Student's Name _____

THINKING WITH SCIENCE

Observation Quiz

Lesson 15 (Acceleration)

1. To accelerate means:
   A. to go ahead.
   B. to speed up.
   C. to stop.
   D. to continue.

2. When you look at the data chart and see that the cart went the following distances, (A=78, B=69, C=57), you know that:
   A. A went the farthest and C went the shortest distance.
   B. A was heaviest.
   C. C was lightest.
   D. C was heaviest.

3. If a conclusion is refuted, it is:
   A. supported..
   B. not supported.
   C. proved false.
   D. proved true.

4. If a conclusion can be said to be supported and not refuted, it can be called:
   A. reliable.
   B. valid.
   C. both of the above.
   D. neither of the above.

5. In this experiment, the manipulated variable is:
   A. weight
   B. each sinker
   C. distance
   D. cargo A

6. Why do all of the sinkers have to be the same size?
   A. Otherwise, there would not be a manipulated variable.
   B. Otherwise, there would be two manipulated variables.
   C. Otherwise, the cargoes would all go the same distance.
   D. Otherwise, there would be no controlled variables.

7. What is one of the primary reasons for scientific experimentation?
   A. To determine the effects of the manipulated variable.
   B. To determine the effects of a controlled variable.
   C. To determine how weight affects travel.
   D. To determine how distance affects travel.

8. The phrase "E-7" means:
   A. Number 7 is excellent.
   B. Number 7 is not good.
   C. everybody except 7.
   D. 7 people are wrong.

9. Scientists analyze data charts in order to:
   A. determine results.
   B. make predictions.
   C. neither of the above.
   D. both of the above.

10. What slows down moving objects?
   A. weight.
   B. sinkers.
   C. heat.
   D. friction.

11. An object that is in motion will stay in motion unless it encounters what?
   A. a brick wall.
   B. heat.
   C. gravity.
   D. friction.

12. In this focus, the friction is between:
   A. the table and the wheels.
   B. the rubber band and the cart.
   C. the wheels and the cart.
   D. the cart and the launch pad.

13. Something that has apparently been moving forever, and which will apparently continue to move forever because it encounters no friction is:
   A. a satellite.
   B. the moon.
   C. the earth.
   D. all of the above.

14. How deep is the atmosphere?

A. 72 miles.
B. 63 miles.
C. 18,000 miles.
D. none of the above.

15. The first artificial satellite was launched in:

A. 1930
B. 1957
C. 1962
D. none of the above.

16. The opposite force to gravity, that must be balanced with gravity in order for a satellite to stay in orbit, is:

A. centrifugal
B. gravitational
C. spinning
D. air

17. Why couldn't Albert Einstein launch a satellite into orbit?

A. He didn't know how.
B. He didn't have a rocket that could go 18,000 miles per hour.
C. He didn't know how to make a satellite.
D. He didn't have a launch pad.

18. A law of physics states that "For every action, there an equal and opposite what?

A. action
B reaction
C. force
D. gravity

19. Without computers, what couldn't we do?

A. make the space shuttle land where we want it to land.
B. Turn on the retrorockets of the shuttle at the correct time.
C. Turn off the retrorockets of the shuttle at the correct time.
D. all of the above.

20. If an independent truck driver is asked to haul a load of lumber, what is the first question he will ask the shipper?

A. How heavy is the load?
B. What is in the load?
C. How fast do you want to get it to the destination?
D. None of the above.

Students's Name ANSWER Key

OBSERVATION QUIZ FOR "THINKING WITH SCIENCE"

Quiz for Lesson 15 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