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.
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.