Internet Resources for Teachers from Center for Earthquake Research and Information

There is no guarantee that information contained in this list or to its links is accurate. It was compiled to provide teachers with ideas and ready-to-use lesson plans related to earthquakes and plate tectonics.

To offer suggestions for this list, e-mail mdry@memphis.edu.

Lesson Plans for Grades K-12

The Active Earth (Grades 3-5)

http://www.nationalgeographic.com/xpeditions/lessons/07/g35/earth.html

Aftershocks Continue to Rock India (Grades 9-12) http://images.cnn.com/2001/fyi/lesson.plans/01/30/india.quake.2/

Aftershocks in El Salvador (Grades 9-12)

http://images.cnn.com/2001/fyi/lesson.plans/01/19/quake.aftermath/index.html

Big Trouble in Earthquake Country (Grades 9-12)

http://www.lhs.berkeley.edu/SII/SII-eqcountry/5eqcountry.homepage.html

Birth of the Earth (Grades 6-8)

http://school.discovery.com/lessonplans/programs/birthofearth/

Building a Model to Withstand an Earthquake (Grades 4-8)

http://www.pbs.org/wgbh/nova/teachers/activities/2302 shook.html

Candy Quakes (Grade 8)

http://www.uen.org/Lessonplan/preview.cgi?LPid=1113

The Changing Earth (Grades 3-4)

http://www.askeric.org/cgi-bin/printlessons.cgi/Virtual/Lessons/Science/Geology/GLG0002.html

Constructing Earthquake-Resistant Buildings (Grades K-12)

http://www.pbs.org/wgbh/nova/teachers/activities/2116_killerqu.html

Constructing Earthquake-Resistant Buildings (Grades 6-8)

http://school.discovery.com/lessonplans/programs/earthquakeproof/

Continental Drift (Grades 6-8)

http://school.discovery.com/lessonplans/programs/continentaldrift/index.html

Core of the Earth (Grade 8)

http://www.askeric.org/cgi-bin/printlessons.cgi/Virtual/Lessons/Science/Geology/GLG0006.html

Core Sampling with Cupcakes (Grades 5-8)

http://nesen.unl.edu/lessons/geology/coresamples.html

Creating a Seafloor Diagram (Grades K-12)

http://pao.cnmoc.navy.mil/educate/neptune/lesson/art/seafloor.htm

Cupcake Core Sampling (Grades K-12)

http://www.coaleducation.org/lessons/lesson.htm

Designing Structures to Perform Well During an Earthquake (Grades K-12)

http://mceer.buffalo.edu/education/exercises/struct.asp

Designing Structures to Withstand Earthquakes (Grades 2-10)

http://www.nsf.gov/od/lpa/nstw/teach/nstw1996/shake/start.htm

Does the Earth Have the Shakes?

http://geosun.sjsu.edu/alert/products/platects1.pdf

Dynamic Earth (Grades K-5)

http://school.discovery.com/lessonplans/programs/dynamicearth/

The Dynamic Earth (Grades 3-8)

http://www.wnet.org/wnetschool/origlessons/dynamic_earth/index.html

The Earth Bowl (Grades K-3)

http://sln.fi.edu/tfi/activity/earth/earth-1.html

(Layers of the earth in a see-through bowl.)

Earth Changes (Grades 4-6)

http://www.askeric.org/cgi-bin/printlessons.cgi/Virtual/Lessons/Science/Geology/GLG0008.html

Earthquake Activities (Grades K-8)

http://quake.ualr.edu/schools/elem.htm

Earthquake Activities (Grades 7-12)

http://tremor.nmt.edu/activities.htm

Earthquake Activities (Grades K-12)

http://web.ics.purdue.edu/~hborcher/EAS%20102%20APT/earthquake.html

Earthquake Country Unit (Grades 4-7)

http://www.mountainlake.org/ed/local/quake.htm

Earthquake Depth (Grades 9-12)

http://btc.montana.edu/nten/trc/default.shtml

Earthquake Epicenters and Magnitudes (Grades 4-12)

http://btc.montana.edu/nten/trc/default.shtml

Earthquake Experiments from FEMA (Grades K-8)

http://www.fema.gov/kids/jessnsam/

Earthquake Internet Scavenger Hunt

http://www.brookscole.com/earthscience d/special features/scavenger.html

Earthquake Lesson Plans (Grades K-12)

http://visearth.ucsd.edu/VisE_teach/

Earthquakes! (Grades 6-8)

http://cse.ssl.berkeley.edu/lessons/indiv/davis/hs/QuakesEng3.html

Earthquakes (Grade 5)

http://www.uen.org/Lessonplan/preview.cgi?LPid=2696

Earthquakes and the Behavior of Earth Materials (Grades K-3)

http://www.owu.edu/~mggrote/pp/geology/c_earthquakes.html

Earthquakes: Causes and Effects (Grade 4)

http://www.learnnc.org/LearnNC/lessonp.nsf/docunid/136E3FC93ACCDDA98525

Earthquakes, Faults and Moving Plates Using Food and Candy (Grades 4-8)

http://www.rit.edu/%7Ecomets/pages/lessonplans/earthquakes.html

Earthquakes: Get Ready for the Big One (Grades 6-8)

http://www.summerproductions.com/earthworks/quakes/resources.html

Earthquakes: Getting Ready for the Big One (Grades 6-8)

http://school.discovery.com/lessonplans/programs/earthquakes-gettingready/

Earthquakes: Learn from the Past, Prepare for the Future (Grades 9-12)

http://school.discovery.com/lessonplans/programs/earthquakes/

Earthquake Slip: A Classroom Exercise (Grades 7-9, but can be adapted) http://jjlahr.com/science/earth/science/tabletop/earthshaking/index.html

Earthquakes, Plate Tectonics and Volcanoes (Grades 7-12)

http://www.glencoe.com/sec/science/search/searchVoyages.php4

Earthquakes Theme Page (links to lessons)

http://www.cln.org/themes/earthquakes.html#top

Earthquakes and Volcanoes (Grades 3-5)

http://www.nationalgeographic.com/xpeditions/lessons/15/g35/earthquakes.html

Earthquakes and Volcanoes (Grade 6)

http://www.sasked.gov.sk.ca/docs/midlsci/gr6ubmsc.html

Earthquakes and Volcanoes (Grades 6-12)

http://etc.sccoe.org/i2000/Equakes1.html

Earthquakes WebQuest (Grades 5-8)

http://www.askeric.org/cgi-bin/printlessons.cgi/Virtual/Lessons/Science/Geology/GLG0035.html

Earthquakes: "What About Me?" (Grade 3)

http://www.uen.org/cgi-bin/websql/lessons/l4.hts?id104

Earthquake Waves and Their Destructions: 7 Activities (Grades 7-12)

http://www.iit.edu/~smile/ph9309.html

Earth Science Lessons: Plate Tectonics, Earthquakes, Volcanoes, Prehistoric Earth (Grades 5-8)

http://volcano.und.nodak.edu/vwdocs/vwlessons/lessons/lesson.html

Earth Science Activities from a USGS Scientist

http://www.jjlahr.com/science/earth science/

Earth Science (Grades K-12)

http://www.glencoe.com/sec/science/lep_science/earth_science/index.html

Earth Science (Grade 10)

http://www.bced.gov.bc.ca/irp/science810/10earsp.htm

Earth Science and Geology Lesson Plans (Grades 11-12)

http://www.bced.gov.bc.ca/irp/esg/esgtoc.htm

Earth's Dramatic History (Grades 6-8)

http://school.discovery.com/lessonplans/programs/earthspast/

Earth's Interior and Plate Tectonics Theory (Grades 5-6)

http://www.askeric.org/cgi-bin/printlessons.cgi/Virtual/Lessons/Science/Earth_Science/EAR0203.html

Edible Four-Layer Earth (Grades K-8)

http://www.sd5.k12.mt.us/glaciereft/geoeatk8.htm

Edible Rock Layers (includes faulting) (Grades 5-8)

http://www.coaleducation.org/lessons/lesson.htm

Finding an Earthquake's Epicenter (Grades 9-12)

http://www.educationworld.com/a tsl/archives/02-1/lesson001.shtml

Geologic Time (Grades 5-8)

http://www.geol.vt.edu/vesr/gtu.html

Geologic Time (Grades 7-12)

http://nesen.unl.edu/lessons/geology/journey 2.htm

Geological Time and the Evolution of the Earth (K-3)

http://www.owu.edu/~mggrote/pp/geology/c_geological.html

Geologic Time: Relative and Absolute Dating (Grades 9-12)

http://btc.montana.edu/nten/trc/default.shtml

Geological Timeline (Grades 3-8)

 $\underline{http://www.coaleducation.org/lessons/primary/geol/geotim.htm}$

Great Continental Drift Mystery

http://www.yale.edu/ynhti/curriculum/units/1991/6/91.06.05.x.html

The Great San Francisco Earthquake of 1906 (Grades 5 and up)

http://www.teacherhelp.com/your_classroom/lesson_plans/lessonpln2.html

The Impact of Natural Hazards Around the World (Grades 6-8)

http://www.nationalgeographic.com/xpeditions/lessons/15/g68/hazards.html

Interactive Online Earthquake Lesson Plan (Grades 9-12)

http://www.wnet.org/edonline/concept2class/month2/lp hs intro.html

Kobe, Japan Earthquake Report (Grades 5-9)

http://inspire.ospi.wednet.edu:8001/curric/land/kobett.html

Layer Cake Core Drilling (K-12)

http://www.coaleducation.org/lessons/lesson.htm

Layers of the Earth (Grades 2-3)

http://www.coaleducation.org/lessons/sme/elem/2.htm

Layers of the Earth (Grades 2-3)

http://www.askeric.org/cgi-bin/printlessons.cgi/Virtual/Lessons/Science/Geology/GLG0051.html

Layers of the Earth (Grades 2-6)

http://www.askeric.org/cgi-bin/printlessons.cgi/Virtual/Lessons/Science/Geology/GLG0011.html

Learn from the Past, Prepare for the Future

http://www.teachers.yourhomework.com/hanchon/intro_erthqk_discoverychannel_plan.htm

The Living Earth (Grades 3-5) Glaciers and other natural forces that shape the Earth. http://school.discovery.com/lessonplans/programs/livingearth/

Making a Shake Table (Grades 7-12)

http://mceer.buffalo.edu/education/exercises/shtable.asp

Mapping Earthquakes, Earthquake Depth and Earthquake Magnitude (Grades 7-12) http://atlas.geo.cornell.edu/education/instructor/earthquakes/index.html

Mid-America Earthquake Center Education Program: Lessons and Activities (Grades K-12) http://mae.ce.uiuc.edu/Education/Teachers/resource.htm

A Model of Sea-Floor Spreading (Grades 7-12)

http://www.ucmp.berkeley.edu/fosrec/Metzger3.html

A Model of Three Faults (Grades 7-12)

http://interactive2.usgs.gov/learningweb/teachers/faults.htm

Moving the Earth (Grade 5)

http://www.uen.org/Lessonplan/preview?LPid=2192

Musical Plates (Grades 4-12)

http://k12science.ati.stevens-tech.edu/curriculum/musicalplates2/index.shtml

Natural Frequency of Buildings (Grades 7-12)

http://www.geo.arizona.edu/K-12/teachers/chriskaus/FREQTEXT.HTML

Online Earthquake Lesson (Grades 4-8)

http://www.uen.org/utahlink/activities/view activity.cgi?activity id=6985

Pangea "All Lands" (Grades 4-6)

http://www.sd5.k12.mt.us/glaciereft/pangea.htm

Peanut Butter and Jelly Sandwich Faults (Grades 3-5) http://web.ics.purdue.edu/~wines/60minutelesson.html

Plate Tectonics: 10 Activities

http://www.iit.edu/~smile/ph9312.html

Plate Tectonics and Earthquakes (Grade 6)

http://www.empirenet.com/kevinl/teacher/earthquake lesson links.htm

Plate Tectonics and Snickers (Grades 5-8)

http://sciencespot.net/Pages/classearth.html#Anchor3

Plate Tectonics and the Surface of the Earth (Grades K-3)

http://www.owu.edu/~mggrote/pp/geology/c_plate.html

Plate Tectonics Units Covering Earthquakes, Volcanoes and Hazards (Grades K-6)

http://www.msnucleus.org/membership/html/k-6/pt/index.html

Plate Tectonics with an Orange (Grades K-12)

http://www.coaleducation.org/lessons/lesson.htm

Plate Tectonics Unit (Grade 6)

http://etc.sccoe.org/i2000/tecton.htm

Plate Tectonics Using Clay (Grades 5-9)

http://leapnyc.org/lessonplans/sampleplan/Sample1_/sample1_.html

Prepare Yourself for Natural Hazards (Grades K-2)

http://www.nationalgeographic.com/xpeditions/lessons/07/gk2/prepare.html

The Relationship Between Earthquakes and Plate Boundaries (Grades 4-9)

http://btc.montana.edu/nten/trc/default.shtml

Researching Geologic Time in Pairs (Grades 7-12)

http://nesen.unl.edu/lessons/geology/journey 2.htm

Rock and Roll: Earthquake-Resistant Homes (Grades 5-8)

http://sciencespot.net/Pages/classearth.html#Anchor-49575

Seismology Lessons from Prof. Larry Braile (Grades 5-12)

http://www.eas.purdue.edu/~braile/

Seismology Lessons from Indiana University (Grades 7-12)

http://www.indiana.edu/~pepp/

Shake, Rattle and Erupt: A Unit on Plate Tectonics, Earthquakes and Volcanoes (Grades5-8)

http://hyper.vcsun.org/HyperNews/nherr/get/csp_lesson_plans_2001/4.html

Shake, Rattle, and Liquefy (Grades 6-10)

http://www.wa.gov/dnr/htdocs/ger/earthcon.htm

Shake, Rattle and Roll (Grades 5-8)

http://www.covis.nwu.edu/geosciences/activities/shake/

Soil and Earthquakes (Grades 4-12)

http://mceer.buffalo.edu/education/exercises/soil.asp

Stress and Strain in the Earth's Crust (Grades 5-8)

http://www.iit.edu/~smile/ph9003.html

Structural Geology Laboratory (K-12)

http://www.coaleducation.org/lessons/lesson.htm

Structure of the Earth (Grade 3)

http://www.sasked.gov.sk.ca/docs/elemsci/gr3ubesc.html

Table-top Earthquakes (Grades 9-12)

http://pubs.usgs.gov/of/1998/ofr-98-0767/

Tasty Quakes Using Gelatin (Grades K-6)

http://www.fema.gov/kids/tastyeq.htm

The Three Little Pigs in Earthquake Land (Grades K-2)

http://www.nationalgeographic.com/xpeditions/lessons/15/gk2/threepigs.html

Tracking Earthquakes Around the World (Grades 6-12)

http://school.discovery.com/lessonplans/activities/trackingearthquakes/

Trembling, Spewing Earth: Earthquake Impacts on Human Activity (Grade 7)

http://www2.una.edu/geography/statedepted/lessons/trembling/trembling.html

Understanding the Global Effect of a Major Earthquake (Grades 5-12)

http://scied.gsu.edu/Hassard/mos/con9.html

Understanding the Geologic Time Scale (Grades 7-12)

http://www.tmm.utexas.edu/education/lessonplans/time/index.html

Using the Internet to Learn about Earthquakes (Grades 4-9)

http://webback.educ.umt.edu/cpgrant/ILPS/HuiQuake.htm

Virtual Earthquake Lab (Grade 8)

http://www.westga.edu/~anazzal/MGED4530/WebPages/ChrisyMcCormick/virtualearthquakelab.htm

Visual Model of the Planet Earth (Grades 3-9)

http://www.askeric.org/cgi-bin/printlessons.cgi/Virtual/Lessons/Science/Earth Science/EAR0023.html

Writing the Geologic History of Your County (Grades 7-12)

http://nesen.unl.edu/lessons/geology/geohistory.html

Additional Sites Containing Earthquake and Earth Science Lesson Plans:

Big Chalk

http://www.bigchalk.com/cgi-

<u>bin/WebObjects/WOPortal.woa/Homework/Middle_School/Resource/Science/Earth_Science/Geology_2</u> 2440.html

Earth Science Lesson Plans from UC-Berkeley with National Science Standards Matrix http://www.ucmp.berkeley.edu/fosrec/Matrix.html

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

Lesson Plans

http://www.teach-nology.com/

Science Lesson Plans from Frey Scientific for Grades 5-12 http://www.freyscientific.com/lessons/index.jsp

Earth Science Lesson Plans from the Web http://www.edhelper.com/cat251.htm

University of Arkansas at Little Rock: Arkansas Center for Earthquake Education and TechnologyTransfer (ACEETT) http://quake.ualr.edu/schools/

Additional Teacher Resources

A Listing of Earth Science Books http://www.geometry.net/basic e bk/earth science activities.html

Earthquakes for Teachers http://earthquake.usgs.gov/4teachers/

Free (or nearly) Teacher Training from the Federal Emergency Management Agency (includes a one-week workshop on geology and seismology) http://www.fema.gov/kids/fematce.htm

Geologic Time Scale (A great site for so many topics.) http://www.EnchantedLearning.com/subjects/Geologictime.html

Multiple Intelligence Approach to Teaching Rocks and Minerals http://www.chariho.k12.ri.us/curriculum/MISmart/ocean/MIRocks.htm

University of California-Berkeley Seismological Laboratory (Teaching Resources) http://www.seismo.berkeley.edu/seismo/faq/teaching.html

General Earthquake Information

American Red Cross: Earthquakes

http://www.redcross.org/services/disaster/keepsafe/readyearth.html

Associated Bay Area Governments

http://www.abag.ca.gov/bayarea/eqmaps/kids.html

Center for Earthquake Research and Information

http://www.ceri.memphis.edu/

Earthquakes for Kids from the USGS

http://earthquake.usgs.gov/4kids/

Earthquakes: A publication from the USGS

http://pubs.usgs.gov/gip/earthq1/

Earth Science Explorer

http://www.cotf.edu/ete/modules/msese/explorer.html

Educational Materials from the United States Geological Survey

http://mac.usgs.gov/mac/isb/pubs/forms/educmat.html

FEMA (Federal Emergency Management Agency)

http://www.fema.gov/hazards/earthquakes/eqklinks.shtm

http://www.fema.gov/hazards/earthquakes/

http://www.fema.gov/kids/

General Earthquake Information

http://mae.ce.uiuc.edu/Education/Teachers/general.htm

Global Earthquake Response Center

http://www.earthquake.org/teachers.html

IRIS Consortium (Incorporated Research Institutions for Seismology): Education and Outreach

http://www.iris.washington.edu/about/ENO/

National Earthquake Information Center

http://neic.usgs.gov/

Saint Louis University Earthquake Center

http://www.eas.slu.edu/Earthquake_Center/

Seismology Resources for Teachers from the American Seismological Society of America

http://www.eas.purdue.edu/~braile/edumod/seisres/seisresweb.htm

Seismology Science Fair Ideas

http://quake.wr.usgs.gov/info/scifair/

http://earthquake.usgs.gov/4kids/sciencefair.html

Seismosurfing

http://www.geophys.washington.edu/seismosurfing.html

Soil Liquefaction Web Site (includes a video)

http://www.ce.washington.edu/~liquefaction/html/main.html

This Dynamic Earth: The Story of Plate Tectonics http://pubs.usgs.gov/publications/text/dynamic.html

Understanding Earthquakes http://www.crustal.ucsb.edu/ics/understanding/

United States Geological Survey Earthquake Hazards Program http://earthquake.usgs.gov/

United States Geological Survey Learning Web http://www.usgs.gov/education/

New Madrid Links

New Madrid Links from the National Earthquake Information Center http://www.neic.cr.usgs.gov/neis/new_madrid/new_madrid.html

Rocking Hounding in Arkansas: The New Madrid Fault http://rockhoundingar.com/geology/fault.html

The Virtual Times: The Great New Madrid Earthquake (not scientific but interesting)

http://hsv.com/genlintr/newmadrd/

Books about Earthquakes with Activities

Discovering Earthquakes: Mysteries, Secret Codes, Games, Mazes by Nancy Field, Adele Schepige (Contributor), Nancy Lynch (Illustrator)

Earthquake Games: Earthquakes and Volcanoes Explained by Games and Experiments by Matthys Levy, Christina Blatt (Illustrator), Mario George Salvadori

Janice VanCleave's Earthquakes: Mind-boggling Experiments You Can Turn Into Science Fair Projects by Janice VanCleave (Author)