

EarthComm Earth's Natural Resources: Mineral Resources and Your Community Activity 4

This investigation will help you to:

- Mapping
- Geochemistry
- Geophysics
- To learn more about mineral supply and demand, visit the following web sites:

Mapping

- "Reading Geologic Maps" - About.com
Site provides an overview on reading and interpreting geologic maps.
- "What is a Geologic Map?" - USGS
General overview of what geologic maps are and why they are important to geologists. Also gives a brief introduction to the National Cooperative Geologic Mapping Program.
- "Why geologic maps are made and how they are used" - USGS
Site briefly reviews why geologists make and use geologic maps in the assessment of natural resources and natural hazards.
- "Remote Sensing in the USGS Mineral Resource Surveys Program in the Eastern United States" - USGS
Site uses a case study to illustrate how the modern techniques of remote sensing (aerial images) are helping geologists to locate potential mineral deposits.

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Geochemistry

- "Carolina Slate Belt Gold Deposits in Virginia, North Carolina, South Carolina, and Georgia" - USGS
Online handout presents the steps that geoscientists follow to assess mineral deposits through a real example.
- "Stable Isotopes and Mineral Resource Investigations in the United States" - USGS
Site explains how analyses of the elements oxygen, hydrogen, sulfur, and carbon can be used to help in locating copper, lead, and zinc, gold, and silver deposits. Presents case studies in the eastern U.S.

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Geophysics

- "3-D Geologic and Seismic Velocity Models of the San Francisco Bay Region" - USGS
This site presents an actual study of data used to assess whether or not a site would make a good drillsite. Shows how scientists started with a geologic map and then used geophysical techniques to produce several maps. These maps were then used to produce a 3-D model of the subsurface. Includes color images.
- "Western Region Mineral Resources" - USGS

Visit this site to gain access to bedrock and surficial surveys, geophysical research, and mineral resource studies that are ongoing in western U.S. Includes color samples of maps.

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To learn more about mineral supply and demand, visit the following web sites:

- "Monitoring Cyclical Changes in U.S. Metals Activity" - USGS Fact Sheet 71-98
Fact sheet explains how fluctuations in the economy can affect the metals activity of the U.S.
- "Mineral Commodity Surveys" - USGS
Click on the year and mineral commodity of interest to learn about the worldwide supply and demand of that resource.
- "Metal Industry Indicators" - USGS
Online monthly newsletter that analyzes and forecasts the economic health of five metal industries: primary metals, steel, copper, primary aluminum, and aluminum mill products.

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