

States of Matter



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	13.1 Gases
1	13.2 Forces of Attraction
0.5	13.3 Liquids and Solids
1	13.4 Phase Changes
0.5	Review and Assessment

Gases pages 385–392

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

National Science Content Standards: UCP.1, UCP.2, UCP.3; A.1; B.2, B.4, B.5, B.6; E.2; G.3

Georgia QCC: 1, 1.2, 2, 2.1, 3.1, 15

Objectives

- Use the kinetic-molecular theory to explain the behavior of gases.
- **Describe** how mass affects the rates of diffusion and effusion.
- **Explain** how gas pressure is measured and **calculate** the partial pressure of a gas.

Lesson Resources

- _____ Section Focus Transparency 47 and Master
- _____ Teaching Transparency 40 and Master
- _____ *Study Guide for Content Mastery*, pp. 73–74 TCR

- _____ *Using the Internet in the Science Classroom*, TCR
- _____ Chemistry Web site: ga.science.glencoe.com

Multimedia Resources

- _____ **Chemistry Interactive CD-ROM**, Section 13.1 Animation
- _____ **MindJogger Videoquizzes**, Ch. 13
- _____ **Guided Reading Audio Program**, Section 13.1
- _____ **Cosmic Chemistry Videodisc**, Disc 1, Side 2

Optional Resources

- _____ *Solving Problems: A Chemistry Handbook*, Section 13.1 TCR
- _____ *Spanish Resources* 13.1 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. • Distribute the corrected Chapter 12 tests. 	Section Focus Transparency 47 and Master	5 minutes
Core Lesson <ul style="list-style-type: none"> • Introduce Chapter 13 with the Discovery Lab. • Teach the main concepts of Section 13.1. 	SE, p. 385 TWE, pp. 385–392	20–25 minutes
In-Class Check <ul style="list-style-type: none"> • Reinforce Section 13.1 concepts using the Knowledge Assessment. • Complete the Check for Understanding and Reteach strategies. 	TWE, p. 391 TWE, pp. 391–392	10–15 minutes
Homework <ul style="list-style-type: none"> • Have students complete Section 13.1 Assessment. • Have students design the experiment in the Skill Assessment. • Assign relevant questions from Chapter 13 Assessment. 	SE, p. 392 TWE, p. 392 SE, pp. 414–417	5 minutes

[total = 45 minutes]

Forces of Attraction pages 393–395

Key: SE = Student Edition,
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National Science Content Standards: UCP.1, UCP.2, UCP.3;
B.2, B.4

Georgia QCC: 8.3, 8.4, 15

Objectives

- **Describe** and **compare** intramolecular and intermolecular forces.
- **Distinguish** among intermolecular forces.

Lesson Resources

- _____ Section Focus Transparency 48 and Master
- _____ *Study Guide for Content Mastery*, p. 75 TCR

Optional Resources

- _____ *Challenge Problems*, p. 13 TCR
- _____ *Solving Problems: A Chemistry Handbook*,
Section 13.2 TCR
- _____ *Spanish Resources* 13.2 TCR

Multimedia Resources

- _____ **MindJogger Videoquizzes**, Ch. 13
- _____ **Guided Reading Audio Program**, Section 13.2
- _____ **Cosmic Chemistry Videodisc**, Disc 1, Side 2
- _____ *Using the Internet in the Science Classroom*, TCR
- _____ Chemistry Web site: ga.science.glencoe.com

Lesson Plan

Activity	Resources	Suggested Time
<p>Classroom Management</p> <ul style="list-style-type: none"> • Display the Section Focus Transparency and have students answer the questions. • Have students check homework answers. 	<p>Section Focus Transparency 48 and Master TWE, pp. 392, 414–417</p>	5 minutes
<p>Discussion</p> <ul style="list-style-type: none"> • Answer any questions about homework. 	TWE, pp. 392, 414–417	5 minutes
<p>Core Lesson</p> <ul style="list-style-type: none"> • Introduce Section 13.2 with the Quick Demo. • Teach the main concepts of Section 13.2. • Review the Applying Chemistry feature with students. 	<p>TWE, p. 393 TWE, pp. 393–395 TWE, p. 394</p>	35 minutes
<p>In-Class Check</p> <ul style="list-style-type: none"> • Reinforce Section 13.2 concepts using the <i>Study Guide for Content Mastery</i>. • Complete the Check for Understanding, Reteach, and Extension strategies. 	<p><i>Study Guide for Content Mastery</i>, p. 75 TCR TWE, pp. 394–395</p>	40 minutes
<p>Homework</p> <ul style="list-style-type: none"> • Have students complete the Skill Assessment. • Have students complete Section 13.2 Assessment. • Have students complete the Chemistry Journal assignment. • Assign relevant questions from Chapter 13 Assessment. 	<p>TWE, p. 394 SE, p. 395 TWE, p. 394 SE, pp. 414–417</p>	5 minutes

[total = 90 minutes]

Liquids and Solids *pages 396–403*

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National Science Content Standards: UCP.1, UCP.2, UCP.3; B.2, B.4, B.5

Georgia QCC: 1, 1.2, 3.1, 8.4, 15, 15.1, 15.2, 15.3

Objectives

- **Apply** kinetic-molecular theory to the behavior of liquids and solids.
- **Relate** properties such as viscosity, surface tension, and capillary action to intermolecular forces.
- **Compare** the structures and properties of different types of solids.

Lesson Resources

- _____ Section Focus Transparency 49 and Master
- _____ Math Skills Transparency 18 and Master
- _____ *ChemLab and MiniLab Worksheets*, p. 49 TCR
- _____ *Study Guide for Content Mastery*, p. 76 TCR

- _____ **Cosmic Chemistry Videodisc**, Disc 1, Side 2
- _____ *Using the Internet in the Science Classroom*, TCR
- _____ Chemistry Web site: ga.science.glencoe.com

Multimedia Resources

- _____ **Chemistry Interactive CD-ROM**, Section 13.3 Demonstration
- _____ **MindJogger Videoquizzes**, Ch. 13
- _____ **Guided Reading Audio Program**, Section 13.3

Optional Resources

- _____ *Solving Problems: A Chemistry Handbook*, Section 13.3 TCR
- _____ *Spanish Resources* 13.3 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 49 and Master TWE, pp. 394, 395, 414–417	10 minutes
Discussion <ul style="list-style-type: none"> • Answer any questions about homework. 	TWE, pp. 394, 395, 414–417	5 minutes
Core Lesson <ul style="list-style-type: none"> • Teach the main concepts of Section 13.3. 	TWE, pp. 396–403	15 minutes
In-Class Check <ul style="list-style-type: none"> • Complete the Check for Understanding and Reteach strategies. 	TWE, p. 403	10 minutes
Homework <ul style="list-style-type: none"> • Have students complete Section 13.3 Assessment. • Divide students into groups and have them complete the Performance Assessment. • Assign relevant questions from Chapter 13 Assessment. 	SE, p. 403 TWE, p. 403 SE, pp. 414–417	5 minutes

[total = 45 minutes]

Phase Changes *pages 404–409*

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National Science Content Standards: UCP.1, UCP.2, UCP.3; A.1; B.2, B.4, B.5, B.6; E.2; F.6

Georgia QCC: 1, 1.2, 2, 2.1, 3.1, 4, 5.2, 14, 14.1, 15, 15.1, 15.2

Objectives

- **Explain** how the addition and removal of energy can cause a phase change.
- **Interpret** a phase diagram.

Lesson Resources

- _____ Section Focus Transparency 50 and Master Teaching Transparency 41 and Master
- _____ *ChemLab and MiniLab Worksheets*, pp. 50–52 TCR
- _____ *Study Guide for Content Mastery*, pp. 77–78 TCR

- _____ *Using the Internet in the Science Classroom*, TCR
- _____ Chemistry Web site: ga.science.glencoe.com

Optional Resources

- _____ *Laboratory Manual*, pp. 97–104 TCR
- _____ *Small-Scale Laboratory Manual*, pp. 33–36 TCR
- _____ *CBL Laboratory Manual*, pp. 9–12 TCR
- _____ *Solving Problems: A Chemistry Handbook*, Section 13.4 TCR
- _____ *Spanish Resources 13.4* TCR
- _____ *Supplemental Problems*, p. 17 TCR

Multimedia Resources

- _____ **Chemistry Interactive CD-ROM**, Section 13.4 Experiment, Video, and Demonstration
- _____ **MindJogger Videoquizzes**, Ch. 13
- _____ **Guided Reading Audio Program**, Section 13.4
- _____ **Cosmic Chemistry Videodisc**, Disc 1, Side 2; Disc 3, Side 5

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 50 and Master <i>TWE</i> , pp. 403, 414–417	10 minutes
Discussion <ul style="list-style-type: none"> • Answer any questions about homework. 	<i>TWE</i> , pp. 403, 414–417	5 minutes
Core Lesson <ul style="list-style-type: none"> • Teach the main concepts of Section 13.4. • Have students read the ChemLab and follow the procedure. 	<i>TWE</i> , pp. 404–409 <i>SE</i> , pp. 410–411	60 minutes
In-Class Check <ul style="list-style-type: none"> • Complete the Check for Understanding and Reteach strategies. • Answer questions on Chapter 13 in preparation for the test. 	<i>TWE</i> , p. 408 <i>TWE</i> , pp. 384–417	10 minutes
Homework <ul style="list-style-type: none"> • Have students complete Section 13.4 Assessment. • Assign relevant questions from Chapter 13 Assessment. • Assign supplemental problems to prepare students for the test. 	<i>SE</i> , p. 409 <i>SE</i> , pp. 414–417 <i>Supplemental Problems</i> , p. 17 <i>TCR</i>	5 minutes

[total = 90 minutes]

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Assessment Resources

- _____ Chapter Assessment, Ch. 13 TCR
- _____ Performance Assessment in the Science Classroom, TCR
- _____ Alternate Assessment in the Science Classroom, TCR
- _____ Reviewing Chemistry: Preparing for the AHSGE, TCR

Multimedia Resources

- _____ MindJogger Videoquizzes, Ch. 13
- _____ TestCheck Software, Ch. 13
- _____ Chemistry Interactive CD-ROM, Ch. 13 quiz
- _____ Vocabulary PuzzleMaker Software, Ch. 13

Activity	Resources	Suggested Time
Classroom Management <ul style="list-style-type: none"> • Have students check homework answers. 	TWE, pp. 409, 414–417 Supplemental Problems, p. 17 TCR	5 minutes
Reviewing the Chapter <ul style="list-style-type: none"> • Answer any questions about homework. • Answer any final questions about Chapter 13. 	Supplemental Problems, p. 17 TCR TWE, pp. 384–417	5 minutes
Assessment <ul style="list-style-type: none"> • Distribute the test and allow students to work quietly. 	Chapter Assessment, pp. 73–78 TCR	30–35 minutes
Closing <ul style="list-style-type: none"> • As students complete the test, have them read the Chapter 14 Opener. • If students have time, let them explore the Chemistry Online for Chapter 14. 	SE, p. 418 ga.science.glencoe.com	0–5 minutes

[total = 45 minutes]