## Sinkhole in a Cup

**Discover how sinkholes form.**

### Materials
- Styrofoam cup
- Scouring pad or thin sponge
- 2-liter bottle (empty)
- 1 Sheet of paper
- Sugar
- Sand
- Scissors

### Procedure
- Make a thumb-sized hole in the bottom of the styrofoam cup.
- Ask an adult to cut a circle out of the scouring pad that fits in the the bottom of the cup. Place the circle into the cup.
- Roll the paper into a tube that is about 1/2 the diameter of the cup. Stand the tube up inside of the cup.
- Fill the inside of the paper tube with sugar until the sugar is just lower than the rim of the cup. Fill the area between the tube and the sides of the cup with sand.
- Remove the paper tube and place a thin layer of sand over the tube sugar.
- Have an adult cut off the bottom of the 2-liter so that it is the same height as the paper cup. Fill it about half-full with water.
- Place the cup in the water and observe the results.

### Results
A sinkhole formed in the cup!

### Why?
Sinkholes form when groundwater removes rock that is easily dissolved in water, such as limestone. The sugar in the middle of the cup represented the easily dissolved rock. As the rock dissolves away, the rock and soil on the surface falls into the hole. Sinkholes are common in about 1/4 of the U.S. and usually indicate the presence of caves and/or weathered limestone near the surface. If you visit an area where sinkholes are common, such as parts of Kentucky or Florida, keep an eye out for them! You can identify sinkholes as circular or oval-shaped depressions in the ground.

To learn more about limestone, check out the Pink Palace Museum's *Rocks and Minerals* Program.