

Student's Name _____

THINKING WITH SCIENCE

Observation Quiz

Lesson 10 (The Broken Jar)

1. The manipulated variable is:
 - A. how the groups are treated differently.
 - B. how the groups are treated the same.
 - C. how the groups are treated.
 - D. none of the above.

2. The control question for "Was B in the freezer?" is:
 - A. was B in the freezer longer?
 - B. was B at a colder temperature?
 - C. was A in the freezer?
 - D. none of the above.

3. The fact that both A and B were in the freezer is called:
 - A. a controlled variable.
 - B. a manipulated variable.
 - C. a control group.
 - D. none of the above.

4. How do we know that putting them both in the freezer had nothing to do with the difference in the results?
 - A. both contained water.
 - B. both jars were the same.
 - C. there was the same amount of water in both.
 - D. none of the above.

5. The manipulated variable was:
 - A. the lid.
 - B. the water.
 - C. the jars.
 - D. all of the above.

6. If a conclusion can be called "reliable", that means that it:
 - A. is supported by the data.
 - B. is not refuted by the data.
 - C. both of the above.
 - D. neither of the above.

7. When water freezes, it:
- A. expands.
 - B. forms ice.
 - C. gets hard.
 - D. all of the above.
8. The process that makes water different from other substances is that it:
- A. expands when it freezes.
 - B. gets hard when it freezes.
 - C. forms a gas when boiled.
 - D. none of the above.
9. An example that indicates that water expands when it freezes is:
- A. a soda pop can bursts in the freezer.
 - B. the ice cubes in an ice tray are higher than the previous water was.
 - C. water pipes sometimes burst when the weather is freezing.
 - D. all of the above.
10. The word "tentative", when used to describe a conclusion, means:
- A. incomplete.
 - B. temporary.
 - C. not final.
 - D. all of the above.
11. The main reason why B broke was:
- A. pressure.
 - B. heat.
 - C. water.
 - D. none of the above.
12. I was 10 years old 68 years ago. How old am I now?
- A. 68
 - B. 73
 - C. 78
 - D. 83
13. The way that milk is when it first comes out of cows is called:
- A. pasteurized.
 - B. homogenized.
 - C. raw
 - D. cream

14. My ice cream, when I was a child, contained only:

- A. cream.
- B. cream and sugar.
- B. cream, sugar, and salt.
- C. none of the above.

15. A rapid fire focus is one in which:

- A. no questions are asked.
- B. no one writes anything.
- C. the data are written.
- D. everyone asks questions.

16. The reason why Jar D was partly empty was that:

- A. it contained less water originally.
- B. the ice was sawed off after it was frozen.
- C. the ice melted.
- D. all of the above.

17. When water freezes, it gets what per cent bigger?

- A. 5
- B. 8
- C. 10
- D. 12

18. When you hear water gushing out of a faucet under your floor, you would probably feel:

- A. frantic.
- B. panicky
- C. desperate.
- D. all of the above.

19. How much of an iceberg is above the ocean that it is floating in?

- A. 6 per cent
- B. 8 per cent
- C. 9 per cent
- D. 11 per cent

20. Why not get close to an iceberg in your boat?

- A. 92 per cent is under the water.
- B. most of it is under the water.
- C. you might hit the part that is under the water.
- D. all of the above.

Students's Name Answer Key

OBSERVATION QUIZ FOR "THINKING WITH SCIENCE"

Quiz for Lesson 10

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