Awesome virtual earthquake lab:

<http://www.sciencecourseware.org/VirtualEarthquake/index.php>

Time-Travel

* Radius between epicenter and measuring station
* Time elapsed between P and S wave
* Graphing S-P time lag versus known distance between station and epicenter
* Fitting a straight line to above points.
* Using the straight line to predict either S-P time delay given distance or visa versa.

Epicenter

* Triangulation
* Longitude and Latitude

<http://web.ics.purdue.edu/~braile/educindex/educindex.htm>

Lesson plans include:

Inquiry based lesson about earthquake and volcanic activity and plate tectonics.

Using seismographs and calculating magnitudes, locating earthquakes using the S minus P method, analyzing and interpreting seismograms, etc.

How to teach about seismic waves using slinkies and wave tanks.

Inquiry based activity with dynamic planet puzzle to locate tectonic plates

Teach about plate tectonics with foam models.

Plotting earthquake epicenters on a world map leads to fault maps.

Really great comprehensive science lesson plan – middle or early high school

<http://www.pbs.org/newshour/extra/teachers/lessonplans/science/earthquakes.html>

<http://www.pbs.org/newshour/extra/teachers/lessonplans/science/earthquakes_terms.html>

Math lesson: Richter scale and logs

<http://www.cimt.plymouth.ac.uk/resources/topical/earthquakes/earthquakes_lp.pdf>

Mixture of slides about Richter scale, pH and decibels all being logarithmic scales.

<http://www.cimt.plymouth.ac.uk/resources/topical/earthquakes/earthquakes_os.pdf>

National Science Digital Library – searchable archive of lesson plans, etcetera. Very descriptive list of resources when search on “earthquake”.

<http://nsdl.org>