Name:
Date:
Class:

Lesson 5.1 Agriscience and the Scientific Method

Lesson Review

Carefully study the lesson and then answer the following questions.

1. How does science support agriculture? (5.1.1)
   Answer:

2. What are the three main fields of science? (5.1.1)
   Answer:

3. What is the difference between physical science and biology? (5.1.1)
   Answer:

4. List the five basic steps of the scientific method (in order). (5.1.2)
   Answer:

5. All scientific tests begin with _____. (5.1.2)

A. a problem listed by a governmental organization
B. conclusions from previous scientific experiments
C. an observation of something the researcher cannot explain
D. creating charts and graphs of the current situation

Answer:

6. An educated prediction of the outcome of a scientific experiment is called a _____. (5.1.2)

A. hypothesis
B. problem
C. conclusion

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D. research question

Answer:

Match the experimental term to the definition.

A. Variable
B. Independent variable (IV)
C. Dependent variable (DV)
D. Treatment
E. Control
F. Constant
G. Trial

7. Something that will change over the course of the experiment (5.1.2)

Answer:

8. Items kept the same between experimental groups (5.1.2)

Answer:

9. Changed by the researcher to test the hypothesis (5.1.2)

Answer:

10. The number of organisms that treatments are applied to or the number of times the experiment is repeated (5.1.2)

Answer:

11. Different levels of the independent variables (5.1.2)

Answer:

12. Changes because of the outcome of the experiment (5.1.2)

Answer:

13. Section of the experiment that does not receive the treatment (5.1.2)

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Answer:

14. List the three categories of information that should be kept in a logbook for an experiment. (5.1.2)

Answer:

15. What is the difference between a fact and an inference? (5.1.2)

Answer:

16. Which of the following is true about a good conclusion? (5.1.2)

A. It shows that the hypothesis was correct.
B. It includes only charts and graphs.
C. It includes the most relevant results only and is brief.
D. It includes all the results and relates them to the hypothesis.

Answer:

Match the parts of a written research report to the definition.

A. Abstract
B. Introduction
C. Literature review
D. Methods
E. Results
F. Discussion/conclusion
G. References

17. Describes the experimental process in detail (5.1.2)

Answer:

18. A summary of the research and findings (5.1.2)

Answer:

19. Shares the implications of the findings (5.1.2)

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Answer:

20. Gives the reason that this study was conducted (5.1.2)
    Answer:

21. Gives all of the findings of the study (5.1.2)
    Answer:

22. Includes information on the topic and related studies that have already been completed in this area (5.1.2)
    Answer:

23. A complete list of the sources that were used (5.1.2)
    Answer:

24. What is the difference between a chart and a graph? (5.1.2)
    Answer:

Critical Thinking

1. Why is it important to follow the scientific method? What do you think would happen if every researcher had the chance to follow their own rules regarding testing a hypothesis? (5.1.2)
   Answer:

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