



Find-A-Feature: Red Rocks

By [Educational Resources](#)

Have you ever noticed that rocks can be different colors, such as gray, black, green, yellow, brown, and red? These colors can give us clues about what the rock is composed of, and possibly even what type of environment it formed in. For this Find-A-Feature challenge, we challenge you to look around you for examples of red rocks.

Why are some rocks reddish in color? The rust-colored grains within rock likely contain minerals made up of iron and oxygen, called iron oxides. One example of an iron oxide is hematite (Fe_2O_3), which is abundant in Earth's crust. Hematite is in rocks, too, and is also in much of the clay that is used to make bricks. Iron in the hematite (or other iron-containing minerals) rusts when exposed to oxygen and water.

A lot of the sandstone found in the desert Southwest of the United States is reddish in color - consider Grand Canyon, in Arizona, or Canyonlands National Park, in Utah. When sedimentary rock has a reddish color, it often indicates that the sediment was exposed to oxygen (in the air) before or during burial. For example, the Navajo Sandstone seen in many national parks and monuments (such as Zion and Grand Staircase-Escalante) formed from ancient desert sand dunes. Other red rock (such as some of the siltstone layers seen in Bryce Canyon) were formed by deposition in lakes and streams. Rock that is formed from deposition in deep seas, in comparison, is more likely to be other colors, such as gray or black, due to lower oxygen in deep water.

Look at the cliffs and buildings near you. Can you find rust-colored, reddish-brown hues? Show us what you see! Send your pic to usgs_yes@usgs.gov or #findafeature on social media.

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Current Challenge Instructions and Gallery

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