

Shake, Rattle... and Record!

1 Tape a felt-tip marker to a can so that the tip of the marker sticks out beyond the can. **Caution: The vapor from some felt-tip markers is dangerous if breathed. Be sure that the labeling on the pen indicates that it is safe to use.**

2 Cut 6 pieces of notebook paper into thirds, lengthwise (you should have 18 strips). Take six strips of paper and tape them end to end to make a long strip. Do this two more times with your remaining 12 strips of paper, so that you have a total of three long strips.

3 Use your paper strip to measure the width you need and then tape down 4 popsicle sticks as shown so that the paper will fit between them. Now tape down two popsicle sticks across your other sticks as shown. This is your paper track. Slide your strip of paper under the paper track as shown.

4 Pile two stacks of books on opposite sides of the paper track. Place a ruler under the top book on each stack. Tie one end of a string around the top of the can and tape the string down so that it does not come loose. Tie the other end to the ruler so that the point of the marker gently touches the paper.

5 Pull the paper **very slowly** through the track as your adult partner shakes the table in quick little vibrations, then with bigger vibrations, and then with really big vibrations.

6 Look at the marks on your paper. Can you tell which marks were made from the different kinds of shaking by your adult partner? Try the same activity again with a new strip of paper. This time have your adult partner do the same type of shakes but in the opposite order.

7 By looking at your new marks, were you able to tell the order of the shaking and when it changed?

8 Now for a **mystery quake!** Ask your adult partner to get someone else to pull the paper while you leave the room. Ask them to use the same types of shakes as before, but to do as many of them and in any order as they want. By reading your earthquake detector paper (or **seismogram**), tell them the order and type of shakes in their earthquake!

You will need

6 popsicle sticks	blunt end scissors
felt-tip marker	8-10 large heavy books
masking tape	ruler
6 sheets of notebook paper	string
unopened food can	

