

ACTIVITY!

MAKE YOUR OWN SHAKE TABLE

Architects and engineers who design buildings in areas prone to earthquakes try to create structures that will be stable if an earthquake hits. A shake table is used to shake a model and see what happens. It makes the same motion as an earthquake. You can see what it's like when you build your own shake table and then try to create structures that can withstand the force of moving earth beneath them.

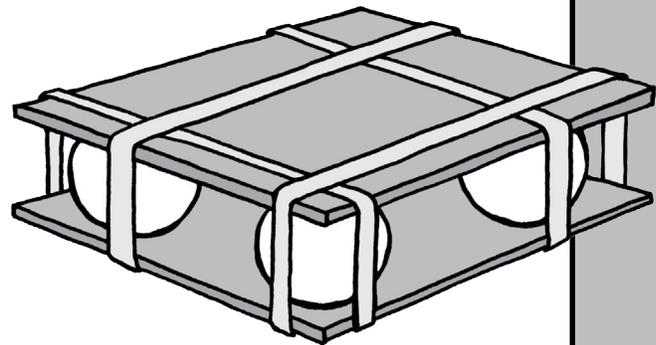
1 Place the balls between the pieces of cardboard. Use the rubber bands to hold the pieces of cardboard together tightly. If your rubber bands can't stretch all the way around, make a chain by looping several rubber bands together.

2 Put your shake table on a sturdy surface. If you're using ground cover, put that on the top board now.

3 Begin building. Use your building materials to create a structure a foot high or more (about 30 centimeters).

SUPPLIES

- * 2 large, stiff pieces of cardboard of equal size
- * 4 balls of the same size (like golf balls)
- * large rubber bands
- * ground cover materials such as sand, dirt, or rocks (*optional*)
- * building materials such as blocks, popsicle sticks, toothpicks, clay, or other materials



ACTIVITY!

4 When you are done building, have a helper hold the bottom board steady while you gently pull or push on the top board. Let go and see what happens to your buildings. Experiment with different shapes and sizes of buildings.

5 What worked and what didn't? Try to make improvements until you can create a building that withstands your "earthquake." You might try creating "cross beams" with popsicle sticks on a square structure to make it sturdier. Or maybe you can provide supports inside a clay building. Are your buildings sturdier on one type of ground cover than another? Think about how structures in different areas of the world would be built, based on the likelihood of having an earthquake.

