

Name: _____

Date: _____

Class: **Physical Science**

Block: _____

Video – Air Pressure

Directions: Watch the video on “Air Pressure” and complete the questions below.

1. _____ is always pushing on us from all sides.
2. There is about _____ lbs of air pressure per square inch, but at the same our bodies push back against air pressure with _____ force, which _____ it out and we don't get crushed.
3. _____ near the ground are packed closely together by the weight of the air above. This is why at sea level, they are much denser; however higher up in the atmosphere, there is a lot less air pushing from above, and so the air molecules are not packed tightly together.
4. Example of pressure changing suddenly: _____
_____. At much greater heights there is less air weight pressing on you, causing your body to readjust/react to pressure changing.
5. Scientists use _____ and other tools to study the air pressure to predict weather and study climate.
6. **Experiment to see how air expands as it gets warmer.**

Procedure	Materials needed/Questions
1. Take a balloon and blow it up. Place it over the mouth of the bottle.	Balloon, empty bottle, warm water
2. Place it in the freezer for 10 minutes. Run some hot water in the sink.	Question: 1. What did the balloon look like after it was taken out of the freezer?
3. Submerge the bottle in the warm water.	2. What happened to the balloon when it was placed in the warm water?

7. In the atmosphere, warm air expands, gets lighter, and rises in the atmosphere causing a _____ pressure area.

8. How to make a barometer:

Procedure	Materials needed
1. Cut the balloon neck.	Large balloon
2. Stretch it over the jar.	Scissors
3. Seal the balloon to the jar with tape	Large jar with wide opening
4. Insert the triangle into one end of the straw	Packing tape
5. Glue the other end of the straw to the balloon lid	Drinking straw
6. Put a piece of paper on the wall	Glue
7. Place the straw up against the wall and mark the paper where it meets (draw a line)	Paper/pen/ruler/small poster board triangle
8. This is how you note the changes in air pressure. 9. Check the position of the pointer every few hours. 10. Each time write down the measurements by drawing a line with the date and time.	Questions: *If the pointer moves down, there is less atmospheric pressure pushing down on the barometer: _____ pressure *If the pointer moves up, there is more atmospheric pressure pushing down on the balloon: _____ pressure

9. Knowing how to accurately measure the atmospheric pressure is critical to weather forecasters. Low air pressure means that it is generally _____ weather with expected storms and precipitation.
10. When the air pressure is _____, it generally means good weather with clear skies.

Exit ticket: Make a Venn Diagram to compare high pressure and low pressure.