



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 contain many hypotheses; a hypothesis only contains one theory

2 Place the following steps in sequence: A) Recognizing a problem; B) Testing a hypothesis; C) Drawing inferences

- A** A, C, B
- B** A, B, C
- C** B, C, A
- D** C, B, A

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

- A** Probable
- B** Amazing
- C** Incoherent
- D** Logical

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 running 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 you grow
- C** The amount of water you give the beans
- D** The temperature at which each bean is kept

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

- A** Obvious
- B** Perfect
- C** Unchanging
- D** Testable

7 What might cause a theory to change over time?

- A** New laws passed by the government
- B** New but untestable 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 this biological theory?

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

9 Which of the following is a testable hypothesis?

- A** Roses are more beautiful than violets
- B** A plant needs at least five hours of sunlight per day to grow
- C** Ice cream is delicious
- D** Humans will someday land on Mars

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-think your hypothesis