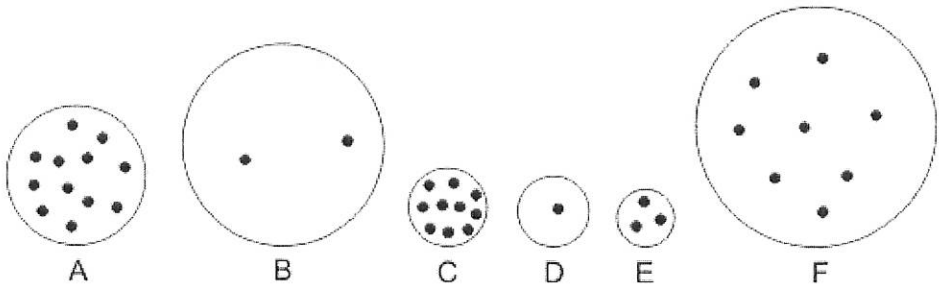
EPS 100 Stapleton
Quiz: Physical Properties

Name: Key

Part I: **DARKEN** each correct answer choice.

The objects below are mostly empty space. The circle is the edge of each object. The dots inside represent all of each object's mass. The empty space inside the objects has no air or mass of any kind. All of the objects are in similar locations on the same planet.

1. Which object has the most mass? **A** B C D E F
2. Which object has the least mass? A B C **D** E F
3. Which object has the most volume? A B C D E **F**
4. Which object has the least volume? A B C D **E** F
5. Which object is most dense? A B **C** D E F
6. Which object is least dense? A **B** C D E F
7. Which object has the most weight? **A** B C D E F
8. Which object has the least weight? A B C **D** E F



Part II: For the following questions, tell whether each property increases, decreases, or stays the same. Darken the correct symbol, either +,-, or =.

9-12. A film canister submarine sits on the bottom of a pool. Inside the canister there is Alkaseltzer, water, and pennies. As the Alkaseltzer fizzes, a bubble forms in the top of the canister, and water gets pushed out the bottom. During this process, what is happening to the canister's overall…

9. mass + **-** =
10. volume + - **=**
11. density + **-** =
12. weight + **-** =

13-16. Something gets smaller, but the amount of stuff in it does not change. What is happening to its…

13. mass + - **=**
14. volume + **-** =
15. density **+** - =
16. weight + - **=**

ESS 100 Name: Key

Physical Properties Quiz: Pressure

1. A student is standing in front of the school. Air pressure is pushing against all of the student's surfaces. What causes the air pressure that we feel when we are standing in front of the school (or anywhere else on the Earth's surface)?

Weight of air above us

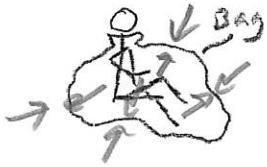
2. This room has a lot of air in it. Does that air have weight? Circle the answer: (Yes) No

3. One way to measure air pressure is in psi.

"PSI" stands for pounds per square inch.

4. On Earth, ordinary air pressure at sea level is about. Circle the answer:
100psi 75 psi 35psi (15psi) 5psi

5. The pictures on the right show a student before and after being vacuum packed in a plastic bag. Use arrows to show why the student on the right is being squeezed by the bag, while the student on the left is not.



6. a. If you climb a mountain, moving from a low altitude to a higher altitude, does the air pressure around you increase or (decrease)?

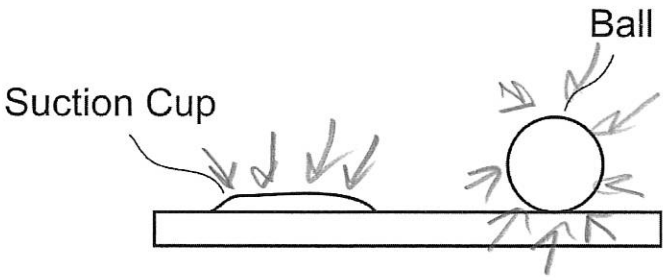
b. Explain why.

Less air is above you when you are higher.

7. When you climb up a mountain, do your eardrums stretch inward or outward?

Outward

8. The diagram on the right shows a ball sitting on a table, and it also shows a suction cup that is stuck to the table. In the diagram on the right, draw arrows representing air pressure. Use those arrows to show why the suction cup sticks to the table and why the ball does not.



9. Use arrows to show why helium balloon rise. Your arrows should represent the air pressure pushing against the helium balloon in the picture. If you feel like your arrows don't fully explain why the balloon rises, you can also use words to explain how pressure causes the balloon to rise.