

Grade 6 Science Air and Flight Quiz #1

Name: _____ Class: _____

Matching Questions - Below is a description of some of the experiments we did in class. Match up each experiment with the scientific idea that it proves. Write the letter in the space provided. ***Please note that there are more scientific ideas than there are experiments, so choose wisely!**

Experiment

1. Place 1 inflated balloon on one side of a meter stick and 1 deflated balloon on the other end of a meter stick (the side of the stick with the deflated balloon rises). _____ (1 Mark)

2. Place a piece of cardboard on top of a full glass of water. Holding the glass and the cardboard quickly flip the glass upside-down and slowly let go of the cardboard (none of the water escapes, the cardboard stays attached to the glass). _____ (1 Mark)

3. Place a medicine dropper that is half full of water in a 2 litre bottle of water. Apply pressure to the bottle (the medicine dropper sinks). _____ (1 Mark)

Scientific Idea

- a. Air has weight
- b. Air takes up space
- c. Air can be compressed
- d. Air exerts pressure

Multiple Choice Questions - Circle the right answer (1 Mark Each)

4. The experiment in the picture to the right (Diving Paper), shows a piece of paper wedged into the bottom of a glass, that is held upside down in a tub of water. When you pull the glass out of the water you notice that the paper is not wet. This is because

- a. air is lighter than water.
- b. air in the jar takes up space.
- c. water is heavier than air.
- d. gravity is pulling down on the water.

5. An example of an **observation** made during the Diving Paper experiment is

- a. gravity is pulling down on the water.
- b. air in the jar takes up space.
- c. air exerts pressure on the water.
- d. the paper in the glass did not get wet.



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6. When a hot air balloon is rising, the air inside it is _____ the air outside the balloon.

- a. cooler than
- b. warmer than
- c. the same temperature as
- d. denser than

Short Answer Questions - Remember to answer in full sentences!

7. Give two examples from everyday life where air is a fluid, is compressed, takes up space, OR exerts pressure. Make sure to identify which property of air your example identifies and remember to use complete sentences. (4 Marks)

(Ex. Smoke coming from the chimney shows fluidity because it flows out of the chimney.)

First Example:

Second Example:

8. Give the definition for the following. Make sure to use full sentences.

a. An observation is_____. (1 Mark)

b. An inference is_____. (1 Mark)

9. In our experiment, "Huff and Puff" where there was a balloon inside the pop bottle, why could we not blow up the balloon? (2 Marks)

10. Which of the following changes to the experiment would have allowed us to blow up the balloon? (1 Mark)

- a. Used a bigger balloon.
- b. Used a bigger water bottle.
- c. Blowing harder into the bottle.
- d. Cut a hole in the water bottle.

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