

Backyard Weather Station Activity – Tool #1: Wind Vane Worksheet

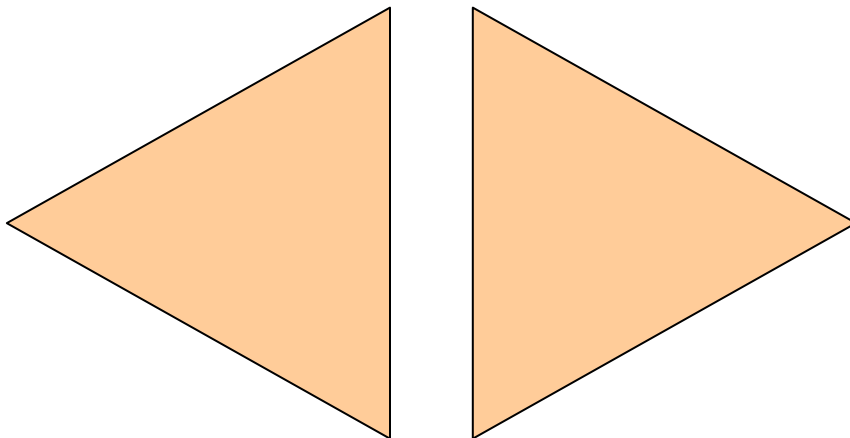
Materials

Each group should have:

- One sheet of cardstock
- A heavy marker
- One pair of scissors
- Glue (hot glue works best)
- One plastic straw, non-bendable
- One full-sized pencil with full eraser
- One straight pin or T-pin
- Small piece of modeling clay
- Piece of cardboard (at least 12" x 12")
- A compass

Instructions

1. Push the pin through center of the straw.
2. Insert into pencil eraser, making sure the straw has enough room to spin (see Figure at right).
3. On a piece of cardstock, draw the shape of an arrow (see below). You can create multiple arrow shapes to test which shape works best in the wind.
4. For each arrow design, cut two identical arrow shapes from the cardstock (as shown below).



5. Glue one set of arrow shapes onto the sides of the straw so that the straight pin is between the shapes.
6. Use a small piece of modeling clay to secure the pencil to the piece of flat cardboard (see picture below). (Note: Although shown on a piece of wood, you will affix the pencil to the cardboard instead).

7. Check to make sure that the wind vane will spin and stand straight.

Using the Wind Vane



- Use a compass to figure out which way is North. Mark this direction on the cardboard.
- Let your wind vane blow in the wind. Observe the direction toward which the wind vane points.
- If the tip of the wind vane arrow is narrow enough and the back wide enough, the wind vane should point in the direction the wind is blowing.
- If your wind vane is not giving good results, try designing another arrow shape.
- Use your wind vane to observe the wind direction over a period of time.
- Record your wind data in the table below

Data Collection

Use the following table to collect data from your observations.

Time of Observation	Wind Direction	Notes