

# 13 Exploring Discrete Math and Probability



## Chapter Pacing Guide

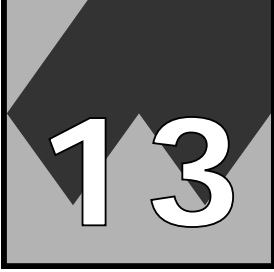
Please note that this pacing guide is based upon completing the entire text in 165 classes, approximately 50 minutes each. More time can be allotted for this chapter if you do not plan to teach the entire text.

<i>Day (Honors)</i>	<i>Lesson</i>	<i>Title</i>
1	*Chapter Project	Theme: Games Advance to GO and Collect \$200
2	13-1A	<small>THINKING LAB</small> Problem Solving Act It Out
3	13-1	Theoretical and Experimental Probability
4	13-2	Tree Diagrams
5	13-3	The Counting Principle
6	13-4	Independent and Dependent Events
	*13-5A	<small>HANDS-ON LAB</small> Cooperative Learning Exploring Permutations
7	13-5	Permutations
8	*13-6A	<small>HANDS-ON LAB</small> Cooperative Learning Exploring Combinations
	13-6	Combinations
9	Review: Study Guide and Assessment	
10	Assessment: Chapter Test	

\*Optional

## Chapter Resources

<p><b>Meeting Individual Needs</b>  <i>Investigations for the Special Education Student,</i>                      The Game Show, pp. 45-46  <i>Spanish Study Guide and Assessment</i>  <i>Study Guide and Practice Workbook</i></p>	<p><b>Technology</b>  <i>Electronic Teacher's Classroom</i>  <i>Resources (ETCR)</i>  <a href="http://www.glencoe.com/sec/math/mac/mathnet">www.glencoe.com/sec/math/mac/mathnet</a></p>
<p><b>Interactive Mathematics: Activities and Investigations</b>                      Units 1 and 14</p>	<p><b>Applications</b>  <i>Family Letters and Activities</i>, pp. 51-52  <i>Spanish Family Letters and Activities</i>, pp. 51-52</p>



# Chapter Project (pp. 526-527)



Teacher's Name \_\_\_\_\_ Dates \_\_\_\_\_

Grade \_\_\_\_\_ Class \_\_\_\_\_ M Tu W Th F

## Objectives

- \_\_\_\_\_ Analyze the use of probability in board games.
- \_\_\_\_\_ Design their own game, combining skill and chance.

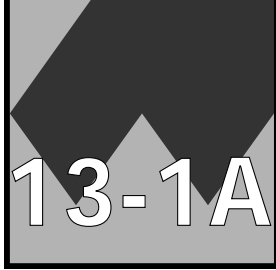
## Theme: Games

- \_\_\_\_\_ Chapter Project, *SE*, p. 527
- \_\_\_\_\_ Chapter 13 Notes, *TWE*, p. 526
- \_\_\_\_\_ Question of the Day, *TWE*, p. 526
- \_\_\_\_\_ ⇔ *Investigations and Projects Masters*, pp. 65-68

### Homework Assignments

- \_\_\_\_\_ p. 533, Working on the Chapter Project, Exercise 22
- \_\_\_\_\_ p. 545, Working on the Chapter Project, Exercise 18
- \_\_\_\_\_ p. 557, Completing the Chapter Project, Alternative Assessment

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



# Lesson Planning Guide (pp. 528-529)



Teacher's Name \_\_\_\_\_ Dates \_\_\_\_\_  
Grade \_\_\_\_\_ Class \_\_\_\_\_ M Tu W Th F

## Objectives

\_\_\_\_\_ Solve problems by acting them out.

### 1 FOCUS

\_\_\_\_\_ Getting Started, *TWE*, p. 528

### 2 TEACH

\_\_\_\_\_ In-Class Examples, *TWE*, p. 528

\_\_\_\_\_ Reteaching the Lesson, *TWE*, p. 528

### 3 PRACTICE/APPLY

\_\_\_\_\_ Check for Understanding, *TWE*, p. 529

<b>NCTM Standards:</b> 1, 6-9
<b>Georgia Quality Core Curriculum:</b> Grade 7: 1, 38, 43

### Homework Assignments (p. 529)

\_\_\_\_\_ All: 5-14

\_\_\_\_\_ Alternate Assignment: \_\_\_\_\_

\_\_\_\_\_ Extra Practice, *SE*, p. 602

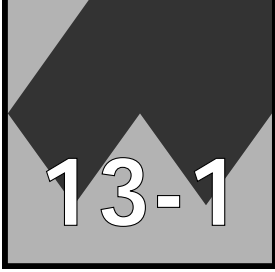
\_\_\_\_\_ Mixed Problem Solving, *SE*, pp. 605-606

### 4 ASSESS

\_\_\_\_\_ Closing Activity, Writing, *TWE*, p. 529

\_\_\_\_\_ Extending the Lesson, *TWE*, p. 529

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# Lesson Planning Guide (pp. 530-533)



Teacher's Name \_\_\_\_\_ Dates \_\_\_\_\_

Grade \_\_\_\_\_ Class \_\_\_\_\_ M Tu W Th F

## Objectives

\_\_\_\_\_ Find and compare experimental and theoretical probabilities.

<b>NCTM Standards:</b> 1, 5-9
<b>Georgia Quality Core Curriculum:</b> Grade 7: 1, 3, 4, 38, 43

## 1 FOCUS

- \_\_\_\_\_ 5-Minute Check, *TWE*, p. 530
- \_\_\_\_\_ ⇨ Transparency 13-1A
- \_\_\_\_\_ Motivating the Lesson, Hands-On-Activity, *TWE*, p. 530
- \_\_\_\_\_ Let the Games Begin, *SE*, p. 530
- \_\_\_\_\_ Cross-Curriculum Cue, *TWE*, p. 530

## 2 TEACH


- \_\_\_\_\_ ⇨ Transparency 13-1B
- \_\_\_\_\_ In-Class Examples, *TWE*, p. 531
- \_\_\_\_\_ Using the Mini-Lab, *TWE*, p. 531
- \_\_\_\_\_ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 13-1
- \_\_\_\_\_ ⇨ *Study Guide Masters*, p. 93
- \_\_\_\_\_ Reteaching the Lesson, *TWE*, p. 532
- \_\_\_\_\_ Error Analysis, *TWE*, p. 532
- \_\_\_\_\_ ⇨ *CD-ROM Program*, Resource Lesson 13-1, Interactive Lesson 13-1

## 3 PRACTICE/APPLY

- \_\_\_\_\_ Check for Understanding, *SE*, p. 532

### Homework Assignments (pp. 532-533)

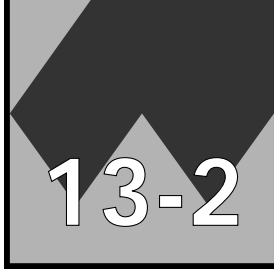
- \_\_\_\_\_ Core: 9-21 odd, 23-26 \_\_\_\_\_ Enriched: 10-18 even, 19-21, 23-26
- \_\_\_\_\_ Optional: 22 (Working on the Chapter Project)
- \_\_\_\_\_ Alternate Assignment: \_\_\_\_\_

- \_\_\_\_\_ Extra Practice, *SE*, p. 603
- \_\_\_\_\_ ⇨ *Practice Masters*, p. 93
- \_\_\_\_\_ ⇨  *Georgia Parent and Student Study Guide Workbook*, p. 105

## 4 ASSESS

- \_\_\_\_\_ Closing Activity, Speaking, *TWE*, p. 533
- \_\_\_\_\_ Extending the Lesson, *TWE*, p. 533
- \_\_\_\_\_ ⇨ *Enrichment Masters*, p. 93

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# Lesson Planning Guide (pp. 534-537)



Teacher's Name \_\_\_\_\_ Dates \_\_\_\_\_

Grade \_\_\_\_\_ Class \_\_\_\_\_ M Tu W Th F

## Objectives

\_\_\_\_\_ Use tree diagrams to count outcomes.

<b>NCTM Standards:</b> 5-10
<b>Georgia Quality Core Curriculum:</b> Grade 7: 1, 41, 43

## 1 FOCUS

- \_\_\_\_\_ 5-Minute Check, *TWE*, p. 534
- \_\_\_\_\_ ⇨ Transparency 13-2A
- \_\_\_\_\_ Motivating the Lesson, Communication, *TWE*, p. 534
- \_\_\_\_\_ Multiple Learning Styles, Logical, *TWE*, p. 534

## 2 TEACH

- \_\_\_\_\_ ⇨ Transparency 13-2B
- \_\_\_\_\_ In-Class Examples, *TWE*, p. 535
- \_\_\_\_\_ Using the Mini-Lab, *TWE*, p. 535
- \_\_\_\_\_ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 13-2
- \_\_\_\_\_ ⇨ *Study Guide Masters*, p. 94
- \_\_\_\_\_ Reteaching the Lesson, *TWE*, p. 535
- \_\_\_\_\_ ⇨ *CD-ROM Program*, Resource Lesson 13-2

## 3 PRACTICE/APPLY

- \_\_\_\_\_ Check for Understanding, *SE*, p. 535

### Homework Assignments (p. 536)

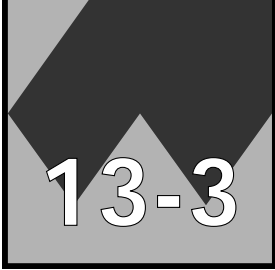
- \_\_\_\_\_ Core: 7-13 odd, 15-18
- \_\_\_\_\_ Enriched: 8-12 even, 13-18
- \_\_\_\_\_ Alternate Assignment: \_\_\_\_\_

- \_\_\_\_\_ Extra Practice, *SE*, p. 603
- \_\_\_\_\_ ⇨ *Practice Masters*, p. 94
- \_\_\_\_\_ ⇨ *School to Career Masters*, p. 26
- \_\_\_\_\_ School to Career Activity, *SE*, p. 537
- \_\_\_\_\_ ⇨ *Georgia Parent and Student Study Guide Workbook*, p. 106

## 4 ASSESS

- \_\_\_\_\_ Closing Activity, Writing, *TWE*, p. 536
- \_\_\_\_\_ ⇨ *Assessment and Evaluation Masters*, Quiz A, p. 351
- \_\_\_\_\_ Extending the Lesson, *TWE*, p. 536
- \_\_\_\_\_ ⇨ *Enrichment Masters*, p. 94

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# Lesson Planning Guide (pp. 538-541)



Teacher's Name \_\_\_\_\_ Dates \_\_\_\_\_

Grade \_\_\_\_\_ Class \_\_\_\_\_ M Tu W Th F

## Objectives

\_\_\_\_\_ Use multiplication to count outcomes.

<b>NCTM Standards:</b>
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1, 2, 5-10
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<b>Georgia Quality Core Curriculum:</b>
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Grade 7: 1
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## 1 FOCUS

\_\_\_\_\_ 5-Minute Check, *TWE*, p. 538

\_\_\_\_\_ ⇨ Transparency 13-3A

\_\_\_\_\_ Motivating the Lesson, Problem Solving, *TWE*, p. 538

\_\_\_\_\_ Multiple Learning Styles, Visual/Spatial, *TWE*, p. 538

## 2 TEACH

\_\_\_\_\_ ⇨ Transparency 13-3B

\_\_\_\_\_ Thinking Algebraically, *TWE*, p. 539

\_\_\_\_\_ In-Class Examples, *TWE*, p. 539

\_\_\_\_\_ ⇨ *Study Guide Masters*, p. 95

\_\_\_\_\_ Reteaching the Lesson, *TWE*, p. 540

\_\_\_\_\_ Error Analysis, *TWE*, p. 540

\_\_\_\_\_ ⇨ *CD-ROM Program*, Resource Lesson 13-3

## 3 PRACTICE/APPLY

\_\_\_\_\_ Check for Understanding, *SE*, p. 540

<b>Homework Assignments (pp. 540-541)</b>
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_____ Core: 7-13 odd, 15-17
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_____ Enriched: 8-12 even, 13-17
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_____ Alternate Assignment: _____
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\_\_\_\_\_ Extra Practice, *SE*, p. 603

\_\_\_\_\_ ⇨ *Practice Masters*, p. 95

\_\_\_\_\_ ⇨ *Hands-On Lab Masters*, p. 84

\_\_\_\_\_ ⇨ *Georgia Parent and Student Study Guide Workbook*, p. 107

## 4 ASSESS

\_\_\_\_\_ Let the Games Begin, *SE*, p. 541

\_\_\_\_\_ Closing Activity, Modeling, *TWE*, p. 541

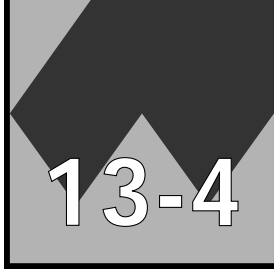
\_\_\_\_\_ ⇨ *Assessment and Evaluation Masters*, Mid-Chapter Test, p. 350

\_\_\_\_\_ ⇨ *Assessment and Evaluation Masters*, Quiz B, p. 351

\_\_\_\_\_ Extending the Lesson, *TWE*, p. 541

\_\_\_\_\_ ⇨ *Enrichment Masters*, p. 95

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# Lesson Planning Guide (pp. 542-545)



Teacher's Name \_\_\_\_\_ Dates \_\_\_\_\_  
Grade \_\_\_\_\_ Class \_\_\_\_\_ M Tu W Th F

## Objectives

\_\_\_\_\_ Find the probability of independent and dependent events.

<b>NCTM Standards:</b> 1, 5-10
<b>Georgia Quality Core Curriculum:</b> Grade 7: 1, 37, 41, 43

## 1 FOCUS

- \_\_\_\_\_ 5-Minute Check, *TWE*, p. 542
- \_\_\_\_\_ ⇨ Transparency 13-4A
- \_\_\_\_\_ Motivating the Lesson, Hands-On-Activity, *TWE*, p. 542
- \_\_\_\_\_ Multiple Learning Styles, Kinesthetic, *TWE*, p. 542

## 2 TEACH

- \_\_\_\_\_ ⇨ Transparency 13-4B
- \_\_\_\_\_ Using the Mini-Lab, *TWE*, p. 543
- \_\_\_\_\_ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 13-4
- \_\_\_\_\_ In-Class Examples, *TWE*, p. 543
- \_\_\_\_\_ ⇨ *Study Guide Masters*, p. 96
- \_\_\_\_\_ Reteaching the Lesson, *TWE*, p. 544
- \_\_\_\_\_ ⇨ *CD-ROM Program*, Resource Lesson 13-4

## 3 PRACTICE/APPLY

- \_\_\_\_\_ Check for Understanding, *SE*, p. 544

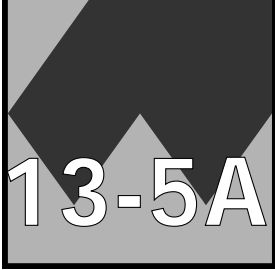
<b>Homework Assignments (pp. 544-545)</b>	
_____ Core: 9-17 odd, 19, 20	_____ Enriched: 8-14 even, 15-17, 19, 20
_____ Optional: 18 (Working on the Chapter Project)	
_____ Alternate Assignment: _____	

- \_\_\_\_\_ Extra Practice, *SE*, p. 604
- \_\_\_\_\_ ⇨ *Practice Masters*, p. 96
- \_\_\_\_\_ ⇨ *Technology Masters*, Calculator Activity, p. 51
- \_\_\_\_\_ ⇨ *Diversity Masters*, p. 26
- \_\_\_\_\_ ⇨ *Science and Mathematics Lab Manual*, pp. 93-96
- \_\_\_\_\_ ⇨ *Georgia Parent and Student Study Guide Workbook*, p. 108

## 4 ASSESS

- \_\_\_\_\_ Closing Activity, Writing, *TWE*, p. 545
- \_\_\_\_\_ ⇨ *Enrichment Masters*, p. 96
- \_\_\_\_\_ Extending the Lesson, *TWE*, p. 545
- \_\_\_\_\_ Mid-Chapter Self Test, *SE*, p. 545

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# Lesson Planning Guide (p. 546)



Teacher's Name \_\_\_\_\_ Dates \_\_\_\_\_  
Grade \_\_\_\_\_ Class \_\_\_\_\_ M Tu W Th F

## Objectives

\_\_\_\_\_ Explore permutations.

<b>NCTM Standards:</b> 1, 5-10
<b>Georgia Quality Core Curriculum:</b> <b>Grade 7: 1, 2, 43</b>

## MANAGEMENT

\_\_\_\_\_ Getting Started, *TWE*, p. 546

\_\_\_\_\_ ⇨ *Teacher's Guide for Overhead Manipulative Resources*,  
Lesson 13-5A

## ASSESS

\_\_\_\_\_ *TWE*, p. 546

\_\_\_\_\_ ⇨ *Hands-On Lab Masters*, p. 70

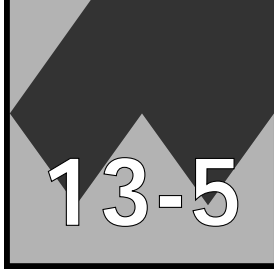
### Class Activity (p. 546)

\_\_\_\_\_ All: 1-6

\_\_\_\_\_ Alternate Assignment: \_\_\_\_\_

\_\_\_\_\_ Math Journal, *TWE*, p. 546

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# Lesson Planning Guide (pp. 547-549)



Teacher's Name \_\_\_\_\_ Dates \_\_\_\_\_  
Grade \_\_\_\_\_ Class \_\_\_\_\_ M Tu W Th F

## Objectives

\_\_\_\_\_ Find the number of permutations of a set of objects.

<b>NCTM Standards:</b> 1, 5-9
<b>Georgia Quality Core Curriculum:</b> Grade 7: 1

## 1 FOCUS

- \_\_\_\_\_ 5-Minute Check, *TWE*, p. 547
- \_\_\_\_\_ ⇨ Transparency 13-5A
- \_\_\_\_\_ Motivating the Lesson, Problem Solving, *TWE*, p. 547

## 2 TEACH

- \_\_\_\_\_ ⇨ Transparency 13-5B
- \_\_\_\_\_ Reading Mathematics, *TWE*, p. 547
- \_\_\_\_\_ In-Class Examples, *TWE*, p. 548
- \_\_\_\_\_ ⇨ *Study Guide Masters*, p. 97
- \_\_\_\_\_ Reteaching the Lesson, *TWE*, p. 548
- \_\_\_\_\_ Multiple Learning Styles, Auditory/Musical, *TWE*, p. 548
- \_\_\_\_\_ ⇨ *CD-ROM Program*, Resource Lesson 13-5

## 3 PRACTICE/APPLY

- \_\_\_\_\_ Check for Understanding, *SE*, p. 548

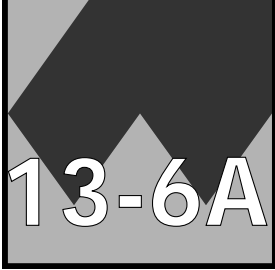
<b>Homework Assignments (p. 549)</b>	
_____ Core: 9-19 odd, 21-24	_____ Enriched: 10-19 even, 19-24
_____ Alternate Assignment: _____	

- \_\_\_\_\_ Extra Practice, *SE*, p. 604
- \_\_\_\_\_ ⇨ *Practice Masters*, p. 97
- \_\_\_\_\_ ⇨ *Technology Masters*, Graphing Calculator Activity, p. 52
- \_\_\_\_\_ ⇨ *Georgia Parent and Student Study Guide Workbook*, p. 109

## 4 ASSESS

- \_\_\_\_\_ Closing Activity, Modeling, *TWE*, p. 549
- \_\_\_\_\_ ⇨ *Assessment and Evaluation Masters*, Quiz C, p. 352
- \_\_\_\_\_ Extending the Lesson, *TWE*, p. 549
- \_\_\_\_\_ ⇨ *Enrichment Masters*, p. 97

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# Lesson Planning Guide (p. 550)



Teacher's Name \_\_\_\_\_ Dates \_\_\_\_\_  
Grade \_\_\_\_\_ Class \_\_\_\_\_ M Tu W Th F

## Objectives

\_\_\_\_\_ Explore combinations.

<b>NCTM Standards:</b> 1, 5-9
<b>Georgia Quality Core Curriculum:</b> <b>Grade 7: 1, 2</b>

## MANAGEMENT

\_\_\_\_\_ Getting Started, *TWE*, p. 550

\_\_\_\_\_ ⇨ *Teacher's Guide for Overhead Manipulative Resources*,  
Lesson 13-6A

## ASSESS

\_\_\_\_\_ *TWE*, p. 550

\_\_\_\_\_ ⇨ *Hands-On Lab Masters*, p. 71

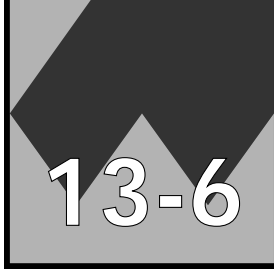
### Class Activity (p. 550)

\_\_\_\_\_ All: 1-5

\_\_\_\_\_ Alternate Assignment: \_\_\_\_\_

\_\_\_\_\_ Math Journal, *TWE*, p. 550

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# Lesson Planning Guide (pp. 551-553)



Teacher's Name \_\_\_\_\_ Dates \_\_\_\_\_  
Grade \_\_\_\_\_ Class \_\_\_\_\_ M Tu W Th F

## Objectives

\_\_\_\_\_ Find the number of combinations of a set of objects.

<b>NCTM Standards:</b> 1, 5-10
<b>Georgia Quality Core Curriculum:</b> Grade 7: 1

## 1 FOCUS

- \_\_\_\_\_ 5-Minute Check, *TWE*, p. 551
- \_\_\_\_\_ ⇨ Transparency 13-6A
- \_\_\_\_\_ Motivating the Lesson, Communication, *TWE*, p. 551
- \_\_\_\_\_ Multiple Learning Styles, Interpersonal, *TWE*, p. 551

## 2 TEACH

- \_\_\_\_\_ ⇨ Transparency 13-6B
- \_\_\_\_\_ Reading Mathematics, *TWE*, p. 551
- \_\_\_\_\_ In-Class Examples, *TWE*, p. 552
- \_\_\_\_\_ ⇨ *Study Guide Masters*, p. 98
- \_\_\_\_\_ Reteaching the Lesson, *TWE*, p. 552
- \_\_\_\_\_ Error Analysis, *TWE*, p. 552
- \_\_\_\_\_ ⇨ *CD-ROM Program*, Resource Lesson 13-6

## 3 PRACTICE/APPLY

- \_\_\_\_\_ Check for Understanding, *SE*, p. 552

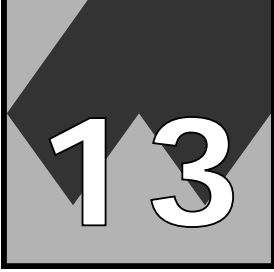
<b>Homework Assignments (p. 553)</b>	
_____ Core: 7-15 odd, 16-18	_____ Enriched: 8-12 even, 13-18
_____ Alternate Assignment: _____	

- \_\_\_\_\_ Extra Practice, *SE*, p. 604
- \_\_\_\_\_ ⇨ *Practice Masters*, p. 98
- \_\_\_\_\_ ⇨ *Classroom Games*, pp. 35-40
- \_\_\_\_\_ Family Activity, *SE*, p. 553
- \_\_\_\_\_ ⇨ *Georgia Parent and Student Study Guide Workbook*, p. 110

## 4 ASSESS

- \_\_\_\_\_ Closing Activity, Speaking, *TWE*, p. 553
- \_\_\_\_\_ ⇨ *Assessment and Evaluation Masters*, Quiz D, p. 352
- \_\_\_\_\_ Extending the Lesson, *TWE*, p. 553
- \_\_\_\_\_ ⇨ *Enrichment Masters*, p. 98

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# Review and Assessment (pp. 554-559)



Teacher's Name \_\_\_\_\_ Dates \_\_\_\_\_

Grade \_\_\_\_\_ Class \_\_\_\_\_ Review M Tu W Th F

Testing M Tu W Th F

\_\_\_\_\_ Study Guide and Assessment, *SE*, pp. 554-557

\_\_\_\_\_ Standardized Test Practice, *SE*, pp. 558-559

\_\_\_\_\_ Chapter Test, *SE*, p. 619

## ⇔ **Assessment and Evaluation Masters (pp. 337-355)**

### *Multiple-Choice Tests*

\_\_\_\_\_ Form 1A, 1B, or 1C, pp. 337-342

\_\_\_\_\_ Standardized Test Practice, pp. 353-354

### *Free-Response Tests*

\_\_\_\_\_ Form 2A, 2B, or 2C, pp. 343-348

\_\_\_\_\_ Performance Assessment, p. 349

\_\_\_\_\_ Cumulative Review, p. 355

\_\_\_\_\_ ⇔ *MindJogger Videoquizzes*, Chapter 13

\_\_\_\_\_ ⇔ *Test and Review Software*

\_\_\_\_\_ ⇔ *CD-ROM Assessment Game*

\_\_\_\_\_ ⇔ *State Test Preparation CD-ROM*

\_\_\_\_\_ ⇔  *Georgia Parent and Student Study Guide Workbook*, p. 111

\_\_\_\_\_ ⇔  *Georgia Stanford 9 Practice and Sample Test Workbook*

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