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### The Scientific Method Quiz

Choose the best answer. Put the complete quiz in the corresponding drop box

1. An explanation for the collection of observations is considered a \_\_\_\_\_.
  - A. theory
  - B. law
  - C. hypothesis
2. A statement about mass always being conserved in a chemical reaction is an example of a \_\_\_\_\_.
  - A. hypothesis
  - B. theory
  - C. law
3. The scientific method involves various techniques which allow researchers to investigate scientific questions through \_\_\_\_\_ and \_\_\_\_\_.
  - A. analysis and observations
  - B. observations and experimentation
  - C. analysis and predictions
4. Why has Galileo been called the father of modern science?
  - A. because he made observations and conducted experiments
  - B. because he discovered electrochemical cells
  - C. because he was a philosopher
5. List the basic steps of the scientific method process in the order they must be carried out.
  - A. observation, hypothesis, prediction, experimentation, and conclusion\*
  - B. hypothesis, observation, prediction, experimentation, and conclusion
  - C. prediction, observation, hypothesis, experimentation, and conclusion
6. Which of the following is not part of the scientific method process?
  - A. observation
  - B. prediction
  - C. discussion
7. Which of the following would be a good example of an observation in the scientific method process?
  - A. a researcher watching a chemical reaction
  - B. a researcher watching a chemical reaction and noting color and temperature changes
  - C. a researcher setting up a chemical reaction in a flask and allowing it to stir for 2 hours

8. Which of the following would be a good example of an observation in the scientific method process?
  - A. a physician observing a patient's reaction to some medication
  - B. a physician observing his watch
  - C. a physician speaking with and observing a patient in an examination room
9. Which of the following would be good tools for making scientific observations during a chemical reaction?
  - A. barometer, thermometer, scale
  - B. thermometer, your eyes, clock
  - C. thermometer, your eyes, tape measure
10. Which of the following would be a good tool for making scientific observations after isolating a solid product from a chemical reaction?
  - A. balance
  - B. clock
  - C. tape measure
11. What can be used to measure the mass of an object?
  - A. balance
  - B. tape measure
  - C. caliper
12. Which of the following would be a good example of a hypothesis in the scientific method process?
  - A. a researcher considers that the more sunlight a green plant receives, the larger the plant will grow
  - B. a researcher wonders amount the effect of more sunlight on green plant growth
  - C. a researcher watches as a green plant exposed to more sunlight grows over a period of 1 month
13. Which of the following would be a good example of a hypothesis in the scientific method process?
  - A. a clinician confirms that taking a vitamin every day will decrease the level of tiredness in people
  - B. a clinician tells a patient that taking a vitamin every day, may decrease the level of tiredness in people
  - C. a clinician contemplates that taking a vitamin every day, may decrease the level of tiredness in people
14. Which of the following would be a good example of a hypothesis in the scientific method process?

- A. a botanist adds 20 mL of water to his plants on a daily basis and he notices a healthy growth, therefore, he believes that adding 40 mL of water on a daily basis will enhance their growth further
  - B. a botanist adds 20 mL of water to his plants on a daily basis and he notices a healthy growth
  - C. a botanist adds 20 mL of water to his plants on a daily basis and he notices a healthy growth, therefore, adding 40 mL of water on a daily basis will definitely enhance their growth further
15. Once a hypothesis has been established, it can be tested by conducting an \_\_\_\_\_.
- A. observation
  - B. experiment
  - C. analysis
16. Which statement is correct about the scientific method process?
- A. after testing a hypothesis, a conclusion can be drawn on whether it will be accepted or rejected
  - B. after testing an observation, a conclusion can be drawn on whether it will be accepted or rejected
  - C. after testing a conclusion, it can be predicted whether a hypothesis will be accepted or rejected