

# The Earth Is One Big Rock

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## THE EARTH IS ONE BIG ROCK

? Geology is the Earth science that studies rocks and their composition and changes that happen but can also include liquids on the planet. The study overlaps with many others.

? Since the Earth is a sphere, depictions of it on flat maps result in the poles being depicted abnormally large. This type of map is called the Mercator projection.

? The Earth's rocks are divided into three categories: igneous, sedimentary, and metamorphic. Metamorphic rocks are formed when igneous, sedimentary, or older metamorphic rocks are subjected to intense temperatures or pressures.

? Cartography is the study of maps and the science of creating them. Modern maps can be political, geological, topographical, or meteorologically orientated, just to name a few categories.

? The Queen Charlotte Fault in Canada and Alaska connects with the Fairweather Fault in Alaska to create an earthquake zone that's more active than the notorious San Andreas Fault. Alaska records more earthquakes than California.

? The lithosphere is the crust and the upper mantle of the Earth's surface. Geologists divide the lithosphere into oceanic and continental lithospheres.

? In 1935, Charles Francis Richter presented his "Richter scale" to the scientific community to determine the magnitude of earthquakes. The system has since been revised and renamed the local magnitude scale, but it's based on Richter's work.

? Igneous rocks are formed from magma cooling in the Earth's crust. They make up about 90-95% of the Earth's crust by volume and about 15% of the land surface.

? Silicates comprise the majority of the Earth's mantle. The mantle comprises 67% of the Earth's mass, 84% of its volume, and is 1,800 miles thick.

? The New Madrid seismic zone extends from Missouri's boot-heel north into the southern tip of Illinois and south into northeastern Arkansas for about 150 miles in total length.

? The earliest maps were actually maps of the land of the afterlife. Coffins in ancient Egypt's Middle Kingdom (ca. 2,055-1,650 BCE) were painted with schematic depictions and the route the deceased would take.

? The moment magnitude scale is based on the Richter scale, although it's more precise. It was proposed in 1979 by Thomas C. Hanks and Hiroo Kanamori.

? The geological theory of "plate tectonics" is that the Earth's lithosphere is comprised of several, moving masses known as tectonic plates. The process began about 3.4 billion years ago.

? The "Hawaii hotspot" doesn't refer to that state's nice weather, but it is a hotspot of volcanic activity. The USGS lists six active volcanos on the islands.

? Lapis lazuli is a dark blue metamorphic rock that is primarily found in Afghanistan but also in a few other places in the world. It was popular in ancient jewelry.

? Sedimentary rocks are formed when rocks, minerals, and organic matter accumulate and cement in layers. About 8% of the Earth's crust is a sedimentary rock.

? The Great Chilean Earthquake of 1960 is the most powerful earthquake ever recorded. The quake measured 9.4-9.6 on the moment magnitude scale. The quake triggered a tsunami and mudslides.

? Sapphire & Steel was a British 1980s sci-fi series about two 'time travelers' played by Joanna Lumley (Sapphire) and David McCallum (Steel). Other characters were also named after minerals.

? Scientists believe that the next "supercontinent" to form will be the combination of Eurasia and the Americas, which they already call "Amasia." Don't worry, though, this won't happen for about 200 million more years.

? Basalt is the most common igneous rock on Earth, comprising about 90% of all volcanic rocks. It's also the most common rock on the Earth's crust.

? The Greek geographer, Ptolemy (ca. CE 100-170), made the first map that showed the Earth as a sphere. He also included longitude and