

**Program Description:**

Students discuss the role of heat and pressure in the formation of rocks. Using examples of each rock type, the instructor explains how scientists categorize rocks as igneous, sedimentary, or metamorphic and shows how properties of rocks reflect which of these categories they fall into. Students build a rock collection box with color-coded labels and a key. They are given a hand lens and microscope, which they use to examine the properties of seven common Connecticut rocks. Students are provided with a sheet to help them describe, classify, and identify the rocks, which teachers can use in their classrooms as a follow-up to the program.

**Learning Objectives:**

- . Students will understand the three major categories of rocks (igneous, sedimentary, and metamorphic) and the formation processes each is associated with.
- . Students will build a rock collection box to help them identify and classify rocks.
- . Students will use a hand lens and microscope to examine properties of rocks.

**Alignment with Connecticut Core Science Curriculum Framework:****3.3** *Earth materials have different physical and chemical properties***Grade Level Expectations:**

2. Rocks can be sorted based on properties, such as shape, size, color, weight or texture.
3. Properties of rocks can be used to identify the conditions under which they were formed.
4. Igneous rocks are formed when melted rock cools, hardens, and forms crystals...
5. Sedimentary rocks are formed underwater when small particles of sand, mud, silt or ancient shells/skeletons settle to the bottom in layers that are buried and cemented together over a long period of time...
6. Metamorphic rocks are formed when igneous or sedimentary rocks are reheated and cooled or pressed into new forms...

**5.4** *Humans have the capacity to build and use tools to advance the quality of their lives***Grade Level Expectations:**

1. People design optical tools that enable them to see things better or to see what cannot be seen by human eyes alone.
5. Magnifiers, such as hand lenses, microscopes or make-up mirrors, make objects appear larger.

**Key Vocabulary:** *mineral, crystal, sedimentary, metamorphic, igneous*

**Preparation for Visit:**

You may want to discuss the following questions with your students to prepare them for their visit.

- How are rocks formed? (It is helpful for students to have an idea that rocks can be formed by layers of earth being compressed over time or as a result of heated magma [liquid minerals under the earth's surface] cooling into a solid.)
- How many kinds of rocks have you noticed around you? What makes rocks different from each other?