

The Covalent Bond



► pages 241–247
► 1 class session(s)

Section Objectives

- **Apply** the octet rule to atoms that bind covalently.
- **Describe** the formation of single, double, and triple covalent bonds.
- **Compare** and **contrast** sigma and pi bonds.
- **Relate** the strength of covalent bonds to bond length and bond dissociation energy.

National Science Content Standards

UCP.2, UCP.3, UCP.5; A.1; B.1, B.2, B.3, B.4, B.6

Georgia QCC

1, 1.2, 2.1, 3.1, 6.3, 8.1, 8.2

Focus

_____ Section Focus Transparency 30 and Master

Teach

- _____ Discovery Lab, *SE* p. 241
- _____ Quick Demo, *TWE* p. 242
- _____ Chemistry Journal, *TWE* p. 243
- _____ *Small-Scale Laboratory Manual*, pp. 21–24 *TCR*
- _____ *Spanish Resources*, 9.1 *TCR*

Assess

- _____ Section Assessment, *SE* p. 247
- _____ Check for Understanding, *TWE* p. 247
- _____ Reteach, *TWE* p. 247
- _____ *Study Guide for Content Mastery*, p. 49 *TCR*

Enrichment/Application

- _____ Extension, *TWE* p. 247
- _____ *Cooperative Learning in the Science Classroom*, *TCR*

Chapter Assessment

- _____ Assessment, *TWE* pp. 245, 247
- _____ *Alternate Assessment in the Science Classroom*, *TCR*
- _____ *Performance Assessment in the Science Classroom*, *TCR*

Multimedia Options

- _____ **Chemistry Interactive CD-ROM**, Section 9.1 Animation
- _____ **Vocabulary PuzzleMaker Software**, Ch. 9
- _____ **Cosmic Chemistry Videodisc**, Disc 3, Side 6; Disc 4, Side 8; Disc 2, Side 3; Disc 3, Side 5
- _____ *Using the Internet in the Science Classroom*, *TCR*
- _____ Chemistry Web site: ga.science.glencoe.com

Naming Molecules

▶ pages 248–251
▶ 1 class session(s)

Section Objectives

- **Identify** the names of binary molecular compounds from their formulas.
- **Name** acidic solutions.

National Science Content Standards

UCP.2, UCP.3, UCP.5; B.2; G.2

Georgia QCC

8

Focus

_____ Section Focus Transparency 31 and Master

Teach

_____ Chemistry Journal, *TWE* p. 250_____ *Spanish Resources*, 9.2 TCR

Assess

_____ Section Assessment, *SE* p. 251_____ Check for Understanding, *TWE* p. 251_____ Reteach, *TWE* p. 251_____ *Study Guide for Content Mastery*, p. 50 TCR

_____ Math Skills Transparency 9 and Master

Enrichment/Application

_____ Extension, *TWE* p. 251_____ *Cooperative Learning in the Science Classroom*, TCR

Chapter Assessment

_____ Assessment, *TWE* pp. 249, 250, 251_____ *Alternate Assessment in the Science Classroom*, TCR_____ *Performance Assessment in the Science Classroom*, TCR

Multimedia Options

_____ **Chemistry Interactive CD-ROM**, Section 9.2 Video and Demonstration_____ **Vocabulary PuzzleMaker Software**, Ch. 9_____ *Using the Internet in the Science Classroom*, TCR_____ Chemistry Web site: ga.science.glencoe.com

Molecular Structures



► pages 252–258
► 2 class session(s)

Section Objectives

- **List** five basic steps used in drawing Lewis structures.
- **Explain** why resonance occurs, and **identify** resonance structures.
- **Explain** three exceptions to the octet rule, and **identify** molecules in which these exceptions occur.

National Science Content Standards

UCP.2, UCP.3, UCP.5; B.2

Georgia QCC

6.3, 8

Focus

_____ Section Focus Transparency 32 and Master

Teach

- _____ Quick Demo, *TWE* p. 252
_____ Chemistry Journal, *TWE* p. 254
_____ Teaching Transparency 29 and Master
_____ *Spanish Resources*, 9.3 TCR

Assess

- _____ Section Assessment, *SE* p. 258
_____ Check for Understanding, *TWE* p. 257
_____ Reteach, *TWE* p. 257
_____ *Study Guide for Content Mastery*, p. 51 TCR

Enrichment/Application

- _____ Extension, *TWE* p. 258
_____ *Challenge Problems*, p. 9 TCR
_____ *Cooperative Learning in the Science Classroom*, TCR

Chapter Assessment

- _____ Assessment, *TWE* p. 258
_____ *Alternate Assessment in the Science Classroom*, TCR
_____ *Performance Assessment in the Science Classroom*, TCR

Multimedia Options

- _____ **Chemistry Interactive CD-ROM**, Section 9.3 Video
_____ **Vocabulary PuzzleMaker Software**, Ch. 9
_____ *Using the Internet in the Science Classroom*, TCR
_____ Chemistry Web site: ga.science.glencoe.com

Molecular Shape

▶ pages 259–262
▶ 2 class session(s)

Section Objectives

- **Discuss** the VSEPR bonding theory.
- **Predict** the shape of and the bond angles in a molecule.
- **Define** hybridization.

National Science Content Standards

UCP.2, UCP.3, UCP.5; A.1; B.2, B.4

Georgia QCC

1, 1.2, 3.1, 6.3, 8.2

Focus

_____ Section Focus Transparency 33 and Master

Teach

- _____ MiniLab, *SE* p. 261
- _____ Quick Demo, *TWE* p. 259
- _____ Chemistry Journal, *TWE* p. 261
- _____ *ChemLab and MiniLab Worksheets*, p. 33 *TCR*
- _____ *Laboratory Manual*, pp. 65–68 *TCR*
- _____ *CBL Laboratory Manual*, pp. 5–8 *TCR*
- _____ Teaching Transparency 30 and Master
- _____ *Spanish Resources*, 9.4 *TCR*

Assess

- _____ Section Assessment, *SE* p. 262
- _____ Check for Understanding, *TWE* p. 262
- _____ Reteach, *TWE* p. 262
- _____ *Study Guide for Content Mastery*, p. 52 *TCR*

Enrichment/Application

- _____ Extension, *TWE* pp. 260, 262
- _____ *Cooperative Learning in the Science Classroom*, *TCR*

Chapter Assessment

- _____ Assessment, *TWE* p. 261
- _____ *Alternate Assessment in the Science Classroom*, *TCR*
- _____ *Performance Assessment in the Science Classroom*, *TCR*

Multimedia Options

- _____ **Chemistry Interactive CD-ROM**, Section 9.4 Experiment
- _____ **Vocabulary PuzzleMaker Software**, Ch. 9
- _____ *Using the Internet in the Science Classroom*, *TCR*
- _____ Chemistry Web site: ga.science.glencoe.com

Electronegativity and Polarity

▶ pages 263–267
▶ 2 class session(s)

Section Objectives

- **Describe** how electronegativity is used to determine bond type.
- **Compare** and **contrast** polar and nonpolar covalent bonds and polar and nonpolar molecules.
- **Describe** the characteristics of compounds that are covalently bonded.

National Science Content Standards

UCP.2, UCP.3, UCP.5; A.1, A.2; B.1, B.2, B.4, B.6, E.2; G.3

Georgia QCC

1, 1.2, 2, 2.1, 3.1, 6.3, 8, 8.1, 8.2, 8.3

Focus

_____ Section Focus Transparency 34 and Master

Teach

_____ Problem-Solving Lab, SE p. 267

_____ ChemLab 9, SE pp. 268–269

_____ How It Works, SE p. 270

_____ Quick Demo, TWE pp. 263, 265

_____ Identifying Misconceptions, TWE p. 264

_____ Chemistry Journal, TWE p. 263

_____ ChemLab and MiniLab Worksheets, pp. 34–36
TCR

_____ Laboratory Manual, pp. 69–72 TCR

_____ Teaching Transparency 31 and Master

_____ Spanish Resources, 9.5 TCR

Assess

Section Assessment, SE p. 267

Check for Understanding, TWE p. 266

Reteach, TWE p. 266

Study Guide for Content Mastery, pp. 53–54 TCR

Math Skills Transparency 10 and Master

_____ Reviewing Chemistry: Preparing for the Georgia
High School Graduation Test, TCR

Enrichment/Application

_____ Extension, TWE p. 266

_____ Cooperative Learning in the Science Classroom, TCR

Chapter Assessment

_____ Chapter 9 Assessment, SE pp. 272–275

_____ Assessment, TWE pp. 265, 266, 267, 269

_____ Chapter Assessment, pp. 49–54 TCR

_____ Alternate Assessment in the Science Classroom, TCR

_____ Performance Assessment in the Science Classroom, TCR

Multimedia Options

_____ Vocabulary PuzzleMaker Software, Ch. 9

_____ MindJogger Videoquizzes, Ch. 9

_____ TestCheck Software, Ch. 9

_____ Cosmic Chemistry Videodisc, Disc 1, Side 2

_____ Chemistry Interactive CD-ROM, Chapter 9 quiz

_____ Using the Internet in the Science Classroom, TCR

_____ Chemistry Web site: ga.science.glencoe.com