Other Studying Strategies

Comparing and Contrasting

Comparing and contrasting is a strategy that helps you note similarities and differences between two or more objects or events. When you determine similarities, you are comparing. When you determine differences, you are contrasting.

You can use comparing and contrasting to help you classify objects or properties, differentiate between similar concepts, and speculate about new relationships. For example, as you read Chapter 1 you might begin to make a table in which you compare and contrast metals, nonmetals, and metalloids. As you continue to learn about these substances in Chapters 4 and 5, you can add to your table, giving you a better understanding of the similarities and differences among elements.

Identifying Cause and Effect

Identifying causes and effects as you read helps you understand the material and builds logical reasoning skills. An effect is an event or the result of some action. A cause is the reason the event or action occurred. Signal words, such as *because, so, since, therefore, as a result,* and *depends on,* indicate a cause-and-effect relationship.

You can use arrows to show cause and effect. For example, you might write this cause-and-effect relationship as you read Chapter 11, Section 2: At constant pressure, increase in temperature (cause) → increase in gas volume (effect).

Making a Prediction Guide

A prediction guide is a list of statements about which you express and try to justify your opinions based on your current knowledge. After reading the material, you re-evaluate your opinion in light of what you learned. Using prediction guides helps you evaluate your knowledge, identify assumptions you may have that could lead to mistaken conclusions, and form an idea of expected results.

1. **Read the statements your teacher writes on the board.** For example, look at the five statements from Dalton's theory listed on page 68 of your textbook.
2. **Decide whether you think each statement is true or false and discuss reasons why you think so.**
3. **After reading the section, re-evaluate your opinion of each statement. Discuss why your opinion changed or remained the same. Find passages in the text that account for the change of reinforcement of your opinions.** For example, you might have agreed with all five statements from Dalton's theory before reading the text. Then, after reading about atoms and subatomic particles, you might have changed your opinion about the first statement.