

Science Experiment Shaker Maker

YOU WILL NEED:

Get the lead out and build a Seismograph Shaker-Maker. That's right! With a sharp lead pencil with an eraser, you can build a simple seismograph, an instrument used by seismologists (earthquake scientists) to record the strength of intensity of earthquakes (Adult help may be needed).

Scissors
Shoebox with lid
Heavy weight (like can of baked beans)
Masking tape
Pencil with eraser
Weights for the pencil like nails or washers
Clay
2 paper clips
string
2 sheets of paper

WHAT TO DO

Carefully cut a tiny slit in the middle near one end of the shoebox lid. Place the open box upright, on one end and put something small and heavy inside to keep it in position. Tape the lid onto the top of the box forming an upside-down L (it doesn't matter if the open part of the box or the bottom of it is toward the slit in the lid).

Now place the weights near the tip of the pencil point, but do not cover it and tape them on securely. A small piece of clay around the pencil near the taped weights will keep weights from slipping off. The weights must fairly heavy so the seismograph recorder pencil will make good contact with the paper and draw fairly dark drag lines on it.

Next open one end of a paper clip and push it securely into the eraser. Tie the string to the unopened end of the clip. Attach the second paper clip to the other end of the string. Wind the string around the paper clip as you would wrap a kite string around a stick.

Slip the top clip through the slit in the box and adjust the pencil marker so the tip rests on the table, not perfectly straight but dragging as it moves. Slip the remaining string under one side of the clasp to fasten the upright pencil in place.

Now cut each paper sheet lengthwise into three strips. These strips will act as roll paper and will record your "earthquake movements".

Place a paper strip against the box (below the slip you made in the lid) and slowly pull the strip forward. Notice how straight the drawn line is as you move the strip of paper.

Have someone bump and shake the table as you pull the paper strips under the dragging pencil marker. Your seismograph makes sideways and up and down movements. Compare the separate strips of paper, how do the lines differ?

WHAT NOW?

Check out more earthquake projects at www.quaketrackers.org.nz