

Answer Key

Corwin Chapter 1

Problems: 3, 7, 9, 11, 13

3. Empedocles stated *air, earth, fire, and water* were four basic elements responsible for the natural world.

7. Step 3 of the scientific method is to conduct additional experiments in order to test the hypothesis.

9. A scientific *theory* explains the behavior of nature using a model or concept, whereas a *natural law* states a relationship that is measurable under various experimental conditions.

11. Statement (a) is a *natural law* because mass can be measured.  
Statement (b) is a *theory* because gas molecule collisions cannot be measured.  
Statement (c) is a *natural law* because gas volumes can be measured.  
Statement (d) is a *theory* because it is a model that explains the nucleus.

13. Chemistry is referred to as the central science because it supports other physical sciences, life sciences, and earth sciences. An understanding of chemistry is also prerequisite to the health sciences.