



12 Investigating Discrete Math and Probability

Chapter Pacing Guide

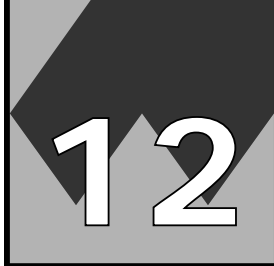
Please note that this pacing guide is based upon completing the entire text in 165 classes, approximately 50 minutes each. More time can be allotted for this chapter if you do not plan to teach the entire text.

<i>Day (Standard)</i>	<i>Day (Honors)</i>	<i>Lesson</i>	<i>Title</i>
1	1	*Chapter Project	Theme: Athletes Consider the Probabilities
2 & 3		*12-1A	<small>HANDS-ON LAB</small> Cooperative Learning Fair and Unfair Games
	1	12-1	Counting Outcomes
4	2	12-2	Permutations
5	3	12-3	Combinations
6	4 & 5	12-4	Pascal's Triangle
		*12-4B	<small>HANDS-ON LAB</small> Cooperative Learning Patterns in Pascal's Triangle
7	6	12-5	Probability of Compound Events
8	7	12-6A	<small>THINKING LAB</small> Problem Solving Act It Out
9	8	12-6	Experimental Probability
10 & 11		*12-7A	<small>HANDS-ON LAB</small> Cooperative Learning Punnett Squares
	9	12-7	Integration: Statistics Using Sampling to Predict
12	10	Review: Study Guide and Assessment	
13	11	Assessment: Chapter Test	

* Optional

Chapter Resources

<p>Meeting Individual Needs <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>Technology <i>Electronic Teacher's Classroom</i> Resources (ETCR) www.glencoe.com/sec/math/mac/mathnet</p>
<p>Interactive Mathematics: Activities and Investigations Units 1 and 17</p>	<p>Applications <i>Family Letters and Activities</i>, pp. 75-76 <i>Spanish Family Letters and Activities</i>, pp. 75-76</p>



Chapter Project (pp. 514-515)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

- _____ Gain an understanding of how to make decisions based on probable outcomes.
- _____ Learn how to predict outcomes based on math principles.

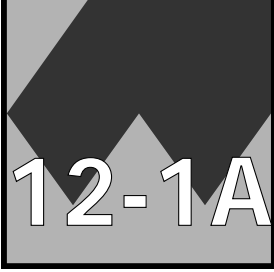
Theme: *Athletes*

- _____ Chapter Project, *SE*, p. 515
- _____ Chapter 12 Notes, *TWE*, p. 514
- _____ Question of the Day, *TWE*, p. 514
- _____ ⇨ *Investigations and Projects Masters*, pp. 61-64

Homework Assignments

- _____ p. 543, Working on the Chapter Project, Exercise 11
- _____ p. 548, Working on the Chapter Project, Exercise 11
- _____ p. 553, Completing the Chapter Project, Alternative Assessment

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



Lesson Planning Guide (pp. 516-517)



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

Objectives

_____ Discover how to determine whether a game is fair or unfair.

NCTM Standards: 5-9
Georgia Quality Core Curriculum: Grade 8: 1, 43, 45

MANAGEMENT

_____ Getting Started, *TWE*, p. 516

ASSESS

_____ *TWE*, p. 517

_____ ⇔ *Hands-On Lab Masters*, p. 63

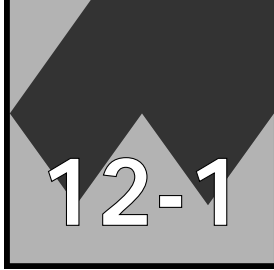
Class Activity (pp. 516-517)

_____ All: 1-15

_____ Alternate Assignment: _____

_____ Math Journal, *TWE*, p. 517

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



Lesson Planning Guide (pp. 518-520)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Count outcomes by using a tree diagram or the Counting Principle.

NCTM Standards: 1, 5-10
Georgia Quality Core Curriculum: Grade 8: 1

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 518
- _____ ⇨ Transparency 12-1A
- _____ Motivating the Lesson, Problem Solving, *TWE*, p. 518
- _____ Cross-Curriculum Cue, *TWE*, p. 518


2 TEACH

- _____ ⇨ Transparency 12-1B
- _____ Thinking Algebraically, *TWE*, p. 519
- _____ In-Class Examples, *TWE*, p. 519
- _____ ⇨ *Study Guide Masters*, p. 93
- _____ Reteaching the Lesson, *TWE*, p. 519
- _____ ⇨ *CD-ROM Program*, Resource Lesson 12-1
- _____ ⇨ *Interactive Mathematics Tools Software*

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, pp. 519-520

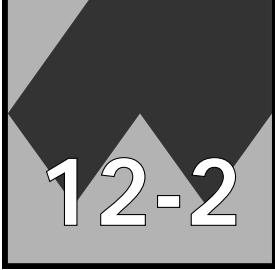
Homework Assignments (p. 520)	
_____ Core: 7-15 odd, 16-18	_____ Enriched: 8-12 even, 13-18
_____ Alternate Assignment: _____	

- _____ Extra Practice, *SE*, p. 639
- _____ ⇨ *Practice Masters*, p. 93
- _____ ⇨  *Georgia Parent and Student Study Guide Workbook*, p. 104

4 ASSESS

- _____ Closing Activity, Writing, *TWE*, p. 520
- _____ Extending the Lesson, *TWE*, p. 520
- _____ ⇨ *Enrichment Masters*, p. 93

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Lesson Planning Guide (pp. 521-523)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Find the number of permutations of objects.

NCTM Standards: 1, 5-10
Georgia Quality Core Curriculum: Grade 8: 1

1 FOCUS

_____ 5-Minute Check, *TWE*, p. 521

_____ ⇨ Transparency 12-2A

2 TEACH

_____ ⇨ Transparency 12-2B

_____ Using the Mini-Lab, *TWE*, p. 521

_____ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 12-2

_____ Multiple Learning Styles, Kinesthetic, *TWE*, p. 521

_____ In-Class Examples, *TWE*, p. 522

_____ ⇨ *Study Guide Masters*, p. 94

_____ Reteaching the Lesson, *TWE*, p. 522

_____ Error Analysis, *TWE*, p. 522

_____ ⇨ *CD-ROM Program*, Resource Lesson 12-2

3 PRACTICE/APPLY

_____ Check for Understanding, *SE*, pp. 522-523

Homework Assignments (p. 523)

_____ Core: 11-27 odd, 28-30

_____ Enriched: 10-24 even, 25-30

_____ Alternate Assignment: _____

_____ Extra Practice, *SE*, p. 639

_____ ⇨ *Practice Masters*, p. 94

_____ ⇨ *Technology Masters*, Graphing Calculator Activity, p. 76

_____ ⇨ *Georgia Parent and Student Study Guide Workbook*, p. 105

4 ASSESS

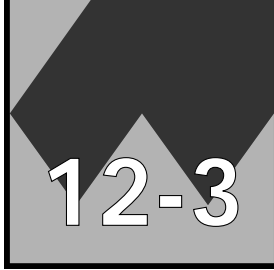
_____ Closing Activity, Modeling, *TWE*, p. 523

_____ ⇨ *Assessment and Evaluation Masters*, Quiz A, p. 323

_____ Extending the Lesson, *TWE*, p. 523

_____ ⇨ *Enrichment Masters*, p. 94

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



Lesson Planning Guide (pp. 524-527)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Find the number of combinations of objects.

NCTM Standards: 1, 5-10
Georgia Quality Core Curriculum: Grade 8: 1, 18

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 524
- _____ ⇨ Transparency 12-3A
- _____ Motivating the Lesson, Communication, *TWE*, p. 524
- _____ Multiple Learning Styles, Interpersonal, *TWE*, p. 524

2 TEACH

- _____ ⇨ Transparency 12-3B
- _____ Using the Mini-Lab, *TWE*, p. 525
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 12-3
- _____ In-Class Examples, *TWE*, p. 525
- _____ ⇨ *Study Guide Masters*, p. 95
- _____ Reteaching the Lesson, *TWE*, p. 526
- _____ Error Analysis, *TWE*, p. 526
- _____ ⇨ *CD-ROM Program*, Resource Lesson 12-3

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, p. 526

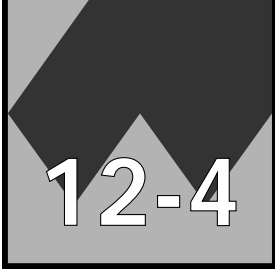
Homework Assignments (pp. 526-527)	
_____ Core: 13-31 odd, 32-36	_____ Enriched: 12-28 even, 30-36
_____ Alternate Assignment: _____	

- _____ Extra Practice, *SE*, p. 640
- _____ ⇨ *Practice Masters*, p. 95
- _____ ⇨ *Technology Masters*, Calculator Activity, p. 75
- _____ ⇨ *Diversity Masters*, p. 38
- _____ ⇨ *Georgia Parent and Student Study Guide Workbook*, p. 106

4 ASSESS

- _____ Closing Activity, Writing, *TWE*, p. 527
- _____ Extending the Lesson, *TWE*, p. 527
- _____ ⇨ *Enrichment Masters*, p. 95

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Lesson Planning Guide (pp. 528-531)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Identify patterns in Pascal's Triangle.

NCTM Standards: 1, 2, 5-10
Georgia Quality Core Curriculum: Grade 8: 1, 45

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 528
- _____ ⇨ Transparency 12-4A
- _____ Motivating the Lesson, Hands-On-Activity, *TWE*, p. 528
- _____ Multiple Learning Styles, Visual/Spatial, *TWE*, p. 528

2 TEACH

- _____ ⇨ Transparency 12-4B
- _____ Using the Mini-Lab, *TWE*, p. 529
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 12-4
- _____ In-Class Examples, *TWE*, p. 529
- _____ ⇨ *Study Guide Masters*, p. 96
- _____ Reteaching the Lesson, *TWE*, p. 530
- _____ Error Analysis, *TWE*, p. 530
- _____ ⇨ *CD-ROM Program*, Resource Lesson 12-4

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, p. 530

Homework Assignments (pp. 530-531)

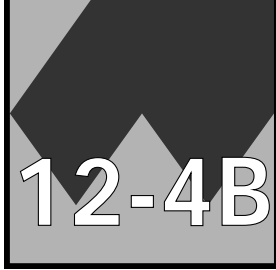
- _____ Core: 9-23 odd, 24-26 _____ Enriched: 10-20 even, 21-26
- _____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 640
- _____ ⇨ *Practice Masters*, p. 96
- _____ ⇨ *Georgia Parent and Student Study Guide Workbook*, p. 107

4 ASSESS

- _____ Closing Activity, Speaking, *TWE*, p. 531
- _____ ⇨ *Assessment and Evaluation Masters*, Mid-Chapter Test, p. 322
- _____ ⇨ *Assessment and Evaluation Masters*, Quiz B, p. 323
- _____ Extending the Lesson, *TWE*, p. 531
- _____ ⇨ *Enrichment Masters*, p. 96
- _____ Mid-Chapter Self Test, *SE*, p. 531

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



Lesson Planning Guide (pp. 532-533)



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

Objectives

_____ Discover numerical and visual patterns in Pascal's Triangle.

NCTM Standards: 1, 2, 6-10
Georgia Quality Core Curriculum: Grade 8: 1, 3

MANAGEMENT

_____ Getting Started, *TWE*, p. 532

ASSESS

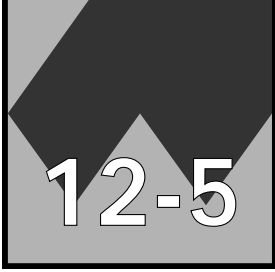
_____ *TWE*, p. 533
_____ ⇔ *Hands-On Lab Masters*, p. 64

Class Activity (pp. 532-533)

_____ All: 1-7
_____ Alternate Assignment: _____

_____ Math Journal, *TWE*, p. 533

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



Lesson Planning Guide (pp. 534-537)



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

Objectives

_____ Find the probability of independent and dependent events.

NCTM Standards: 1, 5-10
Georgia Quality Core Curriculum: Grade 8: 1, 39

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 534
- _____ ⇨ Transparency 12-5A
- _____ Motivating the Lesson, Problem Solving, *TWE*, p. 534

2 TEACH


- _____ ⇨ Transparency 12-5B
- _____ Using the Mini-Lab, *TWE*, p. 535
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 12-5
- _____ In-Class Examples, *TWE*, pp. 535, 536
- _____ ⇨ *Study Guide Masters*, p. 97
- _____ Reteaching the Lesson, *TWE*, p. 536
- _____ Error Analysis, *TWE*, p. 536
- _____ ⇨ *CD-ROM Program*, Resource Lesson 12-5

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, pp. 536-537

Homework Assignments (p. 537)

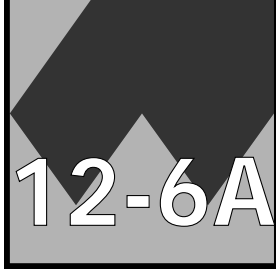
_____ Core: 11-25 odd, 26-29 _____ Enriched: 10-22 even, 24-29
 _____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 640
- _____ ⇨ *Practice Masters*, p. 97
- _____ ⇨  *Georgia Parent and Student Study Guide Workbook*, p. 108

4 ASSESS

- _____ Closing Activity, Modeling, *TWE*, p. 537
- _____ Extending the Lesson, *TWE*, p. 537
- _____ ⇨ *Enrichment Masters*, p. 97

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



Lesson Planning Guide (pp. 538-539)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Solve problems by acting them out.

1 FOCUS

_____ Getting Started, *TWE*, p. 538

2 TEACH

_____ In-Class Example, *TWE*, p. 538

_____ Reteaching the Lesson, *TWE*, p. 538

_____ ⇔ *CD-ROM Program*, Interactive Lesson 12-6A

3 PRACTICE/APPLY

_____ Check for Understanding, *TWE*, p. 539

NCTM Standards: 1, 5-9
Georgia Quality Core Curriculum: Grade 8: 1, 40

Homework Assignments (p. 539)

_____ All: 5-14

_____ Alternate Assignment: _____

_____ Extra Practice, *SE*, p. 641

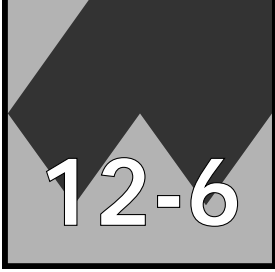
_____ Mixed Problem Solving, *SE*, pp. 645-646

4 ASSESS

_____ Closing Activity, Writing, *TWE*, p. 539

_____ Extending the Lesson, *TWE*, p. 539

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



Lesson Planning Guide (pp. 540-543)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Find experimental probability.

NCTM Standards: 1, 5-9
Georgia Quality Core Curriculum: Grade 8: 1, 39, 43

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 540
- _____ ⇨ Transparency 12-6A
- _____ Motivating the Lesson, Communication, *TWE*, p. 540

2 TEACH

- _____ ⇨ Transparency 12-6B
- _____ Using the Mini-Lab, *TWE*, p. 541
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 12-6
- _____ In-Class Examples, *TWE*, p. 541
- _____ ⇨ *Study Guide Masters*, p. 98
- _____ Reteaching the Lesson, *TWE*, p. 541
- _____ ⇨ *CD-ROM Program*, Resource Lesson 12-6, Interactive Lesson 12-6
- _____ ⇨ *Interactive Mathematics Tools Software*

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, pp. 541-542

Homework Assignments (pp. 542-543)

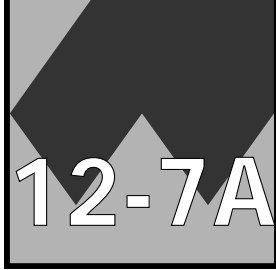
- _____ Core: 7, 9, 12-14 _____ Enriched: 6, 8-10, 12-14
- _____ Optional: 11 (Working on the Chapter Project)
- _____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 641
- _____ ⇨ *Practice Masters*, p. 98
- _____ ⇨ *Hands-On Lab Masters*, p. 79
- _____ Family Activity, *SE*, p. 542
- _____ ⇨ *Science and Mathematics Lab Manual*, pp. 93-96
- _____ ⇨ *Georgia Parent and Student Study Guide Workbook*, p. 109

4 ASSESS

- _____ Let the Games Begin, *SE*, p. 543
- _____ Closing Activity, Writing, *TWE*, p. 543
- _____ ⇨ *Assessment and Evaluation Masters*, Quiz C, p. 324
- _____ Extending the Lesson, *TWE*, p. 543
- _____ ⇨ *Enrichment Masters*, p. 98

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Lesson Planning Guide (pp. 544-545)



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

Objectives

_____ Discover how experimental probability is used in biology.

NCTM Standards: 5-9
Georgia Quality Core Curriculum: Grade 8: 1, 39, 43, 45

MANAGEMENT

- _____ Getting Started, *TWE*, p. 544
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Lesson 12-7A
- _____ ⇨ *Overhead Manipulative Resources*: counters

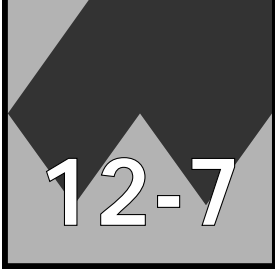
ASSESS

- _____ *TWE*, p. 545
- _____ ⇨ *Hands-On Lab Masters*, p. 65

Class Activity (pp. 544-545)
_____ All: 1-6
_____ Alternate Assignment: _____

_____ Math Journal, *TWE*, p. 545

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Lesson Planning Guide (pp. 546-549)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Predict the actions of a larger group by using a sample.

NCTM Standards: 1, 5-9
Georgia Quality Core Curriculum: Grade 8: 1, 45

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 546
- _____ ⇨ Transparency 12-7A
- _____ Motivating the Lesson, Communication, *TWE*, p. 546

2 TEACH

- _____ ⇨ Transparency 12-7B
- _____ Reading Mathematics, *TWE*, p. 546
- _____ In-Class Examples, *TWE*, p. 547
- _____ ⇨ *Study Guide Masters*, p. 99
- _____ Reteaching the Lesson, *TWE*, p. 547
- _____ ⇨ *CD-ROM Program*, Resource Lesson 12-7

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, p. 547

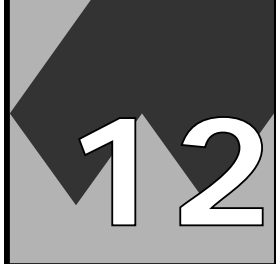
Homework Assignments (pp. 547-548)	
_____ Core: 7, 9, 12-14	_____ Enriched: 6, 8-10, 12-14
_____ Optional: 11 (Working on the Chapter Project)	
_____ Alternate Assignment: _____	

- _____ Extra Practice, *SE*, p. 641
- _____ ⇨ *Practice Masters*, p. 99
- _____ ⇨ *School to Career Masters*, p. 38
- _____ ⇨ *Classroom Games*, pp. 41-42
- _____ School to Career Activity, *SE*, p. 549
- _____ ⇨ *Georgia Parent and Student Study Guide Workbook*, p. 110

4 ASSESS

- _____ Closing Activity, Speaking, *TWE*, p. 548
- _____ ⇨ *Assessment and Evaluation Masters*, Quiz D, p. 324
- _____ Extending the Lesson, *TWE*, p. 548
- _____ ⇨ *Enrichment Masters*, p. 99

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Review and Assessment (pp. 550-557)



Teacher's Name _____ Dates _____

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

_____ Study Guide and Assessment, *SE*, pp. 550-553

_____ Standardized Test Practice, *SE*, pp. 554-555

_____ Chapter Test, *SE*, p. 658

⇔ **Assessment and Evaluation Masters (pp. 309-327)**

Multiple-Choice Tests

_____ Form 1A, 1B, or 1C, pp. 309-314

_____ Standardized Test Practice,
pp. 325-326

Free-Response Tests

_____ Form 2A, 2B, or 2C, pp. 315-320

_____ Performance Assessment, p. 321

_____ Cumulative Review, p. 327

_____ ⇔ *MindJogger Videoquizzes*, Chapter 12

_____ ⇔ *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*

Interdisciplinary Investigation, SE, pp. 556-557

_____ ⇔ *Interdisciplinary Investigation, TWE*, pp. 556-557

_____ ⇔ *Investigations and Projects Masters*, pp. 13-16

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