What's In A Name?

Activity Source:
American Geosciences Institute

How did the place where you live get its name? Was it named after an explorer, the town founder, or some other prominent community member? A perhaps surprising number of cities across the country are named for Earth materials found there.

You can find examples from coast to coast. Ironville, New York. Shale City, Illinois. Granite Quarry, North Carolina. Coalville, Utah. Oil City, Pennsylvania. Silverton, Oregon. Mineral, Virginia. And there are many more.

Surprising? Hardly. The availability of raw materials such as rocks, minerals, metals, aggregates, and fossil fuels shapes and is shaped by community activities such as mining, manufacturing, construction, transportation, food production, energy generation, and product recycling.

For example, consider copper. Towns called Copperville can be found in Alaska, Arkansas, Idaho, Maryland, and New Hampshire. There is a Coppervale, California. You can even visit the Coppertown Mining Museum in Michigan.

In this activity, you will look closely at a geographic map of Arizona, research places across the country where raw materials have been instrumental in communities and discuss how communities develop practices and policies that reflect their values in relation to Earth materials.

Materials
• Geologic Map of Arizona (below)
• Computer with internet access

Procedure

1. Look at the geologic map of Arizona shown here. What does the map show you? Where in Arizona can copper be found? Where is copper mined? What does the map tell you about the areas where copper is most commonly mined?

2. Now go online and do some research about the town of Copper Creek, Arizona. Though it is now a ghost town, it was not always so. View a map of Arizona that shows where Copper Creek is located, then find the spot on this geologic map of Arizona. How did the town get its name?

3. Research and discuss: In places such as Copper Creek, how are raw materials like copper extracted from the Earth? How are they processed, distributed, used, and finally disposed of or recycled? How do other raw materials factor into these processes, such as those used in roads, fuels, and packaging?

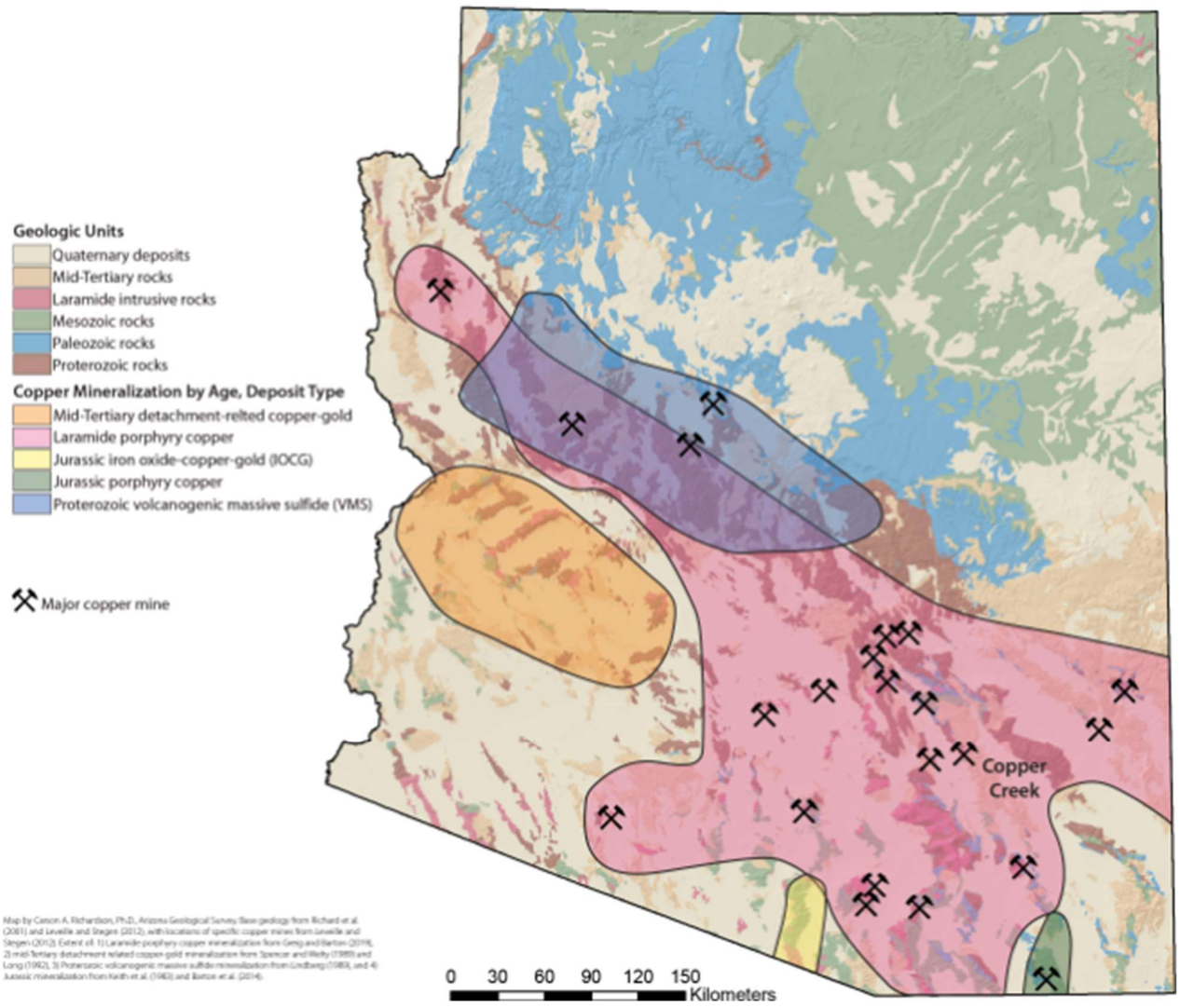
4. Next, visit the website of your state geological survey or state geologist (https://www.stategeologists.org/) and the National Geologic Map Database (https://ngmdb.usgs.gov/). Find geological maps for the area where you live. See which Earth materials can be found there.

5. Finally, search online for a map of your state or region, and read the names of various cities, counties, valleys, hills, and other places. Find another place near you, like Copper Creek, that takes its name from an Earth material that has played a vital role in the community. Research the history of that place and how it got its name.

6. Research and discuss: How do people develop processes that enable them to turn Earth materials to things that have practical value? How do people develop policies that guide the way Earth materials are extracted, processed, distributed, used, and disposed of or recycled?

EARTH SCIENCE WEEK

GEOLOGIC MAP OF ARIZONA, HIGHLIGHTING AREAS WITH COPPER DEPOSITS



NGSS Connections

- Science and Engineering Practices — Natural Resources
- Disciplinary Core Ideas —Obtaining, evaluating, and communicating information
- Crosscutting Concepts — Systems and system models

Metadata

Grade Level: 6, 7, 8, 9, 10
NGSS ESS Topics: Earth's Systems