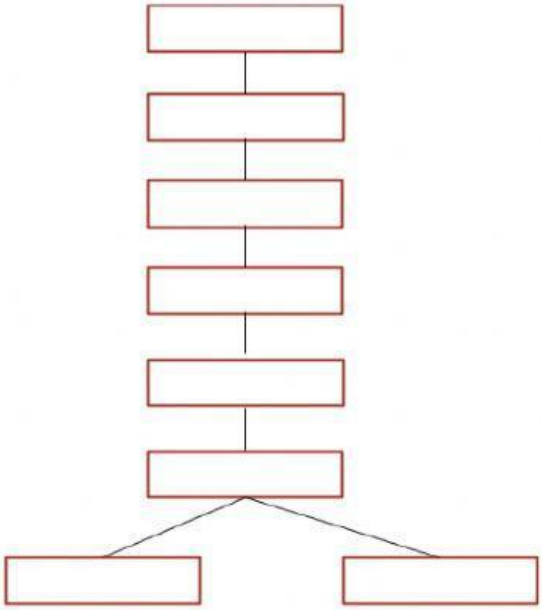
Chapter 1
Section 1: The Methods of Science

Instructions: Drag and Drop

Draw Conclusions State the Problem Test the Hypothesis

Gather Information Analyze the Data

Hypothesis Supported Form a Hypothesis Hypothesis Not Supported



Instructions: Select the correct answer:

Sophia was learning to bake bread at home. Her first few batches of dough didn't rise as much as they should have. Sophia's mom noted that the kitchen was cold and suggested that the dough might not be warm enough to rise.

Sophia decided to test her mom's suggestion. She made a large batch of dough and divided it into six equal-sized balls. Then, she put each ball into a bowl. She left three bowls on the counter in the kitchen, where the temperature was 63 degrees Fahrenheit. She left the other three bowls on her desk in her upstairs bedroom, where the temperature was 80 degrees. After one hour, Sophia measured the size of each dough ball.

1. In Sophia's experiment, which is the independent variable?
    a. The size of each dough ball after an hour
    b. The temperature of each room
    c. The equal sized balls at the beginning of the experiment

2. In Sophia's experiment, which of the following is the dependent variable?
    a. The size of each dough ball after an hour
    b. The temperature of each room
    c. The three bowls left on the kitchen counter

3. In Sophia's experiment, which of the following was the constant?
    a. The equal sized balls at the beginning of the experiment
    b. The three bowls left on the kitchen counter
    c. The temperature of each room

4. In Sophia's experiment, which of the following is the control group?
    a. The three bowls left on her desk in her room
    b. The three bowls left on the kitchen counter
    c. The equal sized balls at the beginning of the experiment

5. A scientific _____ is a statement about what happens in nature that seems to be true all the time.

a. discovery
b. theory
c. law

6. What occurs when a scientist's expectations change how the results of an experiment are analyzed or how the conclusions are made?
   a. Blind experiment
   b. Bias
   c. Prejudice

7. A scientific _____ is an explanation of things or events based on knowledge gained from many observations and investigations.
   a. Law
   b. Theory
   c. Discovery

8. A _____ represents an idea, event, or object to help people better understand it.
   a. Graph
   b. Scientific data
   c. Model

9. Which of the following variables in an experiment is changed in an experiment to see how it will affect the other variables?
   a. dependent
   b. independent
   c. constant