



12 Investigating Discrete Math and Probability

Chapter Pacing Guide

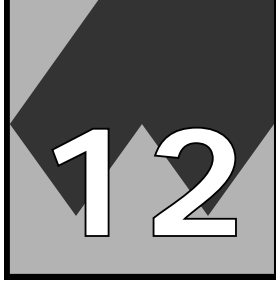
Please note that this pacing guide is based upon completing the entire text in 165 classes, approximately 50 minutes each. More time can be allotted for this chapter if you do not plan to teach the entire text.

Day (Standard)	Day (Honors)	Lesson	Title
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> <i>Resources (ETCR)</i> 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.
- _____ State/local objectives: _____

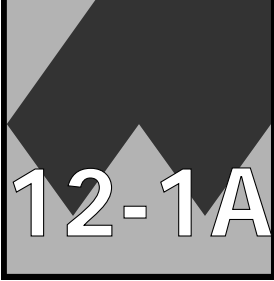
Theme: *Athletes*

- _____ 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.
- _____ State/local objectives: _____

NCTM Standards:
5-9

MANAGEMENT

- _____ Getting Started, *TWE*, p. 516

ASSESS

- _____ *TWE*, p. 517
- _____ ⇄ *Hands-On Lab Masters*, p. 63

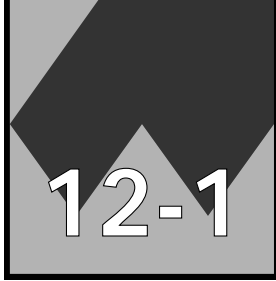
Class Activity (pp. 516-517)

_____ All: 1-15

_____ Alternate Assignment: _____

- _____ Math Journal, *TWE*, p. 517

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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.
- _____ State/local objectives: _____

NCTM Standards:
1, 5-10

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

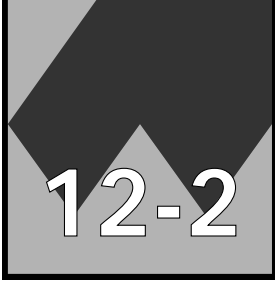
_____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 639
- _____ ⇨ *Practice Masters*, p. 93
- _____ ⇨ *South Carolina 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.
- _____ State/local objectives: _____

NCTM Standards:
1, 5-10

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

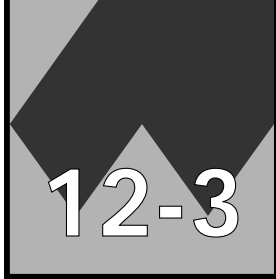
_____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 639
- _____ ⇨ *Practice Masters*, p. 94
- _____ ⇨ *Technology Masters*, Graphing Calculator Activity, p. 76
- _____ ⇨ *South Carolina 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

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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.
- _____ State/local objectives: _____

NCTM Standards:
1, 5-10

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

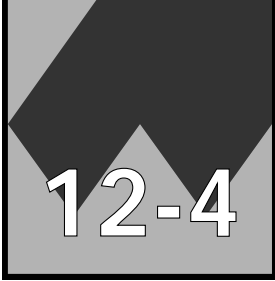
_____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 640
- _____ ⇨ *Practice Masters*, p. 95
- _____ ⇨ *Technology Masters*, Calculator Activity, p. 75
- _____ ⇨ *Diversity Masters*, p. 38
- _____ ⇨ *South Carolina 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.
- _____ State/local objectives: _____

NCTM Standards:
1, 2, 5-10

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

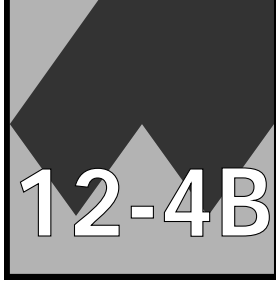
_____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 640
- _____ ⇨ *Practice Masters*, p. 96
- _____ ⇨ *South Carolina 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

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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.
- _____ State/local objectives: _____

NCTM Standards:
1, 2, 6-10

MANAGEMENT

- _____ Getting Started, *TWE*, p. 532

ASSESS

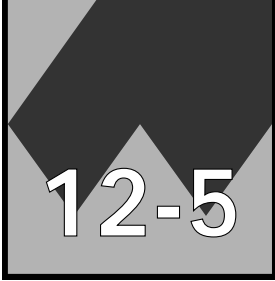
- _____ *TWE*, p. 533
- _____ ⇔ *Hands-On Lab Masters*, p. 64

Class Activity (pp. 532-533)

- _____ All: 1-7
- _____ Alternate Assignment: _____

- _____ Math Journal, *TWE*, p. 533

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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.
- _____ State/local objectives: _____

NCTM Standards: 1, 5-10
South Carolina Math Curriculum Standards
Grade 8: DAP III.C.1., DAP III.C.2., DAP IV.B.1., DAP IV.C.1.

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)

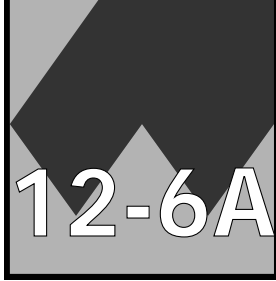
- _____ Core: 11-25 odd, 26-29
- _____ Enriched: 10-22 even, 24-29
- _____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 640
- _____ ⇨ *Practice Masters*, p. 97
- _____ ⇨  *South Carolina 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

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Lesson Planning Guide (pp. 538-539)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

- _____ Solve problems by acting them out.
- _____ State/local objectives: _____

NCTM Standards: 1, 5-9
South Carolina Math Curriculum Standards Grade 8: NO I.A.1., NO III.A.1.

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

Homework Assignments (p. 539)

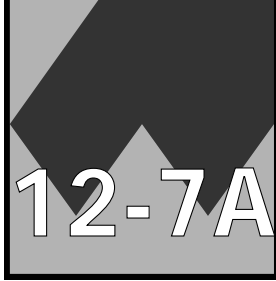
- _____ All: 5-14
- _____ Alternate Assignment: _____

- _____ 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

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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.
- _____ State/local objectives: _____

NCTM Standards: 5-9
South Carolina Math Curriculum Standards Grade 8: DAP III.C.1., DAP III.C.2., DAP IV.B.1.

MANAGEMENT

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

ASSESS

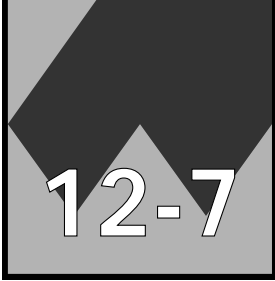
- _____ *TWE*, p. 545
- _____ ⇨ *Hands-On Lab Masters*, p. 65

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.
- _____ State/local objectives: _____

NCTM Standards: 1, 5-9
South Carolina Math Curriculum Standards
Grade 8: DAP III.C.1., DAP IV.B.1.

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

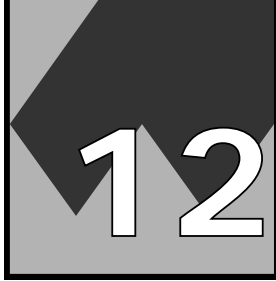
Homework Assignments (pp. 547-548)	
_____ Core: 7, 9, 12-14	_____ Enriched: 6, 8-10, 12-14
_____ Optional: 11 (Working on the Chapter Project)	
_____ Alternate Assignment: _____	

- _____ 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
- _____ ⇨ *South Carolina 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*
- _____ ⇨  *South Carolina Parent and Student Study Guide Workbook*, p. 111
- _____ ⇨  *South Carolina PACT Workbook and Test Preparation, Grade 8*

Interdisciplinary Investigation, SE, pp. 556-557

- _____ ⇨ *Interdisciplinary Investigation, TWE*, pp. 556-557
- _____ ⇨ *Investigations and Projects Masters*, pp. 13-16

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