Windy Weather

Find out which way the wind is blowing by creating your own weather vane.

Collect

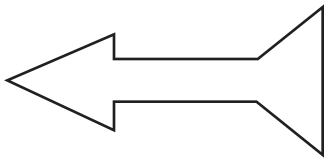
- Coffee can with lid
- Plastic straw
- Wooden skewer
- Cardstock or lightweight cardboard
- Scissors
- Tape
- Compass
- Permanent marker
- Sand or small rocks (optional)

Make the base

1. Use the scissors to poke a hole in the center of the lid. Make sure that it is just big enough for the straw to fit in snuggly.
2. Cut the straw in half.
3. Slide the straw through the lid so that half of the straw is above the lid and half of the straw is inside of the can.
   Optional: Add sand or a few rocks to the inside of the can to keep your weather vane from blowing over.

Create an ornament

4. Draw a large arrow on the cardstock, similar to the one below. Make sure the tail end is larger than the arrow at the other end.



5. Cut out the arrow and place it perpendicular to one end of the wooden skewer and secure it with tape. This is called the weather vane ornament.
6. Slide the other end of the wooden skewer through the straw.
7. Blow against the ornament to test if it can rotate freely. If it doesn't turn easily, make sure that the skewer isn't catching on anything inside of the can.

Find north!

8. Take your weather vane outside and place it in a location that is easy to access.
9. Hold the compass next to the weather vane and use the compass to find north.
   Use the marker to label the sides of coffee can with the cardinal directions: north, south, east, and west.

Measuring the wind

10. Visit the weather vane every day for a week. Each time you visit, determine which direction the wind is blowing from. The arrow will always point to the direction the wind is blowing from.
11. Record the wind direction. Does the wind blow from the same direction each day? Does the temperature change with the wind direction? Were there some days when there was no wind at all?

Why measure the wind?

Changes in wind speed or direction can help forecast the weather. Meteorologists and other weather forecasters that model and predict weather are part of a larger field called atmospheric science, which studies the atmosphere and how each layer affects the earth. Scientists that study the weather often measure the wind in two ways: wind direction and wind speed. The weather vane that you built measures the wind's direction. If you would like to also measure the wind speed, you can make an anemometer.