



Make an Anemometer! (Ages 7+)

Gather

- 5 dixie cups
- Sharpened pencil with eraser on one end
- Push pin
- 2 straws
- Stopwatch
- Markers
- Single hole-punch

Let's Create!

1. Use a hole punch or the tip of a sharpened pencil to punch four holes in a paper cup just below the rim, forming a "+" shape (two pairs of holes opposite each other).
2. Press two straws through the holes as shown to the right.
3. Use a sharpened pencil to poke a hole in the center of the bottom of the cup.
4. Use the pencil or hole punch to create two adjacent holes in each of the remaining four cups. The holes should be about 2-3 cm apart, and about halfway along the cup's height.
5. Push the end of a straw through the two holes in each of the cups, as shown to the right.
6. Push the pencil, eraser end first, through the hole in the bottom of the central cup.
7. Press a pushpin through both of the straws and into the eraser, as shown to the right. Do not press the pushpin into the eraser all the way, or there will be too much friction for your anemometer to spin.
8. Use a marker to draw a symbol or color on the side of one of the cups, so you can easily tell it apart from the other cups. This will make it easier to count revolutions when the anemometer is spinning.



How Does it Work?

An **anemometer** is an instrument that is used to measure wind speed. A cup anemometer has three or four cups mounted about a vertical axis that can spin. The cups are aligned so they all face the same direction around a circle. The open sides of the cups "catch" the wind more than the closed sides. This means that when the wind blows, it pushes on one side of the anemometer harder, causing it to spin. The anemometer's rotation speed can then be used to determine the wind's speed.