

## Make lightning



### MATERIALS:

- disposable round aluminium foil tray
- small piece of wool fabric
- styrofoam plate
- pencil with a new rubber on top
- drawing pin

### INSTRUCTIONS:

1. Push the drawing pin through the middle of the tray from the bottom.
2. Push the rubber end of the pencil into the drawing pin.
3. Place the plate upsidedown on a table. Rub it with the wool for 30 seconds.
4. Pick up the foil tray (holding the pencil) and place it on top of the plate.
5. Touch the aluminium with your finger—you should receive a shock! If nothing happens, go back to step 3 and repeat.
6. Turn out the lights and see if you can see a spark of lightning pass between the tray and you!

Have a look at <<http://www.youtube.com/watch?v=-ig-AjtZ8oc>> for a similar demonstration.



## Rain gauge

### MATERIALS:

- plastic bottle
- permanent marker
- ruler
- scissors

### INSTRUCTIONS:

1. Cut the top off the bottle so the opening is the same size as the bottom.
2. Measure roughly 5 cm up the bottle and draw a line around the bottle. Continue until you reach the top.
3. Fill with water to the first line so your rainfall reading is accurate. Place your rain gauge outside and measure how much rain is received each day.
4. Older students can show the results collected over one week in a line graph.



## Tornado in a jar

### MATERIALS:

- tall clear jar (no ridges) with lid
- dish-washing liquid
- glitter
- water



### INSTRUCTIONS:

1. Fill 3/4 of the jar with water.
2. Put a small drizzle of dish-washing liquid in the jar.
3. Add roughly a teaspoon of glitter.
4. Screw the lid on nice and tight.
5. Shake the jar to mix the ingredients, then swirl the jar around.
6. Hold the jar steady and watch the tornado in the jar.

A demonstration can be found at <<http://www.youtube.com/watch?v=IF2ZByWaUMI>>

## Thermometer

### MATERIALS:

- clear plastic bottle
- water
- rubbing alcohol
- clear straw
- plasticine/modelling clay
- food colouring

### INSTRUCTIONS:

1. Fill 1/4 bottle with equal amounts of water and rubbing alcohol.
2. Add a few drops of food colouring.
3. Place the straw in the bottle, but don't let it touch the bottom. Use the plasticine to seal the neck of the bottle so the straw stays in place.
4. Hold the bottom of the bottle and watch as the liquid moves up through the straw.

