

Scientific Method Quiz

Name _____ Section _____

Part One: Multiple Choice: *Put the correct capital letter on the line (1 point each)*

1. Scientific inquiry refers to
 - A. a possible explanation for a set of observations or answer to a scientific question.
 - B. the diverse ways in which scientists study the natural world and propose explanations based on the evidence they gather.
 - C. a rigid sequence of steps used to find the answer to a scientific question.
 - D. a well-tested explanation for a wide range of observations or experimental results.
2. A hypothesis is
 - A. the result of a scientific experiment performed for the purpose of proving a theory.
 - B. the process of experimentation designed specifically to disprove a scientific theory.
 - C. a summary of events written in a particular fashion.
 - D. a statement that proposes a possible explanation to some phenomenon or event.
3. In Miss Wilt's science class, Harry and his classmates are performing a controlled scientific investigation. Miss Wilt has already picked a topic and testable **question** for the class to study and has provided background **research** on the topic. **Before** performing the investigation, the students must **first**
 - A. Analyze the data that results from the investigation
 - B. Form a hypothesis to predict the outcome of the investigation
 - C. Communicate the results of the investigation with Miss Wilt
 - D. Record data from the investigation in graphs and charts
4. What makes a good **hypothesis**?
 - A. It must contain the words "I believe."
 - B. It must be written in question form.
 - C. It must be testable.
 - D. It must be correct.
5. When scientists use one of their **five senses** to gather information, they are
 - A. drawing a conclusion.
 - B. predicting a relationship.
 - C. making an observation.
 - D. making an inference.
6. Bob's shirt is wet. He must have been exercising. This is a(n)
 - A. inference
 - B. observation
 - C. estimation
 - D. measurement

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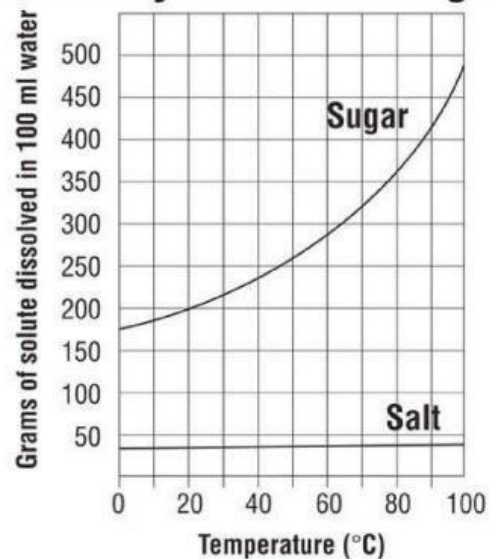
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7. Manuel tested the effects of temperature on the **solubility** of sugar in water (how well sugar can dissolve in water). He measured the maximum amount (in grams) of sucrose (sugar) he could dissolve in 100 g of water. Manuel repeated the test at five different temperatures. The graph of his results is included below.

Based on his observations, which of the following is a general **hypothesis** Manuel might form?

- A. The increasing solubility of a solid raises the temperature of the water.
- B. The decreasing solubility of a solid raises the temperature of the water.
- C. The solubility of a solid increases as the temperature increases.
- D. The solubility of a solid decreases as the temperature increases.

Solubility of Salt and Sugar



Part Two: Matching

Match the word with the correct definition by **putting the capital letter** on the line.

_____ 8. experiment

_____ 9. analyze

_____ 10. hypothesis

_____ 11. observe

_____ 12. measure

_____ 13. purpose

_____ 14. research

- A. State the problem
- B. Gather information, make observations, take measurements
- C. Using your 5 senses to gather information
- D. Comparison with a standard object
- E. Possible explanation to a problem
- F. Record what happened as data during an experiment and find patterns
- G. Developing and carrying out a procedure to test a hypothesis

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Answer Key:

1. B
2. D
3. B
4. C
5. C
6. A
7. C
8. G
9. F
10. E
11. C
12. D
13. A
14. B

For an editable Google Doc copy of this quiz, click on this link:

<https://docs.google.com/document/d/1IRnFoP2uXqXzV3VAAUCcWS0LK4peOFedWdnyMWZc7fg/copy>