

Tsunami! Bridge Data Tip Activity (Grades 8-12)

http://www.vims.edu/bridge/index_archive0105.html

Using tsunami time travel maps, students predict how long it will take a tsunami to reach the shore. The lesson incorporates a number of data maps and affords students to analyze quantitative data.

The Ring of Fire (9-12)

<http://www.nationalgeographic.com/xpeditions/lessons/15/g912/ring.html>

In this lesson, students will learn more about plate tectonics as they investigate the region known as the Ring of Fire, where 75% of the Earth's active and dormant volcanoes are located.

Power of Fire (9-12)

<http://www.nationalgeographic.com/xpeditions/activities/15/powerfire.html>

Become a natural-hazard mapper! Figure out where people face danger from earthquakes and volcanoes, and create a map showing where these natural hazards may occur.

Fetch Me A Wave (9-12)

<http://oceanexplorer.noaa.gov/explorations/03portland/background/edu/media/portlandfetch.pdf>

How do ocean waves form, and what is the effect of extreme storms on wave formation?

Aggregated CNN Student News coverage (8-12)

<http://www.cnn.com/2011/US/studentnews/03/13/transcript.mon/index.html?iref=allsearch>

This link takes you to aggregates CNN student news coverage of the Earthquake and Tsunami. There are numerous links to video footage.

The Science of Tsunamis (8-12)

<http://www.pbs.org/newshour/extra/teachers/lessonplans/science/tsunamis.html#standards>

List Created by Pamela Auburn

A 45 minute lesson plan that includes a demonstration to learn about wave propagation and a discussion of the PBS NewsHour program "Scientists Explain the Origin of South Asia's Deadly Disaster (1883 tsunami)

The Tsunami Lesson Plan (6-9)

http://www.ema.gov.au/www/ema/schools.nsf/Page/TeachLesson_PlansTsunami

The Australian government has created this tsunami lesson plan. Excellent explanations and exposure to students discussing tsunami preparation

Tsunami-Tidal Wave (9-12)

<http://www.earthsci.org/education/teacher/basicgeol/tsunami/tsunami.html>

Brought to you by an aggregation of Earth Science resources assembled by the Australian government, this explanations of tsunamis is adapted to HTML from the course notes of Prof. Stephen A. Nelson Tulane University.

Tsunamis- Geoscience Australia

<http://www.ga.gov.au/hazards/tsunami/tsunami-basics.html>

Geoscience Australia put together this site on tsunamis with an especially nice image gallery

California Tsunami Lesson Plans (6-12)

http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Pages/student_activity.aspx

The State of California department of Conservation put together these teacher resources on tsunamis. The lesson plans have been created to provide an interactive activity with online California tsunami hazard maps. The lessons are targeted for use at 6th grade or higher grade level. These two activities provide students with real world applications using science based maps. The following California Earth Science Content Standards are reinforced in these lessons:

Community Learning Network Tsunami Theme Page

<http://www.cln.org/themes/tsunamis.html>

CLN "Theme Pages" which supplement the study of tsunamis. CLN's theme pages are collections of useful Internet educational resources within a narrow curricular topic and contain links to two types of information. Students and teachers will find curricular resources (information, content...) to help them learn about this topic. In addition, there are links to instructional materials (lesson plans) which will help teachers provide instruction in this theme.

Recent Earthquake Teachable Moments (6-12)

<http://www.iris.edu/hq/retm>

An suite of products including short pdf presentations, animations, and powerpoints. The presentations, generated by seismologists and educators. They include a variety of content allowing educators to customize the information for their classes.

Cascadia Tsunami Geology Lesson Plan (9-12)

<http://orgs.up.edu/totle/index.php?q=node/374>

The last great Cascadia subduction zone earthquake occurred on January 26, 1700. This earthquake caused sudden subsidence (down dropping) of areas along the coast from northern California into southern British Columbia Canada producing the ghost forests. This earthquake also caused a tsunami that inundated low-lying areas of the Pacific Northwest coast. In some areas, tsunami sand deposits overlie the forest floor of the ghost forest and in turn are overlain by intertidal muds and clays deposited since 1700. This succession of geologic layers (organic-rich forest floor - tsunami sand - intertidal mud and clay) has been referred to as the "three-layer cake" of Cascadia tsunami geology. In this guided-inquiry activity, students can examine a large photo of Cascadia tsunami geology that spectacularly records the 1700 great Cascadia earthquake and tsunami.

Earthquakes and Tsunamis (K-12)

http://seps.mgd-colo.peak.org/earthquakes_and_tsunamis.htm

This is one of the few sites where there is information appropriate for elementary students. The twentieth century has witnessed an increased interest in the scientific study of earthquakes. Earthquake research occurs worldwide and is especially active in the areas affected by earthquakes, including Japan, the United States, Europe, Russia, Canada, Mexico, China, Central and South America, New Zealand, and Australia, among

others. If you would like to learn more about earthquakes, tsunamis and the exciting field of seismology the links below provide some of the most current information available.

Wave Heights (K-12)

<http://www.nationalgeographic.com/xpeditions/lessons/07/g35/wavesheights.html>

In this lesson, students will learn about the varying heights of ocean waves and what causes the variation. They will begin by learning the parts of a wave, and then discuss the meaning of wave height and wavelength in terms of various points of reference. A demonstration will spark discussion about how geography affects wave heights, and will allow students to experiment with various forces to create different sized waves. Students will use the National Geographic Wave Simulator to experiment with creating different types of waves, and will draw waves based on the heights and lengths of familiar structures around the school.

Earthquake Topics Tsunamis (K-12)

<http://earthquake.usgs.gov/learn/topics/?topicID=34>

This USGS site provides as aggregated list of links to resources on Tsunamis

NYTimes Learning Network Tsunami Teaching Ideas

<http://learning.blogs.nytimes.com/2011/03/11/teaching-ideas-the-earthquake-and-tsunami-in-japan/>

The Learning Network provides teaching and learning materials and ideas based on New York Times content. Articles are linked and the site is easy to navigate. Materials are most appropriate for lesson integrated with social science and geography.

The Wave That Shook The World

<http://www.pbs.org/wgbh/nova/tsunami/>

Experts reconstruct the 2004 Indian Ocean Tsunami and an effort to prepare for the next big one. Complete with teachers guide and program transcript.

Pacific Northwest Plate Tectonics

List Created by Pamela Auburn

http://orgs.up.edu/totle/index.php?q=pnw_plate_tectonics_quakes_tsunamis/Lesson+Plans

An aggregation of lesson plans on earthquakes and Tsunamis, at a site supported by IRIS outreach