

Table of Contents – SME/GEM CD (2009 NSTA Conference in Phoenix, AZ)

Rock and mineral activities

1. Rock and Mineral ID and Samples (identification of rock and mineral samples, with photos and location in egg carton)
2. Lessons correlating to samples
 - Minerals in My Life (grade 1)
 - Ride the Rock Cycle (grade 3)
 - Rocks and Minerals: What do we do with them? What would we do without them? (grade 7)
 - Supply and Demand for Nonrenewable Resources (secondary)

“The Wonder of Copper” poster (pdf format)

Student tabs (classroom newspapers)

1. “Copper: More Than Metal”
2. “What On Earth? Arizona Rocks and Minerals”

Educator resources

1. “The Life Cycle of a Mineral Deposit” (USGS)
2. “Careers in the Mineral Industry” (SME)
3. Labs and demonstrations
 - Supply and Demand for Copper (economics of supply and demand)
 - From Earth to Metal Copper Labs (oxide and sulfide processing simulations)
4. Order form for Mineral Information Institute (Mii) resources

Internet sites of value to educators and students

- “Ground Rules” video (overview of mining worldwide, Caterpillar 2009)
<http://www.cat.com/cda/components/fullArticle?m=322875&x=7&id=1565862>
- Education pages presented by Freeport McMoRan Copper & Gold, Inc.
http://www.fcx.com/envir/ed_train.htm
- A variety of educational resources from the Mineral Information Institute (Mii)
www.mii.org
- Professional development for educators, including mining and mineral workshops; “The Wonder of Copper” poster with links to activities and information from the Arizona Foundation for Resource Education (AFRE)
www.afre.org
- The Society for Mining, Metallurgy, and Exploration (SME) - a professional organization for those working in the fields of geology and mining
www.smenet.org

- Educational displays, special events, and field trips for classes offered by the Arizona Mining and Mineral Museum
<http://www.admmr.state.az.us/General/museum.html>
- Information about copper and the copper mining industry from the Copper Development Association (CDA)
www.copper.org
- Participate in a blog designed for teachers at www.coppertalk.org or join them on Twitter at <http://twitter.com/Coppertalk>
- "Digging In: Bisbee's Mineral History" (10-minute film)
www.bisbeemuseum.org.
- Information on all things geological and hydrological throughout the USA, including maps, data, and activities from the United States Geological Survey (USGS)
www.usgs.gov
- The vital role geosciences play in society's use of resources, resilience to natural hazards, and the health of the environment - presented by the American Geological Institute (AGI), a nonprofit federation of 46 geoscientific and professional associations
<http://www.agiweb.org/>
- Information from the National Sand, Stone, and Gravel Association (NSSGA) which represents the crushed stone, sand and gravel, and aggregate industries
<http://www.nssga.org/>
- Information and resources from the Women in Mining Education Foundation (WIM)
<http://www.womeninmining.org/ef-main.asp>