Were you born a sapphire or an emerald? In ancient times each month was said to have a special gem. This gem was a symbol of the people who were born during that month. For example, the stone for May is emerald, a green gem. People born in May wore jewelry made of emerald. These special stones became known as birthstones and many people still wear their birthstones.
Learning Outcomes

**Project skill:** Explore uses of minerals in our everyday lives.

**Life skill:** Making models.

**Educational standard:** NGSS MS-ESS3-1: Construct a scientific explanation based on evidence.

**Success indicator:** Identify your birthstone and create an accurate model.

---

**What To Do**

Once you learn about your birthstone grab a friend and create your own! You will need a rock and mineral identifying book, clay, needle, paint, paintbrush, and string.

1. Use colored air-dry clay to create beads that resemble gems. Be sure to include all the different faces or cuts you found in your reference book. Use the needle to make a large hole to string the beads.

2. Let the beads dry overnight, then paint the bead the color of your birthstone. Do you need to mix colors together to get the right color?

3. After the paint has dried thread the beads on a short piece of string to make a bracelet or a long piece to make a necklace. Happy Creating!
Background

Rocks and minerals are sometimes lumped into the same category. However, rocks are recycled minerals. Every rock is made of minerals. Just as different cookies have different ingredients, so do rocks. If you know the ingredients of a rock, you can figure out what kind of rock you have. Every rock has one or more minerals, which makes each rock different. Minerals give rocks their texture and color. The Earth’s crust contains more than 3,000 minerals. Most are rare. Only 100 or so are commonly found. The rarest are mostly referred to as gems. Scientists identify minerals by noting qualities such as color, luster, density, fracture ability, and hardness. The hardness is measured using the Mohs Hardness Scale. German geologist Friedrich Mohs developed this scale in 1812.

The minerals on the left are examples that range from soft, at the bottom, to hard, at the top. The common items on the right show what it would take to make a mark on the mineral.
Featured Career

**Mineralogists** study the physical and chemical properties of minerals. Some mineralogists research how to remove minerals from their natural settings. For more details about this fascinating career, check out [environmentalscience.org/career/mineralogist](environmentalscience.org/career/mineralogist).

Did You Know?

Each state has its own gemstone, rock or fossil. You can find yours at [https://statesymbolsusa.org/us/symbols/state](https://statesymbolsusa.org/us/symbols/state)

Resources

For more information and beautiful photos about dozens of minerals, visit:

- minerals.net.
- https://geology.com/minerals/
- https://www.mindat.org/directory.php
SHARE: What was the most challenging part of this activity about minerals?
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

REFLECT: Copper is used in the wiring of cell phones. What would happen if we had no more copper left on Earth?
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

GENERALIZE: How does following directions help you better understand science?
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

APPLY: Give at least one reason why it is helpful to know which gem is your birthstone?
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________