

## Chapter 6 Chemical Bonding

### Chapter Opener

\_\_ **Chapter Overview, TE** Review the objectives listed in the Student Edition.

### Section 1 Introduction to Chemical Bonding

**PACING: 45 minutes**

**PENNSYLVANIA ACADEMIC STANDARDS FOR SCIENCE AND TECHNOLOGY:**

3.4.A.5 Explain the formation of compounds and their resulting properties using bonding theories.

### Objectives

1. **Define** chemical bond.
2. **Explain** why most atoms form chemical bonds.
3. **Describe** ionic and covalent bonding.
4. **Explain** why most chemical bonding is neither purely ionic nor purely covalent.
5. **Classify** bonding type according to electronegativity differences.

### FOCUS (5 minutes)

\_\_ **Lesson Starter, TE** Have students consider the causes of the attraction and repulsion between atoms.

### MOTIVATE (10 minutes)

\_\_ **Reading Skill Builder, Brainstorming, TE** Have students work in pairs to discuss what is happening in different types of bonding.

### TEACH (20 minutes)

#### \_\_ PowerPoint

\_\_ **Visual Strategy, Figure 1, TE** Use the diagrams to help students understand the fundamental difference between ionic and covalent bonding.

\_\_ **Sample Problem A, SE** Demonstrate how to use electronegativity differences to classify bonding

\_\_ **Practice Problems A, SE** Students use electronegativity differences in order to classify bonding.

### CLOSE (10 minutes)

\_\_ **Section Review, SE** Students answer end-of-section vocabulary, key ideas, critical thinking, and interpreting graphics questions.