

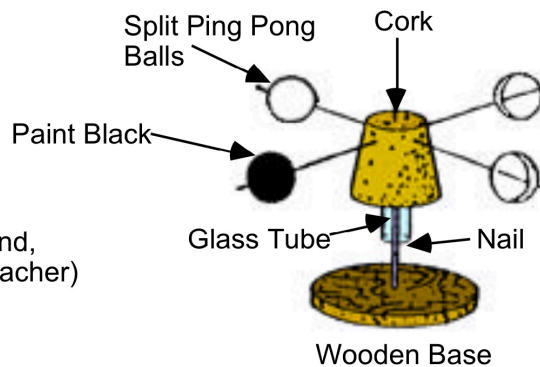


## Make your own weather instruments

### Anemometer or Wind Speed Indicator

Materials Needed:

- 2 Ping Pong balls
- Cork
- Small Wooden Board
- Nail
- Glass Tube--Heated to close one end,  
(perhaps ask a chemistry teacher)
- Thin stiff wire
- Black Paint and Glue



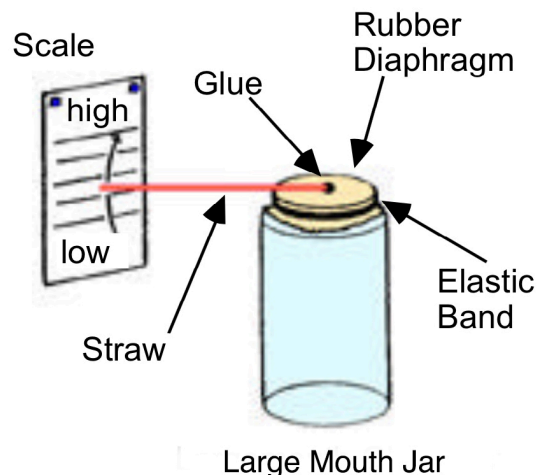
**Assembly** Cut the ping pong balls in half and insert the stiff wire through the edge and glue. Paint *just one* of the ball halves black, or some distinct color. Drive the nail through the board as a base. Insert the closed end of the glass tube (a plastic straw can work) into the cork – this will slide over the nail as a low friction bearing.

**Calibration** Hold your anemometer out of the window of a car while traveling at 10 miles per hour. Count how many times the colored-cup goes around in 30 seconds. Using this information, you can calculate wind speed elsewhere. If the colored cup only turns half as fast in 30 seconds, the wind speed is 5 mph. If it turns twice as fast, the wind speed is 20 mph., etc.

### Barometer

Materials needed:

- Large Mouth Jar
- Straw
- Balloon
- Glue
- Elastic Band
- Paper



Assemble as shown. Cut the balloon to get a large enough piece of rubber to stretch over the mouth of the jar, making a diaphragm. Use the elastic band to secure. Glue end of straw to the center of diaphragm. Make a paper scale as shown. The change of air pressure (the weight of the air) associated with different weather systems will press to varying degrees on the rubber diaphragm. This will cause the straw to move up and down, measuring the air pressure.