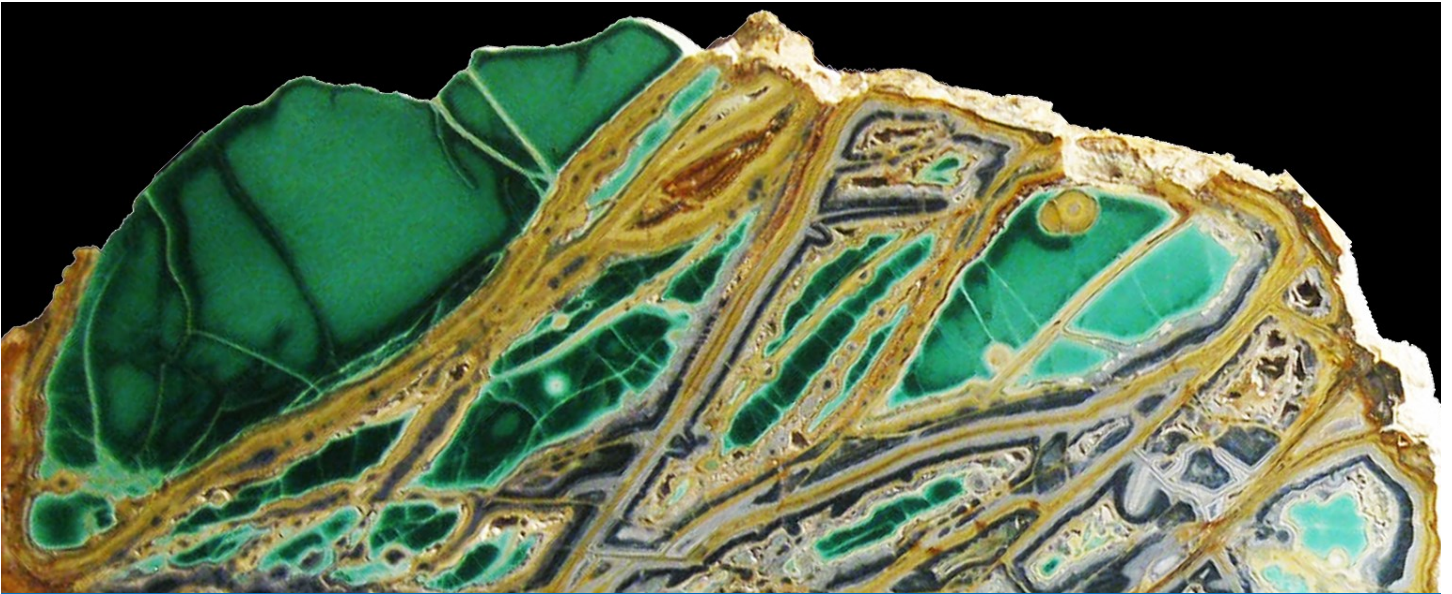


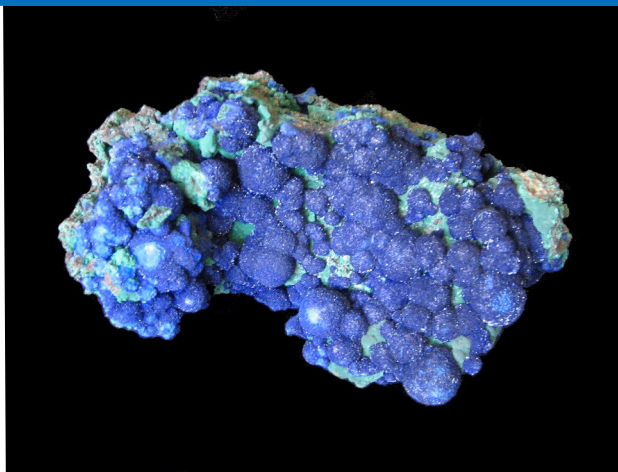
# Gillespie

---

## MUSEUM



### LESSON PLAN—THE ROCK CYCLE



# THE ROCK CYCLE

## Lesson Description

Using real specimens, students will study the three types of rocks: igneous, sedimentary, and metamorphic. We will discuss how and where the rocks form as well as the difference between rocks and minerals. For intermediate students, the lesson can incorporate instruction about the layers of the Earth and about processes such as weathering, erosion, plate tectonics, and mountain building which play a role in the rock cycle.

## Learning Objectives

- Define the three types of rocks and describe how and where they are formed
- Study some rock specimens
- Explore geologic processes that are part of the rock cycle

## Standards

FLNGSS SC.2.E.6.1—Recognize that Earth is made up of rocks. Rocks come in many sizes and shapes.

FLNGSS SC.4.E.6.1—Identify the three categories of rocks: igneous, (formed from molten rock); sedimentary (pieces of other rocks and fossilized organisms); and metamorphic (formed from heat and pressure).

FLNGSS SC.4.E.6.4—Describe the basic differences between physical weathering (breaking down of rock by wind, water, ice, temperature change, and plants) and erosion (movement of rock by gravity, wind, water, and ice).

FLNGSS SC.7.E.6.2—Identify the patterns within the rock cycle and relate them to surface events (weathering and erosion) and sub-surface events (plate tectonics and mountain building).

## Materials Needed

- Gillespie Museum specimen kit (the rocks have the [blue](#) labels)
- Intro to the Rock Cycle video (found on the Gillespie Museum's website under Educational Resources > Geology & Minerals)
- Items listed for rock observation activity

## How To

- First, play the Intro to the Rock Cycle video which will introduce students to the definition of a rock as well as explain the three types of rocks and how they form.
- During or after the video, pass around the rock samples so students may see them up close.
- After the video, complete the rock observation activity described below.
- Tip: please do not allow students to peel the numbered labels off of the rocks!

## Key to Specimens

The rocks are numbered with blue labels. Note: the numbers are not in order.

- #1—Obsidian (igneous)
- #2—Granite (igneous)
- #3—Pumice (igneous)
- #8—Sandstone (sedimentary)
- #9—Conglomerate (sedimentary)
- #10—Limestone (sedimentary)
- #12—Marble (forms from limestone, metamorphic)
- #13—Quartzite (forms from sandstone, metamorphic)
- #14—Gneiss (forms from granite, metamorphic)

## Rock Observation Activity

This activity can be set up in a few ways, depending on what works best for your class and their grade level. Students could be divided into small groups and each group is given one of the specimens to observe; if you have time, the rocks can be passed from group to group so that they get to see more than one. Or, you can set up the rocks at stations and students rotate from station to station, observing different rocks.

### Materials

Sheet of paper or science notebook  
Rock specimens  
Ruler  
Hand lens or magnifying glass

Pencil  
Scale or balance  
Magnet

Have students record the following on a sheet of paper or in their science notebooks:

- Color
- Texture (Coarse or fine-grained? Smooth or rough? Small particles or big particles?)
- Weight (in grams)
- Length (in centimeters or millimeters)
- Is the rock magnetic?
- Do you think it is igneous, metamorphic, or sedimentary?
- Draw a sketch of the specimen

## Extension

- As a “hook,” have students bring in a rock they have collected and share it with the class. Many children have an affinity for collecting rocks! After completing the lesson, ask students if they can identify their rock or determine whether it might be igneous, sedimentary, or metamorphic based on what they know now. (Note: since Florida naturally has very few types of rocks, sometimes the rocks students have collected end up being pieces of asphalt or garden rocks that are not found here, that is ok!)
- Poetry—Have students write a haiku (3 lines, 5/7/5 syllables) about one of the rock specimens.
- Art—Paint rocks (smooth river rocks work best).
- Hands-on/Kinesthetic—If you have access to Lego, ask students to build a model of a rock. Have the different color pieces represent the different minerals found in the rock.