

Student's Name _____

THINKING WITH SCIENCE

Observation Quiz

Lesson 4, The Caps

1. How are the caps different?
 - A. size
 - B. material
 - C. density
 - D. none of the above
2. You can't tell what caused the result of an experiment if there are two:
 - A. controlled variables
 - B. control groups
 - C. manipulated variables
 - D. experimental groups
3. What word does an experimentation question always begin with?
 - A. does
 - B. if
 - C. why
 - D. how
4. Both caps float in Liquid B, but sink in Liquid A. What does that prove?
 - A. the caps are the same
 - B. the liquids are the same
 - C. the liquids are different
 - D. the caps have the same density
5. Because the iron hull of a boat, and the air inside the boat have a combined density that is less than water, boats:
 - A. float
 - B. go fast
 - C. are large
 - D. all of the above
6. A "lock" is a device that:
 - A. raises and lowers boats
 - B. keeps boats out of the water
 - C. helps boats to float
 - D. keeps boats from sinking
7. Where won't barnacles grow?
 - A. rocks
 - B. whales
 - C. freshwater
 - D. saltwater

8. Why did the fishing boat sink in Lake Union?

- A. it was overloaded
- B. it was more dense than Lake Union
- C. the lake was less dense than the boat
- D. all of the above

9. If the first question is, "Does A contain any water?", the next question about A should be:

- A. does A contain only water?
- B. does A contain any salt?
- C. does A contain any sugar?
- D. does A contain any alcohol?

10. Things float better in liquids that are more:

- A. salty
- B. pure
- C. dense
- D. thick

11. Caps A and B had the same:

- A. density
- B. size
- C. neither of the above
- D. both of the above

12. The manipulated variable in this experiment was:

- A. jar A
- B. jar B
- C. alcohol
- D. salt

13. A controlled variable in this experiment was:

- A. the jars
- B. the amount of liquid in the jars
- C. the fact that there was a liquid in jar A and jar B
- D. all of the above

14. Why does Styrofoam float in water?

- A. it is softer than water
- B. it is a solid
- C. it is less dense than water
- D. all of the above.

Students's Name ANSWER Key

OBSERVATION QUIZ FOR "THINKING WITH SCIENCE"

Quiz for Lesson 4

Quiz Number _____

1. ☒ A B C D E
2. A B ☒ C D E
3. A ☒ B C D E
4. A B ☒ C D E
5. ☒ A B C D E
6. ☒ A B C D E
7. A B ☒ C D E
8. A B C ☒ D E
9. ☒ A B C D E
10. A B ☒ C D E
11. ☒ A B C D E
12. A B ☒ C D E
13. A B C ☒ D E
14. A B ☒ C D E
15. A B C D E
16. A B C D E
17. A B C D E
18. A B C D E
19. A B C D E
20. A B C D E