



SCIENTIFIC METHOD

Date: _____

Name: _____

Class: _____

1. What's the difference between a hypothesis and a theory?

- A. "Theory" is another word for "fact." "Hypothesis" is another word for "guess."
- B. Hypotheses can't be proven; theories can.
- C. Theories have been confirmed through tests; hypotheses haven't.
- D. Theories confirm many hypotheses; a hypothesis only confirms one theory.

2. Place the following steps in sequence: A) Recognizing a problem, B) Testing a hypothesis, C) Drawing a conclusion.

- A. A, C, B
- B. A, B, C
- C. B, C, A
- D. C, B, A

3. In the process, "The scientific method is an analytic process for determining why things happen," what's the best example for "analytic"?

- A. Analysis
- B. Answering
- C. Measurement
- D. Logic

4. What must you do before you make a hypothesis?

- A. Run an experiment
- B. Make observations
- C. Form a theory
- D. Draw conclusions

5. If you were testing an experiment to determine the temperature at which beans sprout the fastest, what would be the variable?

- A. The number of beans you plant
- B. The height of the sprouts that grow
- C. The amount of water you give the beans
- D. The temperature at which each bean is kept

6. You develop an experiment several times to make sure your results are consistent. In the preceding phrase, what does "consistent" mean?

- A. Obvious
- B. Perfect
- C. Exchangeable
- D. Testable

7. What might cause a theory to change over time?

- A. New laws passed by the government
- B. New but verifiable ideas
- C. Changes in public opinion
- D. The discovery of new evidence

8. Evolution is one example of a theory. From what you know about the scientific method, what can you conclude about the biological theory?

- A. It's been tested many times.
- B. Scientists don't want to test it anymore.
- C. No one is allowed to test whether it's true or not.
- D. There's very little evidence to support it.

9. Which of the following is a testable hypothesis?

- A. Roses are more beautiful than daisies
- B. A plant needs at least five hours of sunlight per day to grow
- C. The moon is invisible
- D. Robots will eventually rule the world

10. What happens if you test a hypothesis multiple times and the data doesn't support your prediction?

- A. Change the data to support your prediction
- B. Run the experiment again until you get the results you're looking for
- C. Conclude that your hypothesis cannot be proven
- D. Re-test your hypothesis