

Student's Name _____

THINKING WITH SCIENCE

Observation Quiz

Lesson 5 (The Potatoes)

1. A millimeter is about the thickness of a:
 - A. penny
 - B. quarter
 - C. dime
 - D. nickel
2. The group in an experiment that is treated "normally" is the:
 - A. control group
 - B. experimental group
 - C. manipulated group
 - D. scientific group
3. The difference between the control group and the experimental group in an experiment is the:
 - A. controlled variable
 - B. experimental variable
 - C. manipulated variable
 - D. none of the above
4. If a conclusion is refuted, it is:
 - A. supported
 - B. proved false
 - C. proved true
 - D. proved valid
5. A "good" conclusion tell a person:
 - A. it is true
 - B. how to set up the focus
 - C. that it is valid
 - D. all of the above
6. After asking the question, "Does A contain any water?", the next question about A should be:
 - A. Does A contain only water?
 - B. Does B contain any water?
 - C. Does A contain any salt?
 - D. Does A contain any sugar?

7. When a scientist gets additional supporting data, he usually:
- A. changes the conclusion
 - B. eliminates the conclusion
 - C. both of the above
 - D. neither of the above
8. If we know that there is salt in B, but not in A, why do we know that the potatoes were the same length at the start:
- A. B shrank
 - B. A grew
 - C. we don't know
 - D. there can't be two manipulated variables
9. If we find out that B contains salt and water, why should we ask whether B contains "only salt and water"?
- A. so we don't have to ask whether B contains other possibilities
 - B. it is the control question
 - C. it is the experimentation question
 - D. so that we know whether it contains sugar
10. What tells us that the salt has something to do with B shrinking?
- A. it is the manipulated variable
 - B. A doesn't have any salt
 - C. both of the above
 - D. neither of the above
11. Osmosis always involves:
- A. a cell wall and a membrane
 - B. a membrane and water
 - C. a potato
 - D. a plant cell
12. The outermost layer of a plant cell, and a layer that is not found in animal cells is the:
- A. membrane
 - B. cell wall
 - D. cell juice
 - E. none of the above
13. A slug shrinks when you put salt on it because:
- A. water is drawn out of its cells
 - B. osmosis occurs
 - C. its cells lose water
 - D. all of the above

Students's Name ANSWER KEY

OBSERVATION QUIZ FOR "THINKING WITH SCIENCE"

Quiz for Lesson 5 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