

Chapter 1

Use with Section 1

REINFORCEMENT**● Scientific Problem Solving**

Use the numbers 1–7 to put these problem-solving approaches in a logical order.

- _____ a. test your hypothesis
- _____ b. make a plan
- _____ c. draw conclusions
- _____ d. record observations and results
- _____ e. recognize the problem
- _____ f. analyze your data
- _____ g. form a hypothesis

A student wanted to know how his weight on Mars would compare with his weight on Earth. Pretend that traveling to Mars is possible. Answer the following questions.

8. What is one hypothesis the student might form? _____

9. The student decides to perform a controlled experiment to test his hypothesis.
- a. What is the independent variable? _____
 - b. What is the dependent variable? _____
 - c. What is the control? _____
 - d. What factors should be kept constant? _____

10. The student finds that his weight on Mars is about $\frac{1}{3}$ of his weight on Earth. He concludes that all things weigh $\frac{1}{3}$ as much on Mars as on Earth. Do you think his conclusion is correct?
Why or why not? _____

