

The Waves and Tsunamis Project

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ABSTRACT

The goals of the Waves and Tsunamis Project are "to make waves real" to middle school students and to teach them some fundamental concepts of waves. The curriculum was designed in Fall 2004 (before the Sumatra Tsunami) and involves an ocean scientist classroom visit, hands-on demonstrations, and an interactive website designed to explain ocean wave properties. The website is called "The Plymouth Wave Lab" and it has had more than 40,000 hits since the Sumatra event. One inexpensive and interesting demonstration is based on a string composed of alternating elastic bands and paper clips. Washers can be added to the paper clips to construct strings with varying mass. For example, a tapered string with mass decreasing in the wave propagation direction is an analog of tsunami waves propagating from deep to shallow water. The Waves and Tsunamis Project evolved as a collaborative effort involving an ocean science researcher and middle school science teachers. It was carried out through the direction of the Centers of Ocean Science Education Excellence New England (COSEE-NE) Ocean Science Education Institute (OSEI). COSEE-NE is involved in developing models for sustainable involvement of ocean science researchers in K-12 education. This work is supported by the National Science Foundation.

http://msg.who.edu/String_Lab/New_String_Movies.html