

Compendium of Tsunami Education Resources

This Compendium was developed as part of the National Tsunami Education and Outreach Plan of the National Tsunami Hazard Mitigation Program. It is a list of references to materials that have been developed for use in schools to educate students about tsunamis and related natural hazards.

Standards-Aligned Lesson Plans and Curriculum Materials			
Title and Live Link	Grade Level	Description	Production Date
Alaska Tsunami Education Program Curriculum Grades K-4	K-4	37 Lesson plans and activities aligned with Alaska State Standards of Education divided into nine units. Additional 11 lesson for gifted students.	© 2006 - 2010
Alaska Tsunami Education Program Curriculum Grades 5-8	5-8	40 Lesson plans and activities aligned with Alaska State Standards of Education divided into nine units. Additional 11 lesson for gifted students.	© 2006 - 2010
Alaska Tsunami Education Program Curriculum Grades 9-12	9-12	14 Lesson plans and activities aligned with Alaska State Standards of Education divided into nine units. Additional 11 lesson for gifted students.	© 2006 - 2010
Tsunami Grades K-6 Curriculum	K-6	68-page, standards-aligned, lesson plans and activities divided into units for grades K-2, 3-4, and 5-6, which covers both tsunami and earthquake information. Includes a background for the teacher as well as many illustrations and graphics. Black-and-white, pdf file.	Unknown date
Tsunami Grades 7-12 Curriculum	7-12	53-page, standards-aligned, lesson plans and activities grades 7 - 12 which covers both tsunami and earthquake information. Includes a background for the teacher as well as many illustrations and graphics. Black-and-white, pdf file.	Unknown date
Tsunamis: Waves of Destruction	9-12	60-90 minute lesson that uses tsunami time travel maps for students to predict how long it will take a tsunami to reach the shore. Published by Virginia Sea Grant, Virginia Institute of Marine Science.	Undated
Tsunami Surge	6-12	Project that uses real-time data sources from the internet to help students answer questions in five lessons: Tsunamis in History, Tsunami Origins, What Makes a Wave Move, Can We Predict a Tsunami, How Can We Prepare? Developed by Stevens Institute of Technology, Center for Innovation in Engineering and Science Education (CIESE)	© 2006
The Science of Tsunamis	6-8	45-minute classroom demonstration on wave propagation. Developed by PBS News Hour.	© 2006
Tsunami Wave Formation	8-12	JASON Project - interactive, video-based dynamic lesson plans on tsunami wave formation. Aligned with standards in all U.S. states and Canadian provinces.	© 2007-2012
Tsunamis	6-8	From Discovery Science, this lesson plan is designed for students in grades 6 - 8. It explains how tsunamis are formed as well as the behavior of tsunamis in the ocean.	© 2012

Lessons on Tsunamis and Related Hazards			
Title and Live Link	Grade Level	Description	Production Date
Tsunami Strike! Pacific Edition	8 - 12	Scenario-based learning experience for kids from middle school through high school (approximate ages 13-17). The scenario tells the story of four main characters at different locations in the Pacific basin who are each impacted by a major tsunami that originates in Alaska's Aleutian Islands. Over the course of the story, learners not only view the unfolding events and how each of the characters responds, but also observe how warning scientists analyze and communicate the tsunami threat. Fourteen short lessons provide interactive instruction focused on the science, safety, and history of tsunamis. Takes 3 - 4 hours to complete. Developed by COMET.	© 2011
Tsunami Strike! Caribbean Edition	8-12	Offers an interactive learning experience in which learners take on the role of a journalist writing an article for a news magazine. Sixteen multimedia lessons on tsunami science, safety, and history are interwoven within the learning scenario as resources for the article. The material is aimed at middle school and high school students (ages 13-17) but will be useful to a broader audience wishing to learn more about tsunamis in general, and in particular about tsunami risks in the Caribbean. Takes 4 - 5 hours to complete. Developed by COMET.	© 2012
Tsunami Teacher	K-12	Developed by the International Tsunami Information Center (IOC-UNESCO) following the devastating Indian Ocean tsunami of 2004. Lessons are media-driven, and work on various computer operating systems and platforms. A 534-page manual is also available. Training modules target the media, educational systems, and the public and private sectors, including governments, non-government organizations, businesses, and community groups.	©2006 UNESCO
Tsunami Education Resource Kit CD (Tsunami Tool Kit)	Pre-K to 12	CD (with all materials available on-line) produced by NOAA Office of Education. Provides lesson plans, activities, and resources about tsunamis and earthquakes. Includes 4 Teacher's Guides for pre-elementary, Grades 2-4, 5-8 and high school.	2009
Tsunami Smart Teacher Education Resource Kit	6-8	Produced by Caribbean Disaster Emergency Management Agency. Contains four lessons, background information for educators, PowerPoint presentation, student workbook, and cartoon booklet. Lessons have objectives, but are not aligned with education standards.	©2010

California Tsunami Hazard Worksheet--CALEMA	6-12	Produced by the California Geological Survey. One worksheet that walks students through using the CALEMA "My Hazards" website to determine local tsunami risk.	Oct. 2011
California Tsunami Hazard Worksheet--CGS	6-12	Produced by the California Geological Survey. One worksheet that walks students through tsunami basics and applying the CGS Google Maps interface for emergency planning	Oct. 2011
Create Your Own Tsunami	8-12	On-line instructions for how to simulate a tsunami in a water tank. Covers wave generation, propagation, and run-up.	©2010 MCEER, SUNY Buffalo
Waves and Tsunami Project	7&up	Developed by the National Association of Geoscience Teachers, this is an interactive activity that provides an introduction to waves, impress the importance of waves and wave characteristics.	2005
Classroom Exercise: Tsunami	11-12	Classroom exercise on applied mathematics related to tsunamis. Developed by the Univ. of Texas at El Paso.	2005
Let's Make Waves	3-5	Activity that that children can use to learn more about how waves form in the ocean, and how energy travels through the water column.	©1997 Houghton-Mifflin Company
Monster Waves	3-5	Activity for teachers to have students build a table-top village that they can use to visualize tsunami wave height.	©1997 Houghton-Mifflin Company

Information and Resources for Educators - but not lesson plans or curriculum			
Title and Live Link	Grade Level	Description	Production Date
NOAA/NWS Jetstream: On-line school for Weather	7&up	10 web pages about causes of tsunamis, wave generation, and tsunami safety. Not updated since the 2004 Indian Ocean tsunami. Developed by NWS Southern Region.	Sept. 2010
NOAA Education Resources: Tsunami	9-12	One web page with images and links that have information about tsunamis, in general. Written rather scientifically; useful for high school-aged students.	2011
Chapter 4: Tsunamis	7&up	22-page booklet that explains and illustrates information about tsunami formation, detection, and land effects. Published by NOAA Office of Education.	2003
Australia Tsunamis, Curriculum Context	9-12	Web page providing basic information about tsunamis, links to animations and simulations, additional web-based resources, and suggestions on fit with learning area outcomes (standards of education.)	© 2011

Tsunami Education Kit	9-12	World Vision, the Australian Red Cross, and AusAID put together a "Tsunami Education Kit" for students in primary and secondary grade levels. It is composed of various fact sheets, information, and background on issues related to poverty, debt, trade, disaster assistance and relief to examine how the Indian Ocean Tsunami event of December, 2004, fits with bigger picture issues. (ed. note: this is a demonstration of cobbling together information that agencies thought would be of interest to teachers primarily in the field of social sciences. This kit does not provide lesson plans or activities, nor is aligned with any education standards.)	2005 - 2009
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Current Events News about Tsunamis		
Title and Live Link	Description	Date
The Tsunami Project	Blog written by Dr. Brian G. McAdoo, Vassar College Department of Earth Sciences and Geography. Provides updated, current information related to tsunamis around the world.	2012 and earlier

Videos			
Note: there are many videos available about tsunamis. Many are embedded or included with lesson plans and curriculum materials described above. The videos listed below were specifically developed for educational purposes, and are stand-alone products.			
Title and Live Link	Grade Level	Description	Production Date
Tsunamis: Know What To Do	2-5	San Diego County, California, animated short film to educate kids about tsunamis. Animated Crab Teaches Students Valuable Tsunami Preparedness Information. 7:54 length.	© 2009
Tsunamis 101	7&up	Video that demonstrates through live action footage and animations how a tsunami forms. Published by National Geographic. Run time: 3:27.	© National Geographic, after 2004; not dated.
USGS Tsunami Education Videos	5&up	Six (6) videos of various lengths and formats (flash and .wmv) that provide visual demonstrations on tsunami causes, ocean behavior, and effects on land.	2005-2010

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