Lesson Plan

Shake, Rattle, and Roll: Earthquake Sites

Grades: 3–5, 6–8, 9–12

Overview
A series of websites to teach children about earthquakes, tsunamis and volcanoes by presenting information and animation.

You never know when it might happen. You can be sitting there having dinner one night when all of a sudden, the dishes begin to rattle, the floor begins to shake, and next thing you know you're in the middle of an earthquake! If you want to give your students a firsthand look at the inner workings of earthquakes, have them come along on this rocking Internet Field Trip!
Earthquake Globe Animation
http://www.crustal.ucsb.edu/ics/understanding/globe/globe.html
Here you'll get a satellite's eye view of where earthquakes usually occur in the world. Are earthquakes spread all over the planet, or do they happen in certain zones? Have your kids check out the map to see if the quakes form any type of pattern. Try changing the speed of the globe's rotation while making the observations.

Savage Earth: Restless Planet
http://www.pbs.org/wnet/savageearth/earthquakes/index.html
Get the inside story on why we have such a "restless planet" at this site, which helps students understand why earthquakes happen in the first place. Have kids explore the action of faults by clicking on the different animations. You'll need the "Flash Plug-in" to make them run. If you don't have it, simply load this plug-in at the first animation. Using the second set of animations, kids can explore the three different types of earthquake waves and discover why some are more dangerous than others.

NEIC: Current Seismicity — World
Once kids have gotten the scoop on the cause of earthquakes, check out the current seismicity of the world. This U.S. Geological Survey site gives you up-to-the-minute plots of the most recent earthquakes around the world. Have students check out the map to see how close they are to the last big temblor. How do the recent quakes match up with the seismic zones from the first stop on our journey? Are any of the recent quakes bigger than Magnitude 5? How might a map like this be used to predict future earthquakes?

Largest Earthquakes in the United States
Most earthquakes are less than magnitude 6, but every once in a while, a huge one happens. This site tells you where the fifty largest earthquakes in the United States have occurred. Most large earthquakes happen at the intersection of crustal plates, but some of these locations will surprise you! What do your students think might have caused an earthquake in Missouri?
Understanding Earthquakes: Famous Earthquake Accounts
http://www.crustal.ucsb.edu/ics/understanding/accounts/twain.html
Before telephones and TV, people often had to wait days to read written accounts of disastrous earthquakes. Kids can check out some famous earthquake accounts from days gone, by Mark Twain, Jack London, Charles Darwin, and John Muir. (You'll find the link for the next account at the bottom of each one.) Ask your students to imagine what it would be like to live through an earthquake themselves! Then have them try their hands at writing their own accounts and sharing them with the class.

Savage Earth: Quake Prediction
Can anyone predict earthquakes? For years, everyone from seismologists to soothsayers have been trying to accurately predict when a quake will occur. Learn about new methods of prediction, and see if people are any closer now than they were 200 years ago.

USGS: Ask a Geologist
http://walrus.wr.usgs.gov/docs/ask-a-ge.html
Of course, if your students still have unanswered questions about the nature of earthquakes, they can always ask a geologist, at this site of the United States Geological Survey. Kids may have to wait a few days to get an answer, but this really puts your class on the cutting edge of science!

Tour Itinerary
Earthquake Globe Animation
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• Subjects:

Earthquakes, Tsunamis, Volcanoes, Technology, Research Skills