

8 Using Proportional Reasoning



Chapter Pacing Guide

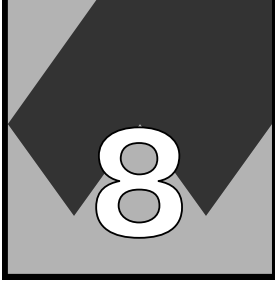
Please note that this pacing guide is based upon completing the entire text in 165 classes, approximately 50 minutes each. More time can be allotted for this chapter if you do not plan to teach the entire text.

<i>Day (Standard)</i>	<i>Day (Honors)</i>	<i>Lesson</i>	<i>Title</i>
1	1	*Chapter Project	Theme: Recycling Waste Not, Want Not
2 & 3		*8-1A	<small>HANDS-ON LAB</small> Cooperative Learning Equal Ratios
	2	8-1	Ratios
4	3	8-2	Rates
5	4 & 5	8-3	Solving Proportions
		*8-3B	<small>HANDS-ON LAB</small> Cooperative Learning Wildlife Sampling
6	6	8-4A	<small>THINKING LAB</small> Problem Solving Draw a Diagram
7	7	8-4	Scale Drawings
8	8	8-5	Percents and Fractions
9	9	8-6	Percents and Decimals
10	10	8-7	Percents Greater Than 100% and Percents Less Than 1%
11	11	8-8	Percent of a Number
12	12	8-9	The Percent Proportion
13	13	Review: Study Guide and Assessment	
14	14	Assessment: Chapter Test	

*Optional

Chapter Resources

<p>Meeting Individual Needs <i>Investigations for the Special Education Student</i>, Park It!, pp. 21-28 <i>Spanish Study Guide and Assessment</i> <i>Study Guide and Practice Workbook</i></p>	<p>Technology <i>Electronic Teacher's Classroom</i> <i>Resources (ETCR)</i> www.glencoe.com/sec/math/mac/mathnet</p>
<p>Interactive Mathematics: Activities and Investigations Units 3 and 12</p>	<p>Applications <i>Family Letters and Activities</i>, pp. 41-42 <i>Spanish Family Letters and Activities</i>, pp. 41-42</p>



Chapter Project (pp. 314-315)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

- _____ Investigate the various kinds of materials that can be recycled by households.
- _____ Compare the amounts of different materials using ratios and percents.
- _____ State/local objectives: _____

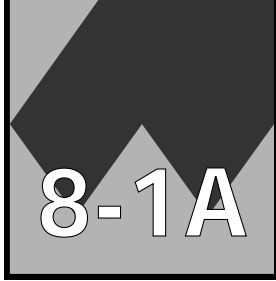
Theme: Recycling

- _____ Chapter Project, *SE*, p. 315
- _____ Chapter 8 Notes, *TWE*, p. 314
- _____ Question of the Day, *TWE*, p. 314
- _____ ⇔ *Investigations and Projects Masters*, pp. 45-48

Homework Assignments

- _____ p. 320, Working on the Chapter Project, Exercise 42
- _____ p. 345, Working on the Chapter Project, Exercise 50
- _____ p. 355, Completing the Chapter Project, Alternative Assessment

KEY SE = Student Edition TWE = Teacher's Wraparound Edition ⇔ = Other Program Components



Lesson Planning Guide (p. 316)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

- _____ Explore the meaning of ratio and proportion
- _____ State/local objectives: _____

NCTM Standards: 1, 6-10
South Carolina Math Curriculum Standards Grade 7: NO I.D.1.

MANAGEMENT

- _____ Getting Started, *TWE*, p. 316
- _____ ⇨ *Hands-On Lab Masters*, p. 6: counters
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Lesson 8-1A
- _____ ⇨ *Overhead Manipulative Resources*: counters

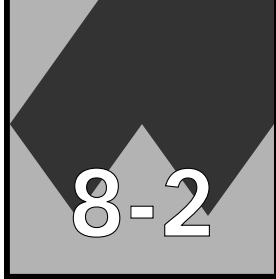
ASSESS

- _____ *TWE*, p. 316
- _____ ⇨ *Hands-On Lab Masters*, p. 54

Class Activity (p. 316)
_____ All: 1-3
_____ Alternate Assignment: _____

- _____ Math Journal, *TWE*, p. 316

KEY	SE = Student Edition	TWE = Teacher's Wraparound Edition	⇨ = Other Program Components
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Lesson Planning Guide (pp. 321-324)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

- _____ Determine unit rates.
- _____ State/local objectives: _____

NCTM Standards: 1, 6-9
South Carolina Math Curriculum Standards
Grade 7: NO I.A.1., NO I.D.1., MEA II.E.1., MEA II.F.1.

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 321
- _____ ⇨ Transparency 8-2A
- _____ Motivating the Lesson, Problem Solving, *TWE*, p. 321
- _____ Multiple Learning Styles, Kinesthetic, *TWE*, p. 321

2 TEACH

- _____ ⇨ Transparency 8-2B
- _____ Thinking Algebraically, *TWE*, p. 322
- _____ In-Class Examples, *TWE*, p. 322
- _____ ⇨ *Study Guide Masters*, p. 59
- _____ Reteaching the Lesson, *TWE*, p. 322
- _____ Error Analysis, *TWE*, p. 322
- _____ ⇨ *CD-ROM Program*, Resource Lesson 8-2

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, pp. 322-323

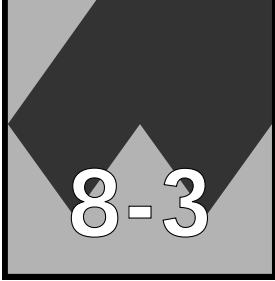
Homework Assignments (pp. 323-324)	
_____ Core: 11-35 odd, 36-39	_____ Enriched: 12-30 even, 31-39
_____ Alternate Assignment: _____	

- _____ Extra Practice, *SE*, p. 589
- _____ ⇨ *Practice Masters*, p. 59
- _____ Family Activity, *SE*, p. 324
- _____ ⇨ *South Carolina Parent and Student Study Guide Workbook*, p. 66

4 ASSESS

- _____ Math in the Media, *SE*, p. 324
- _____ Closing Activity, Writing, *TWE*, p. 324
- _____ Extending the Lesson, *TWE*, p. 324
- _____ ⇨ *Enrichment Masters*, p. 59

KEY <i>SE</i> = Student Edition <i>TWE</i> = Teacher's Wraparound Edition ⇨ = Other Program Components
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Lesson Planning Guide (pp. 325-328)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

- _____ Solve proportions.
- _____ State/local objectives: _____

NCTM Standards: 1, 2, 4, 6-10
South Carolina Math Curriculum Standards Grade 7: NO I.D.1., NO III.D.1., ALG II.D.1., MEA II.F.1.

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 325
- _____ ⇨ Transparency 8-3A
- _____ Motivating the Lesson, Hands-On-Activity, *TWE*, p. 325
- _____ Multiple Learning Styles, Naturalist, *TWE*, p. 325

2 TEACH


- _____ ⇨ Transparency 8-3B
- _____ Using Problem Solving, *TWE*, p. 326
- _____ In-Class Examples, *TWE*, p. 326
- _____ ⇨ *Study Guide Masters*, p. 60
- _____ Reteaching the Lesson, *TWE*, p. 327
- _____ Error Analysis, *TWE*, p. 327
- _____ ⇨ *CD-ROM Program*, Resource Lesson 8-3, Interactive Lesson 8-3
- _____ ⇨ *Interactive Mathematics Tools Software*

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, p. 327

Homework Assignments (pp. 327-328)

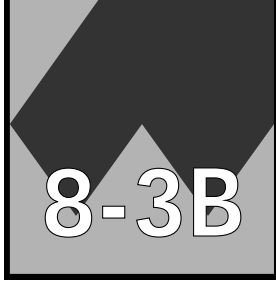
- _____ Core: 9-23 odd, 25-28
- _____ Enriched: 8-20 even, 22-28
- _____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 590
- _____ ⇨ *Practice Masters*, p. 60
- _____ ⇨ *Science and Mathematics Lab Manual*, pp. 37-40
- _____ ⇨  *South Carolina Parent and Student Study Guide Workbook*, p. 67

4 ASSESS

- _____ Let the Games Begin, *SE*, p. 328
- _____ Closing Activity, Writing, *TWE*, p. 328
- _____ ⇨ *Assessment and Evaluation Masters*, Quiz A, p. 211
- _____ Extending the Lesson, *TWE*, p. 328
- _____ ⇨ *Enrichment Masters*, p. 60

KEY	SE = Student Edition	TWE = Teacher's Wraparound Edition	⇨ = Other Program Components
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Lesson Planning Guide (pp. 329)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

- _____ Use the capture-recapture technique to estimate.
- _____ State/local objectives: _____

NCTM Standards: 1, 6-9
South Carolina Math Curriculum Standards Grade 7: NO I.D.1., NO III.D.1., DAP I.A.1., DAP III.A.1.

MANAGEMENT

- _____ Getting Started, *TWE*, p. 329
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Lesson 8-3B

ASSESS

- _____ *TWE*, p. 329
- _____ ⇨ *Hands-On Lab Masters*, p. 55

Class Activity (p. 329)
_____ All: 1-4 _____ Alternate Assignment: _____

- _____ Math Journal, *TWE*, p. 329

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Lesson Planning Guide (pp. 330-331)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

- _____ Solve problems by drawing a diagram.
- _____ State/local objectives: _____

NCTM Standards: 1, 6-9
South Carolina Math Curriculum Standards Grade 7: NO I.D.1.

1 FOCUS

- _____ Getting Started, *TWE*, p. 330

2 TEACH

- _____ In-Class Examples, *TWE*, p. 330
- _____ Reteaching the Lesson, *TWE*, p. 330

3 PRACTICE/APPLY

- _____ Check for Understanding, *TWE*, p. 331

Homework Assignments (p. 331)

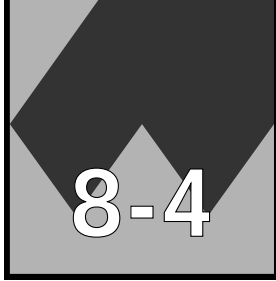
- _____ All: 4-12
- _____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 590
- _____ Mixed Problem Solving, *SE*, pp. 605-606

4 ASSESS

- _____ Closing Activity, Writing, *TWE*, p. 331
- _____ Extending the Lesson, *TWE*, p. 331

KEY	SE = Student Edition	TWE = Teacher's Wraparound Edition	↔ = Other Program Components
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Lesson Planning Guide (pp. 332-335)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

- _____ Solve problems involving scale drawings.
- _____ State/local objectives: _____

NCTM Standards: 1, 2, 6-10
South Carolina Math Curriculum Standards
Grade 7: NO I.D.1., NO III.D.1., ALG II.D.1., MEA II.B.1.

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 332
- _____ ⇨ Transparency 8-4A
- _____ Motivating the Lesson, Hands-On-Activity, *TWE*, p. 332

2 TEACH

- _____ ⇨ Transparency 8-4B
- _____ In-Class Examples, *TWE*, p. 333
- _____ Using the Mini-Lab, *TWE*, p. 333
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 8-4
- _____ ⇨ *Study Guide Masters*, p. 61
- _____ Reteaching the Lesson, *TWE*, p. 334
- _____ Error Analysis, *TWE*, p. 334
- _____ ⇨ *CD-ROM Program*, Resource Lesson 8-4, Extended Activity 8-4

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, p. 334

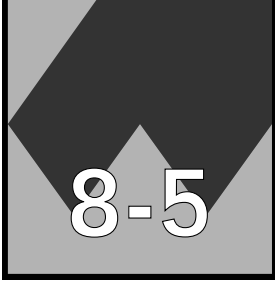
Homework Assignments (pp. 334-335)	
_____ Core: 9-21 odd, 23-26	_____ Enriched: 10-20 even, 21-26
_____ Alternate Assignment: _____	

- _____ Extra Practice, *SE*, p. 590
- _____ ⇨ *Practice Masters*, p. 61
- _____ ⇨ *Hands-On Lab Masters*, p. 79
- _____ ⇨ *School to Career Masters*, p. 21
- _____ ⇨ *South Carolina Parent and Student Study Guide Workbook*, p. 68

4 ASSESS

- _____ Closing Activity, Writing, *TWE*, p. 335
- _____ Extending the Lesson, *TWE*, p. 335
- _____ ⇨ *Enrichment Masters*, p. 61
- _____ Mid-Chapter Self Test, *SE*, p. 335

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Lesson Planning Guide (pp. 336-338)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

- _____ Express fractions as percents and vice versa.
- _____ State/local objectives: _____

NCTM Standards: 1, 6-10
South Carolina Math Curriculum Standards Grade 7: NO I.A.1., NO III.D.1., ALG II.D.1.

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 336
- _____ ⇨ Transparency 8-5A
- _____ Motivating the Lesson, Problem Solving, *TWE*, p. 336
- _____ Multiple Learning Styles, Visual/Spatial, *TWE*, p. 336

2 TEACH

- _____ ⇨ Transparency 8-5B
- _____ Reading Mathematics, *TWE*, p. 336
- _____ In-Class Examples, *TWE*, p. 337
- _____ ⇨ *Study Guide Masters*, p. 62
- _____ Reteaching the Lesson, *TWE*, p. 337
- _____ Error Analysis, *TWE*, p. 337
- _____ ⇨ *CD-ROM Program*, Resource Lesson 8-5

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, pp. 337-338

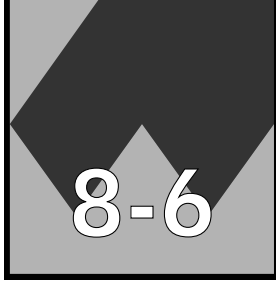
Homework Assignments (p. 338)	
_____ Core: 11-33 odd, 34-38	_____ Enriched: 10-30 even, 32-38
_____ Alternate Assignment: _____	

- _____ Extra Practice, *SE*, p. 591
- _____ ⇨ *Practice Masters*, p. 62
- _____ ⇨ *Technology Masters*, Calculator Activity, p. 41
- _____ ⇨ *South Carolina Parent and Student Study Guide Workbook*, p. 69

4 ASSESS

- _____ Closing Activity, Modeling, *TWE*, p. 338
- _____ ⇨ *Assessment and Evaluation Masters*, Mid-Chapter Test, p. 210
- _____ ⇨ *Assessment and Evaluation Masters*, Quiz B, p. 211
- _____ Extending the Lesson, *TWE*, p. 338
- _____ ⇨ *Enrichment Masters*, p. 62

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Lesson Planning Guide (pp. 339-341)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

- _____ Express decimals as percents and vice versa.
- _____ State/local objectives: _____

NCTM Standards: 1, 6-10
South Carolina Math Curriculum Standards Grade 7: NO I.A.1.

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 339
- _____ ⇨ Transparency 8-6A
- _____ Motivating the Lesson, Problem Solving, *TWE*, p. 339
- _____ Multiple Learning Styles, Logical, *TWE*, p. 339

2 TEACH

- _____ ⇨ Transparency 8-6B
- _____ Using Calculators, *TWE*, p. 339
- _____ In-Class Examples, *TWE*, p. 340
- _____ ⇨ *Study Guide Masters*, p. 63
- _____ Reteaching the Lesson, *TWE*, p. 340
- _____ ⇨ *CD-ROM Program*, Resource Lesson 8-6

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, p. 340

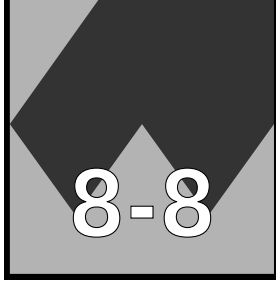
Homework Assignments (pp. 340-341)	
_____ Core: 11-33 odd, 35-39	_____ Enriched: 12-32 even, 33-39
_____ Alternate Assignment: _____	

- _____ Extra Practice, *SE*, p. 591
- _____ ⇨ *Practice Masters*, p. 63
- _____ ⇨ *Science and Mathematics Lab Manual*, pp. 81-84
- _____ ⇨ *South Carolina Parent and Student Study Guide Workbook*, p. 70

4 ASSESS

- _____ Closing Activity, Speaking, *TWE*, p. 341
- _____ Extending the Lesson, *TWE*, p. 341
- _____ ⇨ *Enrichment Masters*, p. 63

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Lesson Planning Guide (pp. 346-348)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

- _____ Find the percent of a number.
- _____ State/local objectives: _____

NCTM Standards: 1, 2, 6-10
South Carolina Math Curriculum Standards
Grade 7: NO I.C.1., NO I.D.1., NO I.E.1., NO III.D.1., ALG II.D.1.

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 346
- _____ ⇨ Transparency 8-8A
- _____ Motivating the Lesson, Communication, *TWE*, p. 346

2 TEACH

- _____ ⇨ Transparency 8-8B
- _____ Modeling Mathematics, *TWE*, p. 347
- _____ In-Class Examples, *TWE*, p. 347
- _____ ⇨ *Study Guide Masters*, p. 65
- _____ Reteaching the Lesson, *TWE*, p. 347
- _____ ⇨ *CD-ROM Program*, Resource Lesson 8-8, Interactive Lesson 8-8

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, p. 347

Homework Assignments (p. 348)

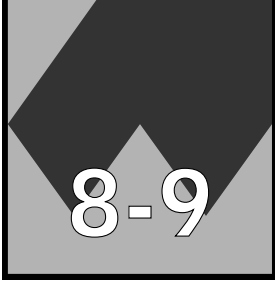
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|-----------------------------------|----------------------------------|
| _____ Core: 9-23 odd, 24-27 | _____ Enriched: 8-18 even, 20-27 |
| _____ Alternate Assignment: _____ | |

- _____ Extra Practice, *SE*, p. 592
- _____ ⇨ *Practice Masters*, p. 65
- _____ ⇨ *South Carolina Parent and Student Study Guide Workbook*, p. 72

4 ASSESS

- _____ Closing Activity, Writing, *TWE*, p. 348
- _____ Extending the Lesson, *TWE*, p. 348
- _____ ⇨ *Enrichment Masters*, p. 65

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Lesson Planning Guide (pp. 349-351)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

- _____ Solve problems using the percent proportion.
- _____ State/local objectives: _____

NCTM Standards: 1, 6-10
South Carolina Math Curriculum Standards Grade 7: NO I.C.1., NO I.D.1., NO III.D.1., ALG II.D.1.

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 349
- _____ ⇨ Transparency 8-9A
- _____ Motivating the Lesson, Problem Solving, *TWE*, p. 349

2 TEACH

- _____ ⇨ Transparency 8-9B
- _____ Thinking Algebraically, *TWE*, p. 349
- _____ In-Class Examples, *TWE*, p. 350
- _____ ⇨ *Study Guide Masters*, p. 66
- _____ Reteaching the Lesson, *TWE*, p. 350
- _____ ⇨ *CD-ROM Program*, Resource Lesson 8-9

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, p. 350

Homework Assignments (p. 351)

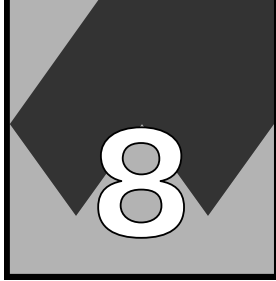
- _____ Core: 11-31 odd, 32-36 _____ Enriched: 12-28 even, 29-36
- _____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 592
- _____ ⇨ *Practice Masters*, p. 66
- _____ ⇨ *Technology Masters*, Spreadsheet Activity, p. 42
- _____ ⇨ *Diversity Masters*, p. 21
- _____ ⇨ *South Carolina Parent and Student Study Guide Workbook*, p. 73

4 ASSESS

- _____ Closing Activity, Speaking, *TWE*, p. 351
- _____ ⇨ *Assessment and Evaluation Masters*, Quiz D, p. 212
- _____ Extending the Lesson, *TWE*, p. 351
- _____ ⇨ *Enrichment Masters*, p. 66

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Review and Assessment (pp. 352-357)



Teacher's Name _____ Dates _____

Grade _____ Class _____
Review M Tu W Th F
Testing M Tu W Th F



- _____ Study Guide and Assessment, *SE*, pp. 352-355
- _____ Standardized Test Practice, *SE*, pp. 356-357
- _____ Chapter Test, *SE*, p. 614

⇨ Assessment and Evaluation Masters (pp. 197-215)

Multiple-Choice Tests

Free-Response Tests

- | | |
|---|---------------------------------------|
| _____ Form 1A, 1B, or 1C, pp. 197-202 | _____ Form 2A, 2B, or 2C, pp. 203-208 |
| _____ Standardized Test Practice, pp. 213-214 | _____ Performance Assessment, p. 209 |
| | _____ Cumulative Review, p. 215 |

- _____ ⇨ *MindJogger Videoquizzes*, Chapter 8
- _____ ⇨ *Test and Review Software*
- _____ ⇨ *CD-ROM Assessment Game*
- _____ ⇨ *State Test Preparation CD-ROM*
- _____ ⇨  *South Carolina Parent and Student Study Guide Workbook*, p. 74
- _____ ⇨  *South Carolina PACT Workbook and Test Preparation, Grade 7*

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