

Assessment

Quiz**Section: Scientific Methods**

In the space provided, write the letter of the description that best matches the term or phrase.

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| _____ 1. control group | a. a possible explanation that can be tested by scientific means |
| _____ 2. experiment | b. a well-supported system of ideas that explains many related phenomena |
| _____ 3. hypothesis | c. the process of obtaining information by using the senses |
| _____ 4. observation | d. serves as a standard of comparison in a scientific test |
| _____ 5. theory | e. a procedure carried out under controlled conditions to test or discover something |

In the space provided, write the letter of the term or phrase that best completes each statement or best answers each question.

- _____ 6. Which of these steps in a scientific investigation is usually taken first?
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| a. experimenting | c. hypothesizing |
| b. forming a theory | d. observing |
- _____ 7. What can scientists do to test a hypothesis?
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| a. run a controlled experiment | c. Both (a) and (b) |
| b. do a detailed study | d. Neither (a) nor (b) |
- _____ 8. An experiment fails to support the hypothesis it was designed to test. What are the scientists who designed the experiment *most* likely to do?
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| a. decide that their hypothesis was a failure |
| b. use the results to come up with a new hypothesis |
| c. decide that their experiment was a failure |
| d. throw out the results and choose another topic of study |
- _____ 9. What is the difference between a hypothesis and a theory?
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| a. A hypothesis relates to a limited set of conditions, whereas a theory explains a broad range of data. |
| b. A hypothesis explains a broad range of data, whereas a theory relates to a limited set of conditions. |
| c. A hypothesis is supposed to be tested, whereas a theory is only tentative and is not supposed to be tested. |
| d. A hypothesis can be tested, whereas a theory is universally true and cannot be tested. |