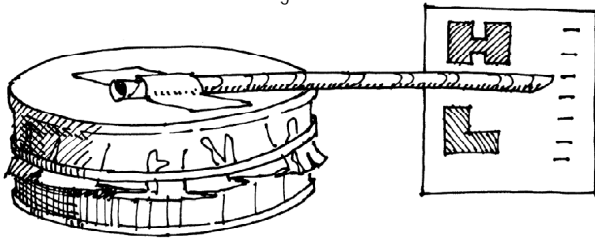
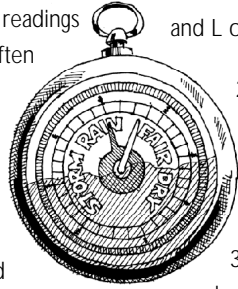


The letters H and L are familiar symbols on a weather map, but what do they stand for? H (Highs) are usually associated with fair weather and L (Lows) with storms. They refer to high pressure and low air pressure, as measured by a barometer. Barometric readings during hurricanes are often especially low. A barometer records air pressure, or the weight of the air, usually in millibars or inches. When air is cold and dry, it weighs more. Air that is warm and wet weighs less than dry air, so the barometer is lower when it raining. Meteorologists know that changing barometer readings predict changes in the weather.



Procedure:

1. Assign students to watch the weather report at home with an adult or watch a videotape of the weather report together. Have them pay particular attention to the weather map and note the letters H and L on the weather map
2. Afterwards, discuss what the children saw and to ask them to figure out what the letters H and L stand for.
3. Explain that there is a column of air that is pressing down on us—called the atmosphere. The weight of that air is called air pressure. It pushes almost a ton of air down on each of us every day! (*Why doesn't it hurt?*) A barometer is an instrument that can measure air pressure.
4. If you have one, show the class an aneroid barometer. Tell the students that they will make their own class barometer.

8. Place the jar in a spot in the room with a fairly constant temperature. Stand it next to a wall so that the protruding end of the straw almost touches a sheet of paper marked High above the pointer and Low below the pointer.

9. Air pressure causes the air inside the can to expand or contract and the straw moves up and down to reflect the changes in pressure. Have students observe and mark the changes on the sheet of paper.

High indicates fair and dry weather
 Low is wet and stormy weather
 Steady indicates no change in the weather.

10. Have students also observe and record changes in the weather on a daily basis.

11. Have students note changes to the aneroid barometer as well. It should have a pointer that can be set at the daily reading so students can compare daily changes.

12. Discuss how changes to the homemade barometer, their weather observations, and the commercial barometer correlate. Chart them.

5. Cut a large circle out of a balloon, wider than the lid of the tuna can.

6. Coat the edge of the can with petroleum jelly to make a tight seal and stretch the balloon over the mouth, though not too tightly. Secure the balloon with one or more rubber bands.

7. Tape one end of the straw in the middle of the balloon to make a pointer.

HIGHS AND LOWS OF FORECASTING

Learning Objective: By learning that highs are associated with fair weather and that lows are associated with rainy weather, students can begin to predict the weather.

Challenge: Make a barometer for a classroom weather station.

Materials: television tuned to weather report, an empty tuna can, balloon, tape, rubber bands, petroleum jelly, plastic straw or coffee stirrer, a sheet of paper, aneroid barometer (optional)

