from sand or small rock particles. Sandstone is an important building material. In 1938, civic leaders placed Vulcan on a sandstone pedestal, and many of Vulcan Park and Museum's architectural features are made of sandstone.

Combine sand, water, and cornstarch in a saucepan and heat slowly until it is thick. When it is cool but still pliable, remove from the pan and mold it into a unique design.

What You'll Need...

- 2 cups of sand
- 1 cup of water
- 1 cup of cornstarch
- An old saucepan
- A hot plate

Activity 3

This activity introduces students to one of Giuseppe Moretti's favorite metamorphic rocks, marble. Marble results when heat and pressure are applied to limestone. It is in abundant supply in Alabama; Giuseppe Moretti made many of his finest sculptures out of Alabama white marble. His marble sculpture *Head of Christ*, made out of stone from a quarry in Sylacauga, is displayed in the Alabama State Archives in Montgomery. Other important marble statues include the Lincoln Memorial. To understand the value artists have ascribed to marble, students can go online and gather a portfolio of pictures of marble statues and architecture.