

SCIENCE EXPERIMENT

EARTHQUAKE WAVES

This science experiment creates a wave box that demonstrates how earthquake waves can travel through a variety of materials as they travel away from the focus of an earthquake where the rocks first rupture.

All earthquakes produce P waves and S waves. P waves travel through solids, liquids and gases. In this simple science experiment you will see how P waves travel through different solids causing paper clips on a string to vibrate.



MATERIALS

Box

String

Paper clips

Object to make a small hole

DIRECTIONS

An adult should supervise the making of the wave box.

Remove one side of a cardboard box.

An adult should punch a hole in the top and bottom of the box.

Tie the string so it runs from the top of the box to the bottom of the box.

Start by tying the string to a paper clip on the outside of the box at the top.

Thread the string through the bottom of the box and tie the string to a paper clip on the bottom of the box.

Place 4 or 5 paper clips on the string inside the box.

Place the box on a table or some other object you can strike to make it vibrate.

Strike the table hard enough to cause energy waves to travel through it to the box.

If you have struck the table hard enough the paper clips will start to vibrate back and forth.

Move your box to other surface and see if you can make the paper clips vibrate on these surfaces.

Change the experiment by using a different thickness of string.

Change the experiment by using different sizes of paper clips.