

Paper Plate Anemometer

v.7/08.1

Goal

Anemometers measure wind speed under all conditions by spinning as the wind pushes cups. The speed is measured by counting the revolutions visually or electronically. This model works by using one colored cup which then can be counted every revolution. For younger children, an anemometer reinforces that wind is caused by an invisible gas moving around. Older children can actually do some crude measurements. Supplies for this design run about .20c per unit.

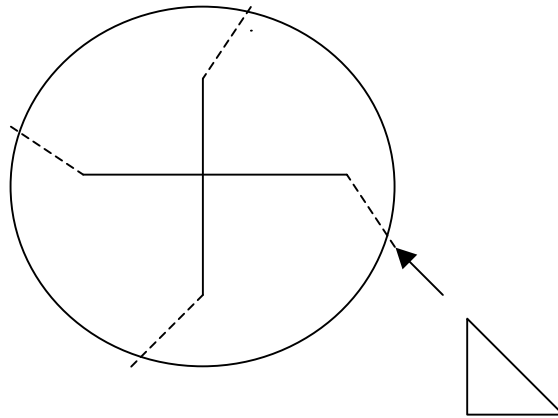
Materials

heavy duty, large paper plate – ‘Chinette’ style
9 oz. ‘hot/cold’ cup (unwaxed paper) – styrofoam does not work well
new, round pencil with eraser
push pin
clear tape
scissors
oaktag
ruler
colored marker and something to write with

Procedure

1. Balance the plate on your pushpin – be patient! Poke it through when you find it.
2. Poke a hole in the center of the paper cup using a sharp pencil.
3. Turn the plate over – draw a line across the plate, going through the center hole.
For a four cup anemometer, draw a line perpendicular to the first line. Students can use any square edge to do this fairly easily.
4. Pin the eraser of the pencil through the plate: pin on ‘bottom’ side of plate, pencil on the ‘eating’ side.
5. Place the cup over the pencil with the wide side of the cup touching the plate. When the cup is centered, tape it to the plate. Put what you have made in a safe place while you make the wind cups.
6. The wind cups are made from oaktag or old folder material. Start by cutting four circles about 10 cm in diameter. I use yogurt container lids as templates.
7. Cut each circle to the center point. Overlap the cut ends about 3cm to make a cone – fasten with tape. Color one cone a bright primary color with the marker provided.

8. Draw a 5cm line 45 degrees from the edge of the plate to the ends of the lines drawn before. Angle them in the same direction! Using scissors, cut this line in each of the four quadrants.



9. Slide a cone into the edge cuts – the open part of the cone should face away from the 4 degree cut. Secure with tape.

You are done! Make sure the anemometer spins freely – pin not too tight and the hole where the pencil goes is not too tight.