

Rock Cycle Resources

Lunar and Planetary Institute Education Pages

Educator Resources: <http://www.lpi.usra.edu/education/resources/>

Workshops and Field Trips: <http://www.lpi.usra.edu/education/workshops/>

Activities we are doing today include portions of "The Scoop on Moon Dirt" at http://www.lpi.usra.edu/education/explore/LRO/activities/moon_dirt/

Texas Bureau of Economic Geology

http://www.beg.utexas.edu/edu/ed_res.php

Resources - Texas geologic, tectonic, oil resources, and geography maps (and others!) are available for purchase

Texas Geologic Map: <http://www.lib.utexas.edu/geo/pics/texas92a.jpg>

Information: http://www.lib.utexas.edu/geo/txgeo_map.html

Texas Tectonic Map: <http://www.lib.utexas.edu/geo/pics/tectonic2.jpg>

Information: http://www.lib.utexas.edu/geo/fieldguides/txtect_map.html

Other Maps : <http://www.lib.utexas.edu/geo/maps.html>

Texas Coastal Monitoring Program - High school students, teachers, and scientists work together to gain a better understanding of dune and beach dynamics on the Texas coast. Scientists from the University of Texas at Austin provide the tools and training needed for scientific investigation. Students and teachers learn how to measure the topography, map the vegetation line and shoreline, and observe weather and wave conditions. By participating in an actual research project, the students obtain an enhanced science education. The students' efforts also provide coastal communities with valuable data on their changing shoreline.

<http://coastal.beg.utexas.edu/thscmp/index.html>

Geological Highway Map of Texas

http://www.bigbendbookstore.org/store/index.php?main_page=product_info&products_id=139

United States Geologic Survey

Geology Division - <http://geology.usgs.gov/index.htm> (earthquakes, volcanoes, climate change); current volcanic activity at a plethora of volcanic monitoring stations, online data, images, and lots of classroom ideas

Water Division - <http://water.usgs.gov/> (stream flow, flood hazards)

Education Materials - <http://education.usgs.gov/common/secondary.htm>

Exploring Earth

http://www.classzone.com/books/earth_science/terc/navigation/home.cfm

Some great visualizations, including a wonderful series that demonstrates how we have modeled Earth's interior structure using seismic waves.

Rock Cycle

<http://www.learner.org/interactives/rockcycle/index.html>

This interactive includes information and matching activities involving types of rocks, how rocks change, and rock cycle diagrams.

Black Hawk College Geology Labs

<http://facweb.bhc.edu/academics/science/harwoodr/GEOL101/Study2.htm>

These labs include interactive online rock and mineral identification activities, and plate tectonic activities.

Geology.com

<http://geology.com/rocks/>

Contains photos and descriptions of igneous, sedimentary, and metamorphic rocks

Geology 101 at Georgia Perimeter College

<http://facstaff.gpc.edu/~pgore/geology/geo101.htm>

Scroll down for links to a variety of lecture notes, on minerals, igneous, sedimentary, metamorphic rocks, and more. Nice overview of terms and processes. Approximate target; teacher background.

Rock Identification Key

<http://www.rockhounds.com/rockshop/rockkey/index.html>

This site has details on a variety of common rocks and steps the user through a key to identify the rock.

Resources for Teaching Geophysics (and Earth Science) in the 21st Century

<http://serc.carleton.edu/NAGTWorkshops/geophysics/>

GREAT animations and visualizations for plate tectonic, volcanism, seismicity... you have to poke around a bit to get at complete activities. Use the left nav bar to get visualizations

Plate Tectonics: <http://serc.carleton.edu/NAGTWorkshops/geophysics/visualizations/PTMovements.html>

Earthquakes: <http://serc.carleton.edu/NAGTWorkshops/geophysics/visualizations/earthquakes.html>

BBC Education Online

http://www.bbc.co.uk/schools/ks3bitesize/science/environment_earth_universe/rock_cycle/revise1.shtml

Nice interactive image of the rock cycle

Earth Science Explorer - Rock Cycle

<http://www.cotf.edu/ete/modules/msese/earthsysflr/rock.html>

Nice overview, not comprehensive; teacher notes don't add much. Approximate target: middle school.

Digital Library for Earth Systems Education

<http://www.dlese.org/library/index.jsp>

Lots of tried and true activities. You will have to poke around; don't go here if it's 2:00 am and you need an activity for the next morning. You can search by type of product (activity, curriculum, laboratory, animation, etc), grade level, and standard. All vetted by classroom teachers. Be sure to look at some of the undergrad materials; these may be appropriate for your classroom.

Earth Observing System

<http://eosps0.gsfc.nasa.gov/>

Great global datasets that can be plotted and compared. Good for global change over the past few decades, not necessarily for long-term change.

Videos by Dr. Richard Alley/ Penn State

<http://www.youtube.com/watch?v=6mziX8yuq7w> – fossil fuel use

<http://www.youtube.com/watch?v=7-yJyM2s6ow> – Geo man

http://www.youtube.com/watch?v=so_-OaDCddo – stratigraphy

<http://www.youtube.com/watch?v=rRBSTPie28I> – beach erosion

<http://www.youtube.com/watch?v=utypgC7h6f4&feature=related> – minerals (silicates)

Science Bulletins

<http://www.amnh.org/sciencebulletins/>

Updates, articles, images, and information about current geologic events

Societies

American Geophysical Union - <http://www.agu.org/education.shtml>

The American Geological Institute - <http://www.agiweb.org/geoeducation.html>

Great classroom lesson ideas and resources

Geological Society of America - <http://www.geosociety.org/educate/>

Lunar and Mars Soil Simulant can be ordered from <http://www.planet-llc.com/pages/products/simulant.htm>

NASA Solar System Ambassadors – Texas

<http://www2.jpl.nasa.gov/ambassador/TX.html>