Key: *SE* = Student Edition,
TWE = Teacher Wraparound Edition,

Oxidation and Reduction

- *pages 635–643*
- *1 class session(s)*

Section Objectives

- **Describe** the processes of oxidation and reduction.
- **Identify** oxidizing and reducing agents.
- **Determine** the oxidation number of an element in a compound.
- **Interpret** redox reactions in terms of change in oxidation state.

National Science Content Standards

UCP.1, UCP.3; A.1; B.1, B.2, B.3; E.2; G.2

Georgia QCC

1, 1.2, 2.1, 3.1, 5.2, 9.1, 9.2, 9.6, 13, 13.1

Focus

_______ Section Focus Transparency 75 and Master

Teach

_______ Discovery Lab, *SE* p. 635
_______ MiniLab, *SE* p. 638
_______ Quick Demo, *TWE* p. 637
_______ Identifying Misconceptions, *TWE* p. 636
_______ Chemistry Journal, *TWE* pp. 638, 640
_______ *ChemLab and MiniLab Worksheets*, p. 77 *TCR*
_______ *Laboratory Manual*, pp. 153–156 *TCR*
_______ Teaching Transparencies 59–60 and Masters
_______ *Spanish Resources*, 20.1 *TCR*

Assess

_______ Section Assessment, *SE* p. 643
_______ Check for Understanding, *TWE* p. 642
_______ Reteach, *TWE* p. 643
_______ *Study Guide for Content Mastery*, pp. 115–116 *TCR*

Enrichment/Application

_______ Extension, *TWE* p. 643
_______ *Cooperative Learning in the Science Classroom, TCR*

Chapter Assessment

_______ Assessment, *TWE* pp. 637, 638, 639, 643
_______ *Alternate Assessment in the Science Classroom*, *TCR*
_______ *Performance Assessment in the Science Classroom*, *TCR*

Multimedia Options

_______ **Chemistry Interactive CD-ROM,** Section 20.1 Animation, Demonstration, Experiment, and Video
_______ **Vocabulary PuzzleMaker Software,** Ch. 20
_______ **Cosmic Chemistry Videodisc,** Disc 2, Side 3; Disc 3, Side 5
_______ *Using the Internet in the Science Classroom, TCR*
_______ Chemistry Web site: **ga.science.glencoe.com**

Key: *SE* = Student Edition, *TWE* = Teacher Wraparound Edition,

Balancing Redox Equations

▶ *pages 644–649*
▶ *1 1/2 class session(s)*

Section Objectives

- **Relate** changes in oxidation numbers to the transfer of electrons.
- **Use** changes in oxidation number to balance redox equations.
- **Balance** net ionic redox equations by the oxidation-number method.

National Science Content Standards

UCP.1, UCP.3; A.1; B.2, B.3; E.1, E.2; F.6

Georgia QCC

4, 9.1, 13, 13.1

Focus

_______ Section Focus Transparency 76 and Master

Teach

_______ Problem-Solving Lab, *SE* p. 647
_______ Quick Demo, *TWE* p. 644
_______ Identifying Misconceptions, *TWE* p. 645
_______ Chemistry Journal, *TWE* p. 646
_______ *Laboratory Manual*, pp. 157–160 *TCR*
_______ *Small-Scale Laboratory Manual*, pp. 73–76 *TCR*
_______ Teaching Transparency 61 and Master
_______ *Spanish Resources*, 20.2 *TCR*

Assess

_______ Section Assessment, *SE* p. 649
_______ Check for Understanding, *TWE* p. 649
_______ Reteach, *TWE* p. 649
_______ *Study Guide for Content Mastery*, pp. 117–118 *TCR*

Enrichment/Application

_______ *Cooperative Learning in the Science Classroom, TCR*

Chapter Assessment

_______ Assessment, *TWE* pp. 647, 648, 649
_______ *Alternate Assessment in the Science Classroom, TCR*
_______ *Performance Assessment in the Science Classroom, TCR*

Multimedia Options

_______ **Vocabulary PuzzleMaker Software,** Ch. 20
_______ *Using the Internet in the Science Classroom, TCR*
_______ Chemistry Web site: **ga.science.glencoe.com**

Key: *SE* = Student Edition, *TWE* = Teacher Wraparound Edition,

Half-Reactions

▶ *pages 650–653*
▶ *2 1/2 class session(s)*

Section Objectives

- **Recognize** the interdependence of oxidation and reduction processes.
- **Derive** oxidation and reduction half-reactions from a redox equation.
- **Balance** redox equations by the half-reaction method.

National Science Content Standards

UCP.1, UCP.3; A.1; B.1, B.2, B.3, B.6; E.2

Georgia QCC

1, 1.2, 2, 2.1, 3.1, 4, 5.2, 8, 9.1, 9.4, 9.6, 12.3, 13, 13.1

Focus

_______ Section Focus Transparency 77 and Master

Teach

_______ ChemLab 20, *SE* pp. 654–655
_______ How It Works, *SE* p. 656
_______ Quick Demo, *TWE* p. 650
_______ Chemistry Journal, *TWE* p. 652
_______ *ChemLab and MiniLab Worksheets*, pp. 78–80 *TCR*
_______ Teaching Transparency 62 and Master
_______ *Spanish Resources*, 20.3 *TCR*

Assess

_______ Section Assessment, *SE* p. 653
_______ Check for Understanding, *TWE* p. 653
_______ Reteach, *TWE* p. 653
_______ *Study Guide for Content Mastery*, pp. 119–120 *TCR*
_______ *Reviewing Chemistry: Preparing for the Georgia High School Graduation Test, TCR*

Enrichment/Application

_______ Extension, *TWE* p. 653
_______ *Challenge Problems*, p. 20 *TCR*
_______ *Supplemental Problems*, p. 31 *TCR*
_______ *Cooperative Learning in the Science Classroom, TCR*

Chapter Assessment

_______ Chapter 20 Assessment, *SE* pp. 658–661
_______ Assessment, *TWE* pp. 651, 653
_______ *Chapter Assessment*, pp. 115–120 *TCR*
_______ *Alternate Assessment in the Science Classroom, TCR*
_______ *Performance Assessment in the Science Classroom, TCR*

Multimedia Options

_______ **Vocabulary PuzzleMaker Software,** Ch. 20
_______ **MindJogger Videoquizzes,** Ch. 20
_______ **TestCheck Software,** Ch. 20
_______ **Cosmic Chemistry Videodisc,** Disc 3, Side 5; Disc 4, Side 8
_______ **Chemistry Interactive CD-ROM,** Ch. 20 quiz
_______ *Using the Internet in the Science Classroom, TCR*
_______ Chemistry Web site: **ga.science.glencoe.com**