

Earthquakes & Seismic Waves

Name: _____ Date: _____

LEARNING OBJECTIVE

Students will build a model to test how earthquake waves affect structures and observe wave energy.

MATERIALS NEEDED

- gelatin (prepared and set in a pan, or a bowl of firm jello) OR a tray of Jell-O
- small paper cups
- small blocks or sugar cubes
- a flat table

HANDS-ON ACTIVITY

1. Prepare a pan of set gelatin/Jell-O ahead of time (or use a pre-made one) and place it on a flat table to represent Earth's crust.
2. Build a small tower out of paper cups or sugar cubes on top of the gelatin.
3. Tap or shake the pan gently to simulate a mild earthquake, then more firmly to simulate a stronger one, observing what happens to your tower each time.
4. Record how many taps/shakes of each strength it took for the tower to fall, and sketch the wave ripples you saw moving through the gelatin.

QUESTIONS

1. What did the gelatin represent in this model, and what did the tower represent?
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2. Did the mild or strong shake cause more damage to your tower? Why does that make sense?
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3. What are seismic waves, and how did you observe them in this model?
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4. Based on your results, why do engineers design earthquake-resistant buildings with flexible materials instead of rigid ones?

