

Build an Anemometer

Materials

- 3-ounce paper cups (5)
- Red crayon or marker
- Hole punch
- Straight pin
- Pencil with eraser
- Scissors
- Stapler
- Plastic straws (2)
- Watch or stopwatch capable of counting seconds

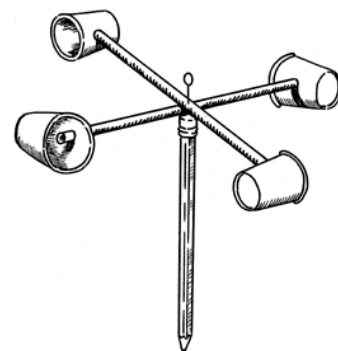


Directions

1. Punch one hole in each of four paper cups, half an inch below the rim. Color the outside bottom of one of the cups red.
2. On the fifth cup, punch two sets of two holes below the rim. Make one hole half an inch below the rim, and punch a second one directly opposite it. Then make another set a quarter inch below the rim. You should end up with four evenly spaced holes around the rim.
3. Cut out the bottom of the cup with four holes punched in it.
4. Push one of the straws through the hole of the colored cup. Fold the tip of the straw inside the cup, and staple it to the cup on the side opposite of the hole.
5. Push the straw through two opposite holes in the fifth cup with four holes. Attach another cup to the opposite end of the straw. Make sure that the second cup faces the opposite direction from the first cup (see image above).
6. Repeat the above step with the remaining two cups and remaining straw.
7. Place the four cups so that they face the same direction (clockwise or counterclockwise). Make sure the cups are all equidistant from the center.
8. Push the pencil up through the bottom of the center cup with the eraser sticking out of the top until it reaches the intersection of the two straws.
9. Finally, push the pin through the intersection of the two straws and into the eraser as far as possible.
10. Take the anemometer outside when the wind is blowing with a friend or family member.
11. While one of you times exactly one minute on the watch or stopwatch, the other counts how many times the red colored cup goes by in one minute. This is the number of revolutions per minute (RPM).
12. Convert your answer for RPM to miles per hour (MPH) using the following formula: $RPM \times 0.2142 = MPH$
13. Use activity sheet provided to create a record of wind speed at different times and during different conditions.

Name: _____

My Anemometer Wind Record Sheet



Date	Wind Speed	Wind Direction	Temperature	Weather (Rain, Snow, etc)

Wind speed: RPM X 0.2142 = MPH

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