Chapter 1 Science Skills

Section 1.2 Using a Scientific Approach
(pages 7–11)
This section describes scientific methods and how they are used to understand the world around you.

Reading Strategy (page 7)
Using Prior Knowledge Before you read, add to the web diagram what you already know about scientific methods. After you read the section, revise the diagram based on what you have learned. For more information on this Reading Strategy, see the Reading and Study Skills in the Skills and Reference Handbook at the end of your textbook.

Scientific Methods (pages 7–9)
1. Name three types of variables in an experiment.
   a. Manipulated variable
   b. __________________
   c. __________________

2. Is the following sentence true or false? If the data from an experiment do not support your hypothesis, you can revise the hypothesis or propose a new one. ______________

Match the following vocabulary terms to the correct definition.

<table>
<thead>
<tr>
<th>Definition</th>
<th>Vocabulary Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Information that you obtain through your senses</td>
<td>a. theory</td>
</tr>
<tr>
<td>4. A well-tested explanation for a set of observations</td>
<td>b. hypothesis</td>
</tr>
<tr>
<td>5. A proposed answer to a question</td>
<td>c. observation</td>
</tr>
</tbody>
</table>
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6. Complete the model of a scientific method by using the sentences in the box below to fill-in the missing steps.

Test hypothesis with further experiments.
Revise hypothesis.
Analyze data and draw conclusions.
Develop theory.

a. ___________________________

b. ___________________________

c. ___________________________

d. ___________________________

Scientific Laws (page 9)

7. All scientists may accept a given scientific law, but different scientists may have different _________ to explain it. Circle the correct answer.

models scientific theories hypotheses

Scientific Models (page 10)

8. Why are scientific models useful? ___________________________

Working Safely in Science (page 11)

9. Circle the letters of safety precautions to follow whenever you work in a science laboratory.

a. Study safety rules.
b. Never ask questions.
c. Read all procedural steps.