

Ionic Compounds



Chapter Pacing Guide

Please note that this pace is based on completing selected sections of the text in 90 classes, approximately 90 minutes each. Refer to the Course Planning Guide on page xvii of this booklet for a complete list of time allotments assigned to each section. Less time can be allocated for each chapter if you plan to teach all 26 chapters.

| Period | Content |
|--------|---|
| 0.5 | 8.1 Forming Chemical Bonds |
| 1 | 8.2 The Formation and Nature of Ionic Bonds |
| 1 | 8.3 Names and Formulas for Ionic Compounds |
| 0.5 | 8.4 Metallic Bonds and Properties of Metals |
| 0.5 | Review and Assessment |

Forming Chemical Bonds *pages 211–214*

Key: SE = Student Edition,
TWE = Teacher Wraparound Edition,
TCR = Teacher Classroom Resources

National Science Content Standards: UCP.1, UCP.2; A.1; B.1, B.2

Georgia QCC: 1, 1.2, 2.1, 3.1, 5.2, 5.3, 6, 6.3, 8.1

Objectives

- **Define** chemical bond.
- **Relate** chemical bond formation to electron configuration.
- **Describe** the formation of positive and negative ions.

Lesson Resources

- _____ Section Focus Transparency 26 and Master
- _____ Math Skills Transparency 7 and Master
- _____ Teaching Transparency 25 and Master
- _____ *Study Guide for Content Mastery*, p. 43 TCR

Optional Resources

- _____ *Challenge Problems*, p. 8 TCR
- _____ *Solving Problems: A Chemistry Handbook*, Section 8.1 TCR
- _____ *Spanish Resources* 8.1 TCR

Multimedia Resources

- _____ **MindJogger Videoquizzes**, Ch. 8
- _____ **Guided Reading Audio Program**, Section 8.1
- _____ **Cosmic Chemistry Videodisc**, Disc 3, Side 6
- _____ *Using the Internet in the Science Classroom*, TCR
- _____ Chemistry Web site: science.glencoe.com

Lesson Plan

| Activity | Resources | Suggested Time |
|---|--|----------------|
| Classroom Management <ul style="list-style-type: none"> • Display the Section Focus Transparency and have students answer the questions. • Distribute the corrected Chapter 7 tests. | Section Focus Transparency 26 and Master | 5 minutes |
| Core Lesson <ul style="list-style-type: none"> • Introduce Chapter 8 with the Discovery Lab. • Teach the main concepts of Section 8.1. | SE, p. 211 TWE, pp. 211–214 | 25–30 minutes |
| In-Class Check <ul style="list-style-type: none"> • Complete the Check for Understanding and Reteach strategies. | TWE, p. 214 | 5–10 minutes |
| Homework <ul style="list-style-type: none"> • Have students complete Section 8.1 Assessment. • Have students complete the Chemistry Journal. • Assign relevant questions from Chapter 8 Assessment. | SE, p. 214 TWE, p. 213 SE, pp. 236–239 | 5 minutes |

[total = 45 minutes]

The Formation and Nature of Ionic Bonds

pages 215–220

Key: SE = Student Edition,
TWE = Teacher Wraparound Edition,
TCR = Teacher Classroom Resources

National Science Content Standards: UCP.1, UCP.2; B.1, B.2, B.3, B.4, B.6

Georgia QCC: 5.3, 8.1

Objectives

- **Describe** the formation of ionic bonds.
- **Account** for many of the physical properties of an ionic compound.
- **Discuss** the energy involved in the formation of an ionic bond.

Lesson Resources

- _____ Section Focus Transparency 27 and Master
- _____ Teaching Transparency 26 and Master
- _____ *ChemLab and MiniLab Worksheets*, pp. 30–32
TCR
- _____ *Study Guide for Content Mastery*, pp. 44–45 TCR

- _____ **Cosmic Chemistry Videodisc**, Disc 2, Side 3
- _____ *Using the Internet in the Science Classroom*, TCR
- _____ Chemistry Web site: ga.science.glencoe.com

Multimedia Resources

- _____ **Chemistry Interactive CD-ROM**, Section 8.2
Experiment
- _____ **MindJogger Videoquizzes**, Ch. 8
- _____ **Guided Reading Audio Program**, Section 8.2

Optional Resources

- _____ *Laboratory Manual*, pp. 57–64 TCR
- _____ *Solving Problems: A Chemistry Handbook*,
Section 8.2 TCR
- _____ *Spanish Resources 8.2 TCR*

Lesson Plan

| Activity | Resources | Suggested Time |
|--|--|----------------|
| Classroom Management <ul style="list-style-type: none"> • Display the Section Focus Transparency and have students answer the questions. • Have students check homework answers. | Section Focus Transparency 27 and Master TWE, pp. 213, 214, 236–239 | 5 minutes |
| Discussion <ul style="list-style-type: none"> • Answer any questions about homework. | TWE, pp. 213, 214, 236–239 | 0–5 minutes |
| Core Lesson <ul style="list-style-type: none"> • Introduce Section 8.2 with the Quick Demo. • Teach the main concepts of Section 8.2. • Have students read the ChemLab and follow the procedure. | TWE, p. 216 TWE, pp. 215–220 SE, pp. 232–233 | 65–70 minutes |
| In-Class Check <ul style="list-style-type: none"> • Complete the Check for Understanding and Reteach strategies. | TWE, p. 220 | 10 minutes |
| Homework <ul style="list-style-type: none"> • Have students complete Section 8.2 Assessment. • Assign the Performance Assessment. • Assign relevant questions from Chapter 8 Assessment. | SE, p. 220 TWE, p. 218 SE, pp. 236–239 | 5 minutes |

[total = 90 minutes]

Names and Formulas for Ionic Compounds

pages 221–227

Key: SE = Student Edition,
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TCR = Teacher Classroom Resources

National Science Content Standards: UCP.1, UCP.2; B.2; E.2; G.2
Georgia QCC: 5.2, 8

Objectives

- **Write** formulas for ionic compounds and oxyanions.
- **Name** ionic compounds and oxyanions.

Lesson Resources

- _____ Section Focus Transparency 28 and Master
- _____ Math Skills Transparency 8 and Master
- _____ Teaching Transparency 27 and Master
- _____ *Study Guide for Content Mastery*, pp. 46–47 TCR

Optional Resources

- _____ *Solving Problems: A Chemistry Handbook*, Section 8.3 TCR
- _____ *Spanish Resources* 8.3 TCR

Multimedia Resources

- _____ **Chemistry Interactive CD-ROM**, Section 8.3 Demonstrations and Exploration
- _____ **MindJogger Videoquizzes**, Ch. 8
- _____ **Guided Reading Audio Program**, Section 8.3
- _____ *Using the Internet in the Science Classroom*, TCR
- _____ Chemistry Web site: ga.science.glencoe.com

Lesson Plan

| Activity | Resources | Suggested Time |
|--|--|----------------|
| Classroom Management <ul style="list-style-type: none"> • Display the Section Focus Transparency and have students answer the questions. • Have students check homework answers. | Section Focus Transparency 28 and Master TWE, pp. 218, 220, 236–239 | 5 minutes |
| Discussion <ul style="list-style-type: none"> • Answer any questions about homework. | TWE, pp. 218, 220, 236–239 | 5 minutes |
| Core Lesson <ul style="list-style-type: none"> • Introduce Section 8.3 with Chemistry Journal. • Teach the main concepts of Section 8.3. • Perform the Demonstration. | TWE, p. 225 TWE, pp. 221–227 TWE, pp. 222–223 | 55–60 minutes |
| In-Class Check <ul style="list-style-type: none"> • Complete the Check for Understanding and Reteach strategies. | TWE, p. 227 | 15–20 minutes |
| Homework <ul style="list-style-type: none"> • Have students complete Section 8.3 Assessment. • Have students complete the Extension Activity. • Assign relevant questions from Chapter 8 Assessment. | SE, p. 227 TWE, p. 227 SE, pp. 236–239 | 5 minutes |

[total = 90 minutes]

Metallic Bonds and Properties of Metals

pages 228–231

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National Science Content Standards: UCP.1, UCP.2; A.1; B.1, B.2, B.3, B.4, B.6; E.1

Georgia QCC: 1, 1.2, 2, 2.1, 3.1, 4, 5.2, 5.3, 6, 6.3, 8, 8.1, 9.6

Objectives

- **Describe** a metallic bond.
- **Explain** the physical properties of metals in terms of metallic bonds.
- **Define** and **describe** alloys.

Lesson Resources

- _____ Section Focus Transparency 29 and Master
- _____ Teaching Transparency 28 and Master
- _____ *ChemLab and MiniLab Worksheets*, p. 29 TCR
- _____ *Study Guide for Content Mastery*, p. 48 TCR

Optional Resources

- _____ *Solving Problems: A Chemistry Handbook*, Section 8.4 TCR
- _____ *Spanish Resources* 8.4 TCR

Multimedia Resources

- _____ **MindJogger Videoquizzes**, Ch. 8
- _____ **Guided Reading Audio Program**, Section 8.4
- _____ **Cosmic Chemistry Videodisc**, Disc 2, Side 4
- _____ *Using the Internet in the Science Classroom*, TCR
- _____ Chemistry Web site: ga.science.glencoe.com

Lesson Plan

| Activity | Resources | Suggested Time |
|---|---|----------------|
| Classroom Management <ul style="list-style-type: none"> • Display the Section Focus Transparency and have students answer the questions. • Have students check homework answers. | Section Focus Transparency 29 and Master TWE, pp. 227, 236–239 | 5 minutes |
| Discussion <ul style="list-style-type: none"> • Answer any questions about homework. | TWE, pp. 227, 236–239 | 5 minutes |
| Core Lesson <ul style="list-style-type: none"> • Teach the main concepts of Section 8.4. | TWE, pp. 228–231 | 25 minutes |
| In-Class Check <ul style="list-style-type: none"> • Complete the Check for Understanding and Reteach strategies. • Answer questions on Chapter 8 in preparation for the test. | TWE, p. 231 TWE, pp. 210–239 | 5 minutes |
| Homework <ul style="list-style-type: none"> • Have students complete Section 8.4 Assessment. • Assign relevant questions from Chapter 8 Assessment. | SE, p. 231 SE, pp. 236–239 | 5 minutes |

[total = 45 minutes]

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Assessment Resources

- _____ *Chapter Assessment, Ch. 8 TCR*
- _____ *Performance Assessment in the Science Classroom, TCR*
- _____ *Alternate Assessment in the Science Classroom, TCR*
- _____ *Reviewing Chemistry: Mastering the Georgia QCC, TCR*

Multimedia Resources

- _____ **MindJogger Videoquizzes**, Ch. 8
- _____ **TestCheck Software**, Ch. 8
- _____ **Chemistry Interactive CD-ROM**, Ch. 8 quiz
- _____ **Vocabulary PuzzleMaker Software**, Ch. 8

| Activity | Resources | Suggested Time |
|---|--|----------------|
| Classroom Management <ul style="list-style-type: none"> • Have students check homework answers. | TWE, pp. 231, 236–239 | 5 minutes |
| Reviewing the Chapter <ul style="list-style-type: none"> • Answer any questions about homework. • Answer any final questions about Chapter 8. | TWE, pp. 210–239 | 5 minutes |
| Assessment <ul style="list-style-type: none"> • Distribute the test and allow students to work quietly. | <i>Chapter Assessment</i> , pp. 43–48 TCR | 30–35 minutes |
| Closing <ul style="list-style-type: none"> • As students complete the test, have them read the Chapter 9 Opener. • If students have time, let them explore the Chemistry Online for Chapter 9. | SE, p. 240 ga.science.glencoe.com | 0–5 minutes |

[total = 45 minutes]