

Data Analysis



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	2.1 Units of Measurement
1	2.2 Scientific Notation and Dimensional Analysis
0.5	2.3 How reliable are measurements?
0.5	2.4 Representing Data
0.5	Review and Assessment

Units of Measurement pages 25–30

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

National Science Content Standards: UCP.1, UCP.3; A.1, A.2; B.2; G.1, G.2

Georgia QCC: 1, 1.2, 2.1, 3.1, 14.2

Objectives

- **Define** SI base units for time, length, mass, and temperature.
- **Explain** how adding a prefix changes a unit.
- **Compare** the derived units for volume and density.

Lesson Resources

- _____ Section Focus Transparency 5 and Master
- _____ *ChemLab and MiniLab Worksheets*, p. 5 TCR
- _____ *Study Guide for Content Mastery*, pp. 7–8 TCR

Optional Resources

- _____ *Small-Scale Laboratory Manual*, pp. 1–4 TCR
- _____ *Solving Problems: A Chemistry Handbook*, Section 2.1 TCR
- _____ *Spanish Resources 2.1* TCR

Multimedia Resources

- _____ **Chemistry Interactive CD-ROM**, Section 2.1 Experiment
- _____ **MindJogger Videoquizzes**, Ch. 2
- _____ **Guided Reading Audio Program**, Section 2.1
- _____ **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
Classroom Management <ul style="list-style-type: none"> • Display the Section Focus Transparency and have students answer the questions. • Distribute the corrected Chapter 1 tests. 	Section Focus Transparency 5 and Master	5 minutes
Core Lesson <ul style="list-style-type: none"> • Introduce Chapter 2 with the Using the Photo feature. • Teach the main concepts of Section 2.1. 	TWE, p. 24 TWE, pp. 25–30	20 minutes
In-Class Check <ul style="list-style-type: none"> • Reinforce Section 2.1 concepts using the Knowledge Assessment. • Complete the Check for Understanding and Reteach strategies. 	TWE, p. 26 TWE, p. 30	15 minutes
Homework <ul style="list-style-type: none"> • Have students complete Section 2.1 Assessment. • Have students complete the Knowledge Assessment. • Have students complete the Skill Assessment. • Assign relevant questions from Chapter 2 Assessment. 	SE, p. 30 TWE, p. 26 TWE, p. 30 SE, pp. 50–53	5 minutes

[total = 45 minutes]

Scientific Notation and Dimensional Analysis pages 31–35

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

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

Objectives

- Express numbers in scientific notation.
- Use dimensional analysis to **convert** between units.

Lesson Resources

- _____ Section Focus Transparency 6 and Master
- _____ Teaching Transparency 4 and Master
- _____ *Study Guide for Content Mastery*, p. 9 TCR

Optional Resources

- _____ *Solving Problems: A Chemistry Handbook*, Section 2.2 TCR
- _____ *Spanish Resources 2.2 TCR*

Multimedia Resources

- _____ *MindJogger Videoquizzes*, Ch. 2
- _____ **Guided Reading Audio Program**, Section 2.2
- _____ *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 6 and Master <i>TWE</i> , pp. 26, 30, 50–53	5 minutes
Discussion <ul style="list-style-type: none"> • Answer any questions about homework. 	<i>TWE</i> , pp. 26, 30, 50–53	5 minutes
Core Lesson <ul style="list-style-type: none"> • Introduce Section 2.2 with the Quick Demo. • Teach the main concepts of Section 2.2. • Divide students into pairs and have them complete the Chemistry Journal activity. 	<i>TWE</i> , p. 31 <i>TWE</i> , pp. 31–35 <i>TWE</i> , p. 33	45–50 minutes
In-Class Check <ul style="list-style-type: none"> • Reinforce Section 2.2 concepts using the Knowledge Assessment. • Have students complete the Portfolio feature. • Complete the Check for Understanding and Reteach strategies. 	<i>TWE</i> , p. 32 <i>TWE</i> , p. 34 <i>TWE</i> , p. 35	25–30 minutes
Homework <ul style="list-style-type: none"> • Have students complete Section 2.2 Assessment. • Have students complete the Skill Assessment. • Ask students to complete the Reteach Extension. • Assign relevant questions from Chapter 2 Assessment. 	<i>SE</i> , p. 35 <i>TWE</i> , p. 35 <i>TWE</i> , p. 35 <i>SE</i> , pp. 50–53	5 minutes

[total = 90 minutes]

How reliable are measurements? pages 36–42

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National Science Content Standards: UCP.1, UCP.3; A.1, A.2; E.2; G.2

Georgia QCC: 1.2

Objectives

- Define and compare accuracy and precision.
- Use significant figures and rounding to reflect the certainty of data.
- Use percent error to describe the accuracy of experimental data.

Lesson Resources

- _____ Section Focus Transparency 7 and Master
- _____ Teaching Transparency 5 and Master
- _____ Study Guide for Content Mastery, pp. 10–11 TCR

Optional Resources

- _____ Solving Problems: A Chemistry Handbook, Section 2.3 TCR
- _____ Spanish Resources 2.3 TCR

Multimedia Resources

- _____ MindJogger Videoquizzes, Ch. 2
- _____ Guided Reading Audio Program, Section 2.3
- _____ 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 7 and Master TWE, pp. 35, 50–53	5 minutes
Discussion <ul style="list-style-type: none"> • Answer any questions about homework. 	TWE, pp. 35, 50–53	5 minutes
Core Lesson <ul style="list-style-type: none"> • Introduce Section 2.3 with the Chemistry Journal. • Teach the main concepts of Section 2.3. 	TWE, p. 36 TWE, pp. 36–42	20 minutes
In-Class Check <ul style="list-style-type: none"> • Reinforce Section 2.3 concepts using the Teaching Transparency. 	Teaching Transparency 5 and Master	10 minutes
Homework <ul style="list-style-type: none"> • Have students complete Section 2.3 Assessment. • Have students complete the Check for Understanding, Reteach, and Extension features. • Assign relevant questions from Chapter 2 Assessment. 	SE, p. 42 TWE, p. 42 SE, pp. 50–53	5 minutes

[total = 45 minutes]

Representing Data *pages 43–45*

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

Georgia QCC: 1, 1.2, 2, 2.1, 3.1, 4

Objectives

- **Create** graphs to reveal patterns in data.
- **Interpret** graphs.

Lesson Resources

- _____ Section Focus Transparency 8 and Master
- _____ Math Skills Transparency 1 and Master
- _____ Teaching Transparency 6 and Master
- _____ *ChemLab and MiniLab Worksheets*, pp. 6–8 TCR
- _____ *Study Guide for Content Mastery*, p. 12 TCR

Optional Resources

- _____ *Challenge Problems*, p. 2 TCR
- _____ *Laboratory Manual*, pp. 9–16 TCR
- _____ *Small-Scale Laboratory Manual*, pp. 5–8 TCR
- _____ *Solving Problems: A Chemistry Handbook*, Section 2.4 TCR
- _____ *Spanish Resources 2.4 TCR*
- _____ *Supplemental Problems*, pp. 1–2 TCR

Multimedia Resources

- _____ **MindJogger Videoquizzes**, Ch. 2
- _____ **Guided Reading Audio Program**, Section 2.4
- _____ *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 8 and Master TWE, pp. 42, 50–53	5 minutes
Discussion <ul style="list-style-type: none"> • Answer any questions about homework. 	TWE, pp. 42, 50–53	5 minutes
Core Lesson <ul style="list-style-type: none"> • Teach the main concepts of Section 2.4. • Have students read the ChemLab and begin the procedure. (Note: this lab will take 45 minutes to complete. Time adjustments may be necessary in subsequent lessons.) 	TWE, pp. 43–45 SE, pp. 46–47	25 minutes
In-Class Check <ul style="list-style-type: none"> • Complete the Check for Understanding strategy. • Answer questions on Chapter 2 in preparation for the test. 	TWE, p. 45 TWE, pp. 24–53	5 minutes
Homework <ul style="list-style-type: none"> • Have students complete Section 2.4 Assessment. • Assign relevant questions from Chapter 2 Assessment. • Assign supplemental problems to prepare students for the test. 	SE, p. 45 SE, pp. 50–53 Supplemental Problems, pp. 1–2 TCR	5 minutes

[total = 45 minutes]

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Assessment Resources

- _____ *Chapter Assessment*, Ch. 2 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. 2
- _____ **TestCheck Software**, Ch. 2
- _____ **Chemistry Interactive CD-ROM**, Ch. 2 quiz
- _____ **Vocabulary PuzzleMaker Software**, Ch. 2

Activity	Resources	Suggested Time
Classroom Management <ul style="list-style-type: none"> • Have students check homework answers. 	<i>TWE</i> , pp. 45, 50–53 <i>Supplemental Problems</i> , pp. 1–2 <i>TCR</i>	5 minutes
Reviewing the Chapter <ul style="list-style-type: none"> • Answer any questions about homework. • Answer any final questions about Chapter 2. 	<i>Supplemental Problems</i> , pp. 1–2 <i>TCR</i> <i>TWE</i> , pp. 24–53	5 minutes
Assessment <ul style="list-style-type: none"> • Distribute the test and allow students to work quietly. 	<i>Chapter Assessment</i> , pp. 7–12 <i>TCR</i>	30–35 minutes
Closing <ul style="list-style-type: none"> • As students complete the test, have them read the Chapter 3 Opener. • If students have time, let them explore the Chemistry Online for Chapter 3. 	<i>SE</i> , p. 54 ga.science.glencoe.com	0–5 minutes

[total = 45 minutes]