

9 Geometry: Investigating Patterns



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: Architecture Designing a Dream House
2	2	9-1	Angles
3	3	9-1B	THINKING LAB Problem Solving Use Logical Reasoning
4	4	9-2	Using Angle Measures
5 & 6		*9-3A	HANDS-ON LAB Cooperative Learning Constructing Congruent Segments and Angles
	5	9-3	Constructing Bisectors
7, 8 & 9		*9-4A	HANDS-ON LAB Cooperative Learning Triangles and Quadrilaterals
	6 & 7	9-4	Two-Dimensional Figures
		*9-4B	HANDS-ON LAB Cooperative Learning Using Nets to Wrap a Cube
10	8	9-5	Lines of Symmetry
11 & 12	9 & 10	9-6	Size and Shape
		*9-6B	HANDS-ON LAB Cooperative Learning Translations and Escher Drawings
13	11	Review: Study Guide and Assessment	
14	12	Assessment: Chapter Test	

* Optional

Chapter Resources

<p>Meeting Individual Needs <i>Investigations for the Special Education Student</i>, Hide and Seek, p. 29 <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 4 and 12</p>	<p>Applications <i>Family Letters and Activities</i>, pp. 17-18 <i>Spanish Family Letters and Activities</i>, pp. 17-18</p>



Chapter Project (pp. 350-351)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Students use a scale drawing to find angle measures and wall lengths.

Theme: Architecture

_____ Chapter Project, *SE*, p. 351

_____ Chapter 9 Notes, *TWE*, p. 350

_____ Question of the Day, *TWE*, p. 350

_____ ⇄ *Investigations and Projects Masters*, pp. 49-52

Homework Assignments

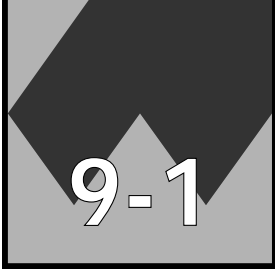
_____ p. 361, Working on the Chapter Project, Exercise 27

_____ p. 373, Working on the Chapter Project, Exercise 27

_____ p. 382, Working on the Chapter Project, Exercise 19

_____ p. 389, Completing the Chapter Project, Alternative Assessment

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



Lesson Planning Guide (pp. 352-355)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Classify and measure angles.

1 FOCUS


- _____ 5-Minute Check, *TWE*, p. 352
- _____ ⇨ Transparency 9-1A
- _____ Motivating the Lesson, Hands-On-Activity, *TWE*, p. 352
- _____ Cross-Curriculum Cue, *TWE*, p. 352

2 TEACH

- _____ ⇨ Transparency 9-1B
- _____ Reading Mathematics, *TWE*, p. 352
- _____ In-Class Examples, *TWE*, p. 353
- _____ ⇨ *Study Guide Masters*, p. 64
- _____ Reteaching the Lesson, *TWE*, p. 353
- _____ Error Analysis, *TWE*, p. 353
- _____ ⇨ *CD-ROM Program*, Resource Lesson 9-1

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, pp. 353-354

The California Mathematics Academic Content Standards	
Grade 5:	MG2.1, MR2.3, MR2.4
Basic Lesson	
Grade 6:	NS1.1, NS1.4, NS2.4, AF1.3, AF3.2, MG2.1, MG2.2, SDP2.3, MR1.1, MR2.6
	Key Lesson

Homework Assignments (pp. 354-355)

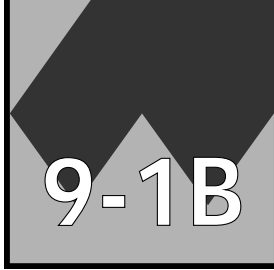
_____ Core: 11-31 odd, 33-38 _____ Enriched: 10-30 even, 31-38
 _____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 580
- _____ ⇨ *Practice Masters*, p. 64
- _____ ⇨ *Technology Masters*, Spreadsheet Activity, p. 18

4 ASSESS

- _____ Closing Activity, Speaking, *TWE*, p. 355
- _____ Extending the Lesson, *TWE*, p. 355
- _____ ⇨ *Enrichment Masters*, p. 64

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



Lesson Planning Guide (pp. 356-357)



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

Objectives

_____ Solve problems by using logical reasoning.

1 FOCUS

_____ Getting Started, *TWE*, p. 356

2 TEACH

_____ In-Class Examples, *TWE*, p. 356

_____ Reteaching the Lesson, *TWE*, p. 356

3 PRACTICE/APPLY

_____ Check for Understanding, *TWE*, p. 357

The California Mathematics Academic Content Standards
Grade 5: MR2.3, MR2.4, MR3.2
Basic Lesson
Grade 6: SDP2.3 Key Lesson

Homework Assignments (p. 357)

_____ All: 5-13

_____ Alternate Assignment: _____

_____ Extra Practice, *SE*, p. 581

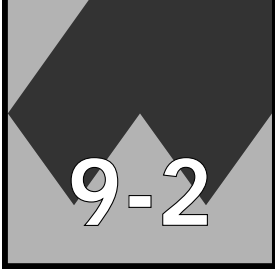
_____ Mixed Problem Solving, *SE*, pp. 593-594

4 ASSESS

_____ Closing Activity, Writing, *TWE*, p. 357

_____ Extending the Lesson, *TWE*, p. 357

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



Lesson Planning Guide (pp. 358-361)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Draw angles and estimate measures of angles.

1 FOCUS

_____ 5-Minute Check, *TWE*, p. 358

_____ ⇨ Transparency 9-2A

_____ Motivating the Lesson, Communication, *TWE*, p. 358

2 TEACH

_____ ⇨ Transparency 9-2B

_____ Using the Mini-Lab, *TWE*, p. 359

_____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 9-2

_____ Multiple Learning Styles, Verbal/Linguistic, *TWE*, p. 359

_____ In-Class Examples, *TWE*, pp. 359-360

_____ ⇨ *Study Guide Masters*, p. 65

_____ Reteaching the Lesson, *TWE*, p. 360

_____ ⇨ *CD-ROM Program*, Resource Lesson 9-2, Interactive Lesson 9-2

_____ ⇨ *Interactive Mathematics Tools Software*

3 PRACTICE/APPLY

_____ Check for Understanding, *SE*, p. 360

Homework Assignments (p. 361)

_____ Core: 11-25 odd, 28-32 _____ Enriched: 10-24 even, 25, 26, 28-32

_____ Optional: 27 (Working on the Chapter Project)

_____ Alternate Assignment: _____

_____ Extra Practice, *SE*, p. 581

_____ ⇨ *Practice Masters*, p. 65

_____ ⇨ *Technology Masters*, Calculator Activity, p. 17

_____ ⇨ *School to Career Masters*, p. 9

4 ASSESS

_____ Closing Activity, Writing, *TWE*, p. 361

_____ ⇨ *Assessment and Evaluation Masters*, Quiz A, p. 239

_____ Extending the Lesson, *TWE*, p. 361

_____ ⇨ *Enrichment Masters*, p. 65

The California Mathematics Academic Content Standards	
Grade 5:	MG2.1, SDP1.2, MR2.3, MR2.4
Basic Lesson	
Grade 6:	NS2.4, AF2.1, AF2.3, AF3.2, MR1.2
Key Lesson	

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Lesson Planning Guide (pp. 362-363)



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

Objectives

_____ Construct congruent segments and angles.

MANAGEMENT

- _____ Getting Started, *TWE*, p. 362
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Lesson 9-3A
- _____ ⇨ *Overhead Manipulative Resources*: compass

The California Mathematics Academic Content Standards
Grade 5: MG2.1, MR2.3, MR2.4
Basic Lesson
Grade 6: Optional Lesson

ASSESS

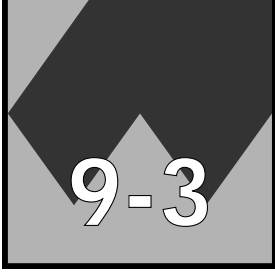
- _____ *TWE*, p. 363
- _____ ⇨ *Hands-On Lab Masters*, p. 57

Class Activity (pp. 362-363)

_____ All: 1-8
 _____ Alternate Assignment: _____

_____ Math Journal, *TWE*, p. 363

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Lesson Planning Guide (pp. 364-367)



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

Objectives

_____ Bisect line segments and angles.

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 364
- _____ ⇨ Transparency 9-3A
- _____ Motivating the Lesson, Problem Solving, *TWE*, p. 364

2 TEACH

- _____ ⇨ Transparency 9-3B
- _____ Using the Mini-Lab, *TWE*, p. 365
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 9-3
- _____ In-Class Examples, *TWE*, p. 365
- _____ ⇨ *Study Guide Masters*, p. 66
- _____ Reteaching the Lesson, *TWE*, p. 365
- _____ Error Analysis, *TWE*, p. 365
- _____ ⇨ *CD-ROM Program*, Resource Lesson 9-3

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, p. 366

The California Mathematics Academic Content Standards	
Grade 5:	MG2.1, MR2.3, MR2.4
Basic Lesson	
Grade 6:	NS2.4
Key Lesson	

Homework Assignments (p. 366)

_____ Core: 9-17 odd, 19-22 _____ Enriched: 8-16 even, 17-22
 _____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 581
- _____ ⇨ *Practice Masters*, p. 66
- _____ School to Career Activity, *SE*, p. 367

4 ASSESS

- _____ Closing Activity, Modeling, *TWE*, p. 366
- _____ ⇨ *Assessment and Evaluation Masters*, Mid-Chapter Test, p. 238
- _____ ⇨ *Assessment and Evaluation Masters*, Quiz B, p. 239
- _____ Extending the Lesson, *TWE*, p. 366
- _____ ⇨ *Enrichment Masters*, p. 66

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Lesson Planning Guide (pp. 368-369)



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

Objectives

_____ Classify triangles and quadrilaterals.

MANAGEMENT

- _____ Getting Started, *TWE*, p. 368
- _____ ⇨ *Hands-On Lab Masters*, p. 13: square dot paper
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Lesson 9-4A
- _____ ⇨ *Overhead Manipulative Resources*: geoboards, geobands, rectangular dot paper

The California Mathematics Academic Content Standards
Grade 5: MG2.1, MR2.3, MR2.4
Basic Lesson
Grade 6: Optional Lesson

ASSESS

- _____ *TWE*, p. 369
- _____ ⇨ *Hands-On Lab Masters*, p. 58

Class Activity (pp. 368-369)

- _____ All: 1-8
- _____ Alternate Assignment: _____

_____ Math Journal, *TWE*, p. 369

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Lesson Planning Guide (pp. 370-373)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Name two-dimensional figures.

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 370
- _____ ⇨ Transparency 9-4A
- _____ Motivating the Lesson, Hands-On-Activity, *TWE*, p. 370

2 TEACH

- _____ ⇨ Transparency 9-4B
- _____ Reading Mathematics, *TWE*, p. 370
- _____ In-Class Examples, *TWE*, p. 371
- _____ ⇨ *Study Guide Masters*, p. 67
- _____ Reteaching the Lesson, *TWE*, p. 372
- _____ ⇨ *CD-ROM Program*, Resource Lesson 9-4

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, p. 372

The California Mathematics Academic Content Standards

Grade 5: MG1.1, MG2.1, MR2.3, MR2.4

🔑 Key Lesson

Grade 6: NS1.2, NS1.3, NS1.4, NS2.4, AF1.1, AF2.3, AF3.1, AF3.2, MG2.3, MR2.5

🔑 Key Lesson

Homework Assignments (pp. 372-373)

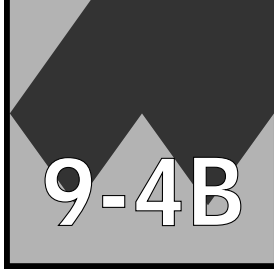
- _____ Core: 11-25 odd, 28-32 _____ Enriched: 12-24 even, 25, 26, 28-32
- _____ Optional: 27 (Working on the Chapter Project)
- _____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 582
- _____ ⇨ *Practice Masters*, p. 67
- _____ ⇨ *Diversity Masters*, p. 9
- _____ ⇨ *Classroom Games*, pp. 23-26

4 ASSESS

- _____ Closing Activity, Writing, *TWE*, p. 373
- _____ Extending the Lesson, *TWE*, p. 373
- _____ ⇨ *Enrichment Masters*, p. 67
- _____ Mid-Chapter Self Test, *SE*, p. 373

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Lesson Planning Guide (p. 374)



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

Objectives

_____ Make a net and use it to wrap a cube.

MANAGEMENT

_____ Getting Started, *TWE*, p. 374
_____ ⇨ *Hands-On Lab Masters*, p. 21: cube pattern

ASSESS

_____ *TWE*, p. 374
_____ ⇨ *Hands-On Lab Masters*, p. 59

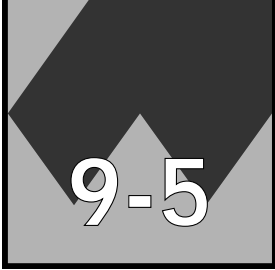
The California Mathematics Academic Content Standards
Grade 5: MG1.2, MR2.3, MR2.4 Key Lesson
Grade 6: Optional Lesson

Class Activity (p. 374)

_____ All: 1-4
_____ Alternate Assignment: _____

_____ Math Journal, *TWE*, p. 374

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Lesson Planning Guide (pp. 375-378)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Describe and define lines of symmetry.

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 375
- _____ ⇨ Transparency 9-5A
- _____ Motivating the Lesson, Communication, *TWE*, p. 375
- _____ Multiple Learning Styles, Interpersonal, *TWE*, p. 375

2 TEACH

- _____ ⇨ Transparency 9-5B
- _____ Using the Mini-Lab, *TWE*, p. 377
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 9-5
- _____ In-Class Examples, *TWE*, p. 376
- _____ ⇨ *Study Guide Masters*, p. 68
- _____ Reteaching the Lesson, *TWE*, p. 377
- _____ Error Analysis, *TWE*, p. 377
- _____ ⇨ *CD-ROM Program*, Resource Lesson 9-5, Interactive Lesson 9-5

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, pp. 376-377

Homework Assignments (pp. 377-378)

- _____ Core: 13-37 odd, 38-43 _____ Enriched: 14-34 even, 36-43
- _____ Alternate Assignment: _____

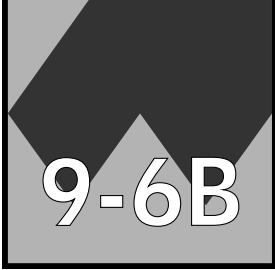
- _____ Extra Practice, *SE*, p. 582
- _____ ⇨ *Practice Masters*, p. 68
- _____ ⇨ *Hands-On Lab Masters*, p. 77

4 ASSESS

- _____ Closing Activity, Modeling, *TWE*, p. 378
- _____ ⇨ *Assessment and Evaluation Masters*, Quiz C, p. 240
- _____ Extending the Lesson, *TWE*, p. 378
- _____ ⇨ *Enrichment Masters*, p. 68

The California Mathematics Academic Content Standards	
Grade 5:	MR2.3, MR2.4, MR2.6, MR3.1
Basic Lesson	
Grade 6:	NS2.1, NS2.4, AF3.2, SDP2.3, MR2.3
Key Lesson	

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Lesson Planning Guide (pp. 384-385)



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

Objectives

_____ Create Escher-like drawings by using translations.

The California Mathematics Academic Content Standards
Grade 5: MR2.3, MR2.4 Basic Lesson
Grade 6: Optional Lesson

MANAGEMENT

- _____ Getting Started, *TWE*, p. 384
- _____ ⇨ *Hands-On Lab Masters*, p. 12: centimeter grid
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Lesson 9-6B
- _____ ⇨ *Overhead Manipulative Resources*: centimeter grid

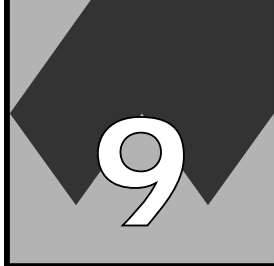
ASSESS

- _____ *TWE*, p. 385
- _____ ⇨ *Hands-On Lab Masters*, p. 60

Class Activity (pp. 384-385)
_____ All: 1-8
_____ Alternate Assignment: _____

_____ Math Journal, *TWE*, p. 385

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Review and Assessment (pp. 386-393)



Teacher's Name _____ Dates _____

Grade _____ Class _____ Review M Tu W Th F

Testing M Tu W Th F

_____ Study Guide and Assessment, *SE*, pp. 386-389

_____ Standardized Test Practice, *SE*, pp. 390-391

_____ Chapter Test, *SE*, p. 603

⇔ **Assessment and Evaluation Masters** (pp. 225-243)

Multiple-Choice Tests

_____ Form 1A, 1B, or 1C, pp. 225-230

_____ Standardized Test Practice, pp. 241-242

Free-Response Tests

_____ Form 2A, 2B, or 2C, pp. 231-236

_____ Performance Assessment, p. 237


_____ Cumulative Review, p. 243


_____ ⇔ *MindJogger Videoquizzes*, Chapter 9

_____ ⇔ *Test and Review Software*

_____ ⇔ *CD-ROM Assessment Game*

_____ ⇔ *State Test Preparation CD-ROM*

_____ ⇔  *California Framework Practice and Sample Test Workbook*, Grade 5

_____ ⇔  *California Framework Practice Transparencies*, Grade 5

_____ ⇔  *California Framework Practice and Sample Test Workbook*, Grade 6

_____ ⇔  *California Framework Practice Transparencies*, Grade 6

Interdisciplinary Investigation, SE, pp. 392-393

_____ ⇔ *Interdisciplinary Investigation, TWE*, pp. 392-393

_____ ⇔ *Investigations and Projects Masters*, pp. 9-12

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