

Chapter 1

CHAPTER REVIEW

● The Nature of Science

Part A. Vocabulary Review

Choose the term from the word list that is best described by each statement. Write the term on the line provided.

model
dependent variable
observation

control
independent variable
constant

physical science
technology
experiment

hypothesis
theory
scientific law

- _____ 1. The factor in an experiment that is adjusted by the experimenter is the _____.
- _____ 2. The area of science in which matter and energy are studied is _____.
- _____ 3. An idea, system, or structure that represents something that is being explained is a(n) _____.
- _____ 4. A test of a hypothesis is a(n) _____.
- _____ 5. A standard for comparison that is used in an experiment is a(n) _____.
- _____ 6. A rule of nature that sums up related observations and experimental results to describe a pattern is a(n) _____.
- _____ 7. The independent variable in an experiment may cause a change in the _____.
- _____ 8. The process in which the senses are used to gather information is _____.
- _____ 9. A testable prediction is a(n) _____.
- _____ 10. Another term for applied science is _____.
- _____ 11. The factor that doesn't change in an experiment is called the _____.
- _____ 12. An explanation based on many observations supported by experimental results is a(n) _____.

Chapter 1 Review (continued)

Part B. Concept Review

Identify each of the following quantities of physical science as matter or energy. Write *M* for matter or *E* for energy in the spaces provided.

- _____ 1. the chemicals that make up a substance
- _____ 2. the amount of sunlight that reaches Earth
- _____ 3. the amount of heat that can be released by a furnace
- _____ 4. water and ice
- _____ 5. lightning and thunder

In the space provided, explain what each safety symbol means.

6.  7.  8.  9.  10. 

6. _____
7. _____
8. _____
9. _____
10. _____

Identify a logical order for the following steps that involve solving a problem by conducting an experiment. Write the numbers 1 through 5 in the space provided.

- _____ 11. problem
- _____ 12. analysis and conclusion
- _____ 13. procedure
- _____ 14. observations and data
- _____ 15. hypothesis

Answer the following questions on the lines provided.

16. How does a problem differ from an exercise?

17. Explain how controversies arise among scientists.
