

Skills Worksheet

Directed Reading

Section: Scientific Methods

Read each question, and write your answer in the space provided.

1. What is observation?

2. What observation did Charles Paine make about Canada geese in the Chicago area?

3. What is a hypothesis?

4. What are three possible hypotheses related to Paine's observations of Canada geese in the Chicago area?

Complete each statement by writing the correct term or phrase in the space provided.

5. A planned procedure carried out under controlled conditions to test a hypothesis is called a(n) _____.

6. In a controlled experiment, a group that receives no treatment is called a(n) _____ group.

7. In a controlled experiment, the factor that is varied is called the _____ variable.

8. In a controlled experiment, a factor that is measured in response to the factor that is varied is called a(n) _____ variable.

Directed Reading *continued*

Read each question, and write your answer in the space provided.

9. What did Paine do to test his hypothesis about the Canada goose population?

10. What did Paine's data show? What new hypothesis did Paine come up with?

11. How did working with another scientist help Paine? What would these scientists do to verify their conclusions?

Study the following steps in a scientific investigation. Determine the order in which the steps commonly take place. Write the number of each step in the space provided.

_____ 12. forming a hypothesis

_____ 13. asking a question

_____ 14. making observations

_____ 15. drawing a conclusion

_____ 16. designing and carrying out one or more experiments

Complete each statement by writing the correct term or phrase in the space provided.

17. A(n) _____ unites and explains a broad range of observations and data.

18. Future _____ may cause a theory to be revised or discarded.

19. The word _____ is used differently by scientists than by the general public.