



Frequently Asked Questions

What is a geologic map?

Like all maps, a geologic map shows where things are. But while other maps highlight where you can find things like streets and streams, a geologic map shows the distribution, nature, and age relationships of rocks, faults, strata, and other geologic features.

How do you read a geologic map?

Each geologic map has a map key, which is a table explaining the meanings of all colors and symbols used to represent geologic features in the map. For example, geologic units usually are listed in order from the youngest (most recently formed) rock types to the oldest (formed earliest in time). The key often will give the name of the each unit, as well as the age and a brief description of that unit's rocks.

In addition to units, the key usually explains the map's use of lines and symbols. Lines might show where two units meet and perhaps bend, fold, and warp up against one another. Symbols might indicate where you can find things like fossils, precious metals, or active faults.

A strike and dip symbol, for instance, is a T-shaped symbol that shows where layers of rock stack up in tilted beds. The number accompanying a strike and dip symbol indicates the angle, or tilt, of the rock bed.



Credit: USGS

How do you use a geologic map?

Like people all over the world, your life is shaped by the geology of your area. Is the ground good for building or farming? Are you likely to find available groundwater? What natural resources are there underground? What is the likelihood of a natural disaster such as an active volcano or earthquake?

As we can see on the map on the other side of this poster, geologic maps are used to identify many features and phenomena, from coal resources and potential landslides to vital ecosystems and animal habitats. Geologic maps are necessary to help us navigate among the many challenges and opportunities offered by the dynamic Earth systems that surround us.

(Adapted from *Geologic Maps*, USGS, and *Meeting Challenges With Geologic Maps*, AGI.)

To learn more about geologic maps, see:

[U.S. Geological Survey \(USGS\)](#)

[USGS/AASG National Geologic Map Database](#)

[USGS/AASG MapView](#)

[USGS's Geologic Maps of the U.S. States](#)

[A Tapestry of Time and Terrain](#)



[Database of the Geologic Map of North America](#)

[USGS's Geology of the Conterminous U.S.](#)

[Paleontology Portal's Tapestry of Time Teacher's Guide](#)

[National Cooperative Geologic Mapping Program \(NCGMP\)](#)

[USGS EDMAP Program - Training the Next Generation of Geoscientists](#)

[USGS EDMAP Program- Webinar](#)

American Association of State Geologists (AASG)

[Find Your State's Geologic Map Here](#)

National Park Service (NPS)

[NPS Geologic Resources Inventory](#)

National Aeronautics and Space Administration (NASA)

[NASA Earth Mapper](#)

American Geosciences Institute (AGI)

[Geologic Map Day](#)

[AGI's Meeting Challenges with Geologic Maps](#)

Additional:

[OneGeology Portal](#)

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