A STEM in the Park
Take Home Activity

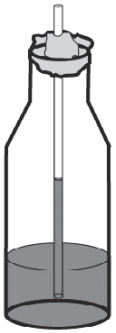
STEM in the PARK™

Science, Technology, Engineering, and Mathematics

Make a Thermometer

What You Need

- Empty glass jar with lid
- Drill and drill bit (we used 5/16)
- Water
- Rubbing alcohol
- Food coloring
- Clear straw
- Modeling clay
- Permanent marker



What To Do

Prior to beginning this experiment, have an adult pre-drill a hole in the jar lid so that the straw will fit snugly through.

1. Fill the jar 1/8 full with water and 1/8 full of rubbing alcohol to create a temperature sensitive liquid.
2. Add in 3-4 drops of food coloring to help make the water more visible.
3. Cover. Place the straw inside the hole. The straw should touch the water, but not the bottom of the jar.

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What To Do cont.

4. Secure the area around the straw on the lid with modeling clay. Swirl liquids inside jar to mix.
5. Use the permanent marker to draw a line at the surface of the water at room temperature.
6. Place the homemade thermometer in different areas inside and out. Explore how temperature will change the liquids in the jar. Is there a difference in temperatures outside in the sunshine versus a shaded area?

The Science

This classic science experiment is designed to help children understand how a thermometer works. It will not give an accurate reading, rather demonstrate how the liquid expands (rises in the straw) when warm and contracts (lowers in the straw) when cooler. Rubbing alcohol is more sensitive to heat than water and will respond much quicker. As with all experiments and activities, use standard safety procedures: cover working surfaces, use gloves and safety goggles, and make sure to experiment with the supervision of an adult.

This activity is brought to you by Sylvan Learning of Bowling Green