

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.

<i>Day (Standard)</i>	<i>Day (Honors)</i>	<i>Lesson</i>	<i>Title</i>
1	1	*Chapter Project	Theme: Art Geometric Art
2, 3, & 4	2 & 3	*9-1A	Cooperative Learning Measuring Angles
		9-1	Angles
5 & 6	4 & 5	*9-1B	Cooperative Learning Perpendicular and Parallel Lines
		*9-2A	Cooperative Learning Angles of a Polygon
7	6 & 7	9-2	Polygons
		*9-2B	Cooperative Learning Inscribed Polygons
8 & 9	8	9-3	Integration: Algebra Similar Polygons
		*9-3B	Cooperative Learning Dilations
10	9	*9-4A	Cooperative Learning Investigating Triangles and Quadrilaterals
		9-4	Triangles and Quadrilaterals
11	10	9-4B	Problem Solving Use Logical Reasoning
12	11	9-5	Tessellations
13	12	9-6	Translations
14	13	9-7	Reflections
15	14	Review: Study Guide and Assessment	
		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> <i>Resources (ETCR)</i> www.glencoe.com/sec/math/mac/mathnet</p>
<p>Interactive Mathematics: Activities and Investigations Unit 4</p>	<p>Applications Family Letters and Activities, pp. 43-44 Spanish Family Letters and Activities, pp. 43-44</p>

9

Chapter Project (pp. 358-359)

Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

- _____ Recognize and name various kinds of polygons based on the number of sides and the relationship of the sides and angles.
- _____ Measure the sides and angles of polygons and use logical reasoning to make predictions about how polygons can be combined in geometric patterns.

Theme: Art

- _____ Chapter Project, *SE*, p. 359
- _____ Chapter 9 Notes, *TWE*, p. 358
- _____ Question of the Day, *TWE*, p. 358
- _____ ⇔ *Investigations and Projects Masters*, pp. 49-52

Homework Assignments

- _____ p. 391, Working on the Chapter Project, Exercise 14
- _____ p. 394, Working on the Chapter Project, Exercise 12
- _____ p. 397, Working on the Chapter Project, Exercise 11
- _____ p. 401, Completing the Chapter Project, Alternative Assessment

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

Lesson Planning Guide (pp. 360-361)

9-1A

Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Measure angles by using a protractor.

NCTM Standards:

2, 4, 6, 8-10

Georgia Quality Core Curriculum:

Grade 7: 1, 2, 26

MANAGEMENT

_____ Getting Started, *TWE*, p. 360

_____ ⇨ *Hands-On Lab Masters*, p. 12: square dot paper

_____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Lesson 9-1A

ASSESS

_____ *TWE*, p. 361

_____ ⇨ *Hands-On Lab Masters*, p. 56

Class Activity (pp. 360-361)

_____ All: 1-9

_____ Alternate Assignment: _____

_____ Math Journal, *TWE*, p. 361

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Lesson Planning Guide (pp. 362-365)

9-1

Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Classify angles.

NCTM Standards:

1-4, 6, 8, 10

Georgia Quality Core Curriculum:

Grade 7: 1, 17, 26

1 FOCUS

_____ 5-Minute Check, *TWE*, p. 362

_____ ⇨ Transparency 9-1A

_____ Motivating the Lesson, Hands-On-Activity, *TWE*, p. 362

_____ Cross-Curriculum Cue, *TWE*, p. 362

2 TEACH

_____ ⇨ Transparency 9-1B

_____ In-Class Examples, *TWE*, pp. 363-364

_____ Using the Mini-Lab, *TWE*, p. 363

_____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 9-1

_____ Multiple Learning Styles, Logical, *TWE*, p. 363

_____ ⇨ *Study Guide Masters*, p. 67

_____ Reteaching the Lesson, *TWE*, p. 364

_____ Error Analysis, *TWE*, p. 364

_____ ⇨ *CD-ROM Program*, Resource Lesson 9-1, Interactive Lesson 9-1

3 PRACTICE/APPLY

_____ Check for Understanding, *SE*, p. 364

Homework Assignments (pp. 364-365)

_____ Core: 11-25 odd, 26-29

_____ Enriched: 10-24 even, 25-29

_____ Alternate Assignment: _____

_____ Extra Practice, *SE*, p. 592

_____ ⇨ *Practice Masters*, p. 67

_____ ⇨ *Science and Mathematics Lab Manual*, pp. 41-44

_____ ⇨ *Georgia Parent and Student Study Guide Workbook*, p. 75

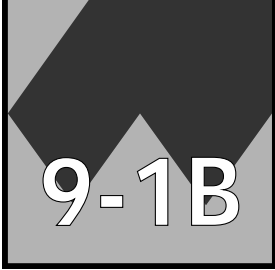
4 ASSESS

_____ Closing Activity, Speaking, *TWE*, p. 365

_____ Extending the Lesson, *TWE*, p. 365

_____ ⇨ *Enrichment Masters*, p. 67

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Lesson Planning Guide (pp. 366-367)



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

Objectives

_____ Construct perpendicular and parallel lines.

NCTM Standards: 1, 4, 6, 8, 10
Georgia Quality Core Curriculum: Grade 7: 1, 2

MANAGEMENT

_____ Getting Started, *TWE*, p. 366

_____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*,
Lesson 9-1B

ASSESS

_____ *TWE*, p. 367

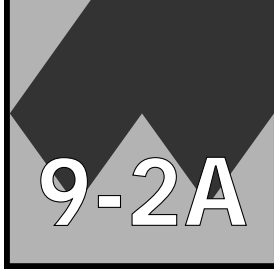
_____ ⇨ *Hands-On Lab Masters*, p. 57

Class Activity (pp. 366-367)
_____ All: 1-3
_____ Alternate Assignment: _____

_____ Math Journal, *TWE*, p. 367

_____ School to Career, *SE*, p. 368

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Lesson Planning Guide (p. 369)



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

Objectives

_____ Find the sum of the angle measures of polygons.

NCTM Standards: 1-4, 6, 8, 10
Georgia Quality Core Curriculum: Grade 7: 1, 2, 11, 17, 26

MANAGEMENT

- _____ Getting Started, *TWE*, p. 369
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Lesson 9-2A
- _____ ⇨ *Overhead Manipulative Resources*: protractor

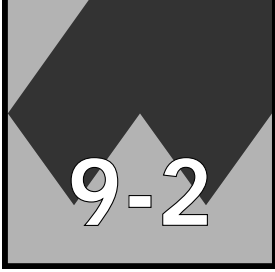
ASSESS

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

Class Activity (p. 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

_____ Identify polygons and regular polygons.

NCTM Standards: 1-4, 6, 8-10
Georgia Quality Core Curriculum: Grade 7: 1, 17, 19

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 370
- _____ ⇨ Transparency 9-2A
- _____ Motivating the Lesson, Communication, *TWE*, p. 370

2 TEACH

- _____ ⇨ Transparency 9-2B
- _____ Reading Mathematics, *TWE*, p. 371
- _____ In-Class Examples, *TWE*, p. 371
- _____ ⇨ *Study Guide Masters*, p. 68
- _____ Reteaching the Lesson, *TWE*, p. 371
- _____ ⇨ *CD-ROM Program*, Resource Lesson 9-2
- _____ ⇨ *Interactive Mathematics Tools Software*

3 PRACTICE/APPLY

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

Homework Assignments (pp. 372-373)

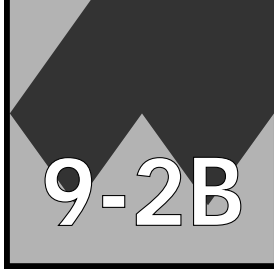
_____ Core: 7-15 odd, 17-20 _____ Enriched: 8-12 even, 14-20
 _____ Alternate Assignment: _____

- _____ Extra Practice, *SE*, p. 593
- _____ ⇨ *Practice Masters*, p. 68
- _____ ⇨ *Technology Masters*, Calculator Activity, p. 43
- _____ Family Activity, *SE*, p. 372
- _____ ⇨ *Georgia Parent and Student Study Guide Workbook*, p. 76

4 ASSESS

- _____ Closing Activity, Writing, *TWE*, p. 373
- _____ ⇨ *Assessment and Evaluation Masters*, Quiz A, p. 239
- _____ Extending the Lesson, *TWE*, p. 373
- _____ ⇨ *Enrichment Masters*, p. 68

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Lesson Planning Guide (pp. 374-375)



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

Objectives

_____ Inscribe triangles, squares, and hexagons in circles.

NCTM Standards: 3, 4, 6, 8, 10
Georgia Quality Core Curriculum: Grade 7: 1, 2, 26

MANAGEMENT

- _____ Getting Started, *TWE*, p. 374
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Lesson 9-2B
- _____ ⇨ *Overhead Manipulative Resources*: compass, ruler

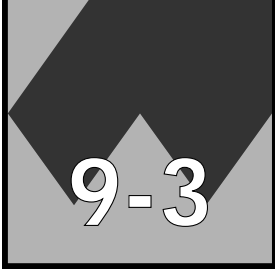
ASSESS

- _____ *TWE*, p. 375
- _____ ⇨ *Hands-On Lab Masters*, p. 59

Class Activity (p. 374-375)
_____ All: 1-5
_____ Alternate Assignment: _____

_____ Math Journal, *TWE*, p. 375

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Lesson Planning Guide (pp. 376-379)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Determine whether polygons are similar and find a missing length in a pair of similar polygons.

NCTM Standards:
1-4, 6-8, 10
Georgia Quality Core Curriculum:
Grade 7: 1, 20, 38

1 FOCUS

_____ 5-Minute Check, *TWE*, p. 376

_____ ⇨ Transparency 9-3A

_____ Motivating the Lesson, Problem Solving, *TWE*, p. 377

2 TEACH

_____ ⇨ Transparency 9-3B

_____ Using the Mini-Lab, *TWE*, p. 377

_____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 9-3

_____ In-Class Examples, *TWE*, p. 377

_____ ⇨ *Study Guide Masters*, p. 69

_____ Reteaching the Lesson, *TWE*, p. 378

_____ Error Analysis, *TWE*, p. 378

_____ ⇨ *CD-ROM Program*, Resource Lesson 9-3

3 PRACTICE/APPLY


_____ Check for Understanding, *SE*, p. 378

Homework Assignments (pp. 378-379)
_____ Core: 9-17 odd, 18-20 _____ Enriched: 10-14 even, 16-20
_____ Alternate Assignment: _____

_____ Extra Practice, *SE*, p. 593

_____ ⇨ *Practice Masters*, p. 69

_____ ⇨ *Technology Masters*, Graphing Calculator Activity, p. 44

_____ ⇨  *Georgia Parent and Student Study Guide Workbook*, p. 77

4 ASSESS

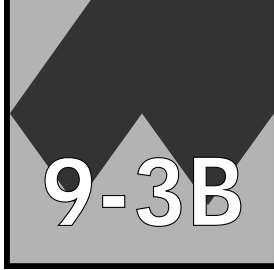
_____ Closing Activity, Modeling, *TWE*, p. 379

_____ Extending the Lesson, *TWE*, p. 379

_____ ⇨ *Enrichment Masters*, p. 69

_____ Mid-Chapter Self Test, *SE*, p. 379

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Lesson Planning Guide (p. 380)



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

Objectives

_____ Enlarge a figure on a coordinate plane.

NCTM Standards: 3, 4, 6, 8, 10
Georgia Quality Core Curriculum: Grade 7: 1, 2, 20

MANAGEMENT

- _____ Getting Started, *TWE*, p. 380
- _____ ⇨ *Hands-On Lab Masters*, p. 10: grid paper
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Lesson 9-3B
- _____ ⇨ *Overhead Manipulative Resources*: grid paper, straightedge

ASSESS

- _____ *TWE*, p. 380
- _____ ⇨ *Hands-On Lab Masters*, p. 60

Class Activity (p. 380)	
_____ All: 1-3	
_____ Alternate Assignment:	_____

_____ Math Journal, *TWE*, p. 380

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Lesson Planning Guide (p. 381)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Discover characteristics of various kinds of triangles and quadrilaterals.

NCTM Standards:

3, 4, 6, 8, 10

Georgia Quality Core Curriculum:

Grade 7: 1, 2, 19, 26

MANAGEMENT

_____ Getting Started, *TWE*, p. 381

_____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Lesson 9-4A

_____ ⇨ *Overhead Manipulative Resources*: protractor

ASSESS

_____ *TWE*, p. 381

_____ ⇨ *Hands-On Lab Masters*, p. 61

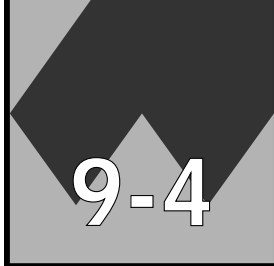
Class Activity (p. 381)

_____ All: 1-3

_____ Alternate Assignment: _____

_____ Math Journal, *TWE*, p. 381

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Lesson Planning Guide (pp. 382-385)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Classify triangles and quadrilaterals.

NCTM Standards: 1-4, 6-10
Georgia Quality Core Curriculum: Grade 7: 1, 18, 19

1 FOCUS

_____ 5-Minute Check, *TWE*, p. 382

_____ ⇨ Transparency 9-4A

_____ Motivating the Lesson, Communication, *TWE*, p. 382

2 TEACH

_____ ⇨ Transparency 9-4B

_____ Modeling Mathematics, *TWE*, p. 383

_____ In-Class Examples, *TWE*, p. 383

_____ ⇨ *Study Guide Masters*, p. 70

_____ Reteaching the Lesson, *TWE*, p. 384

_____ Error Analysis, *TWE*, p. 384

_____ ⇨ *CD-ROM Program*, Resource Lesson 9-4

3 PRACTICE/APPLY

_____ Check for Understanding, *SE*, p. 384

Homework Assignments (pp. 384-385)

_____ Core: 9-19 odd, 21-24

_____ Enriched: 10-18 even, 19-24

_____ Alternate Assignment: _____

_____ Extra Practice, *SE*, p. 593

_____ ⇨ *Practice Masters*, p. 70

_____ ⇨ *Georgia Parent and Student Study Guide Workbook*, p. 78

4 ASSESS

_____ Closing Activity, Speaking, *TWE*, p. 385

_____ ⇨ *Assessment and Evaluation Masters*, Mid-Chapter Test, p. 238

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

_____ Extending the Lesson, *TWE*, p. 385

_____ ⇨ *Enrichment Masters*, p. 70

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Lesson Planning Guide (pp. 386-387)



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

Objectives

_____ Solve problems by using logical reasoning.

1 FOCUS

_____ Getting Started, *TWE*, p. 386

2 TEACH

_____ In-Class Examples, *TWE*, p. 386
 _____ Reteaching the Lesson, *TWE*, p. 386

3 PRACTICE/APPLY

_____ Check for Understanding, *TWE*, p. 387

NCTM Standards: 6-8
Georgia Quality Core Curriculum: Grade 7: 1, 19, 38

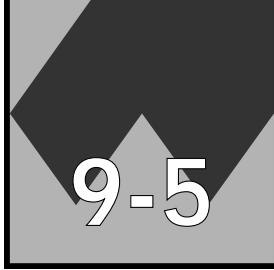
Homework Assignments (p. 387)
_____ All: 5-13
_____ Alternate Assignment: _____

_____ Extra Practice, *SE*, p. 594
 _____ Mixed Problem Solving, *SE*, p. 605-606

4 ASSESS

_____ Closing Activity, Writing, *TWE*, p. 387
 _____ Extending the Lesson, *TWE*, p. 387

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Lesson Planning Guide (pp. 388-391)



Teacher's Name _____ Dates _____

Grade _____ Class _____ M Tu W Th F

Objectives

_____ Determine which regular figures can be used to form a tessellation.

NCTM Standards: 2-4, 8-10
Georgia Quality Core Curriculum: Grade 7: 1, 19, 20, 21

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 388
- _____ ⇨ Transparency 9-5A
- _____ Multiple Learning Styles, Kinesthetic, *TWE*, p. 388
- _____ Motivating the Lesson, Hands-On-Activity, *TWE*, p. 389

2 TEACH

- _____ ⇨ Transparency 9-5B
- _____ Using the Mini-Lab, *TWE*, p. 389
- _____ ⇨ *Teacher's Guide for Overhead Manipulative Resources*, Mini-Lab for Lesson 9-5
- _____ In-Class Examples, *TWE*, p. 389
- _____ ⇨ *Study Guide Masters*, p. 71
- _____ Reteaching the Lesson, *TWE*, p. 390
- _____ Error Analysis, *TWE*, p. 390
- _____ ⇨ *CD-ROM Program*, Resource Lesson 9-5, Extended Activity 9-5

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, p. 390

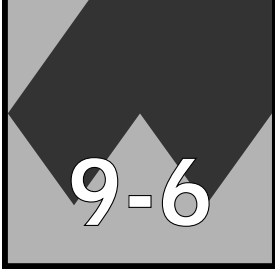
Homework Assignments (pp. 390-391)	
_____ Core: 7-13 odd, 15-17	_____ Enriched: 6-12 even, 13, 15-17
_____ Optional: 14 (Working on the Chapter Project)	
_____ Alternate Assignment: _____	

- _____ Extra Practice, *SE*, p. 594
- _____ ⇨ *Practice Masters*, p. 71
- _____ ⇨ *Hands-On Lab Masters*, p. 80
- _____ ⇨ *Classroom Games*, pp. 26-28
- _____ ⇨ *Georgia Parent and Student Study Guide Workbook*, p. 79

4 ASSESS

- _____ Let the Games Begin, *SE*, p. 391
- _____ Closing Activity, Speaking, *TWE*, p. 391
- _____ Extending the Lesson, *TWE*, p. 391
- _____ ⇨ *Enrichment Masters*, p. 391

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Lesson Planning Guide (pp. 392-394)



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

Objectives

_____ Create Escher-like drawings by using translations.

NCTM Standards: 2, 3, 8-10
Georgia Quality Core Curriculum: Grade 7: 1

1 FOCUS

- _____ 5-Minute Check, *TWE*, p. 392
- _____ ⇨ Transparency 9-6A
- _____ Motivating the Lesson, Hands-On-Activity, *TWE*, p. 392

2 TEACH

- _____ ⇨ Transparency 9-6B
- _____ Reading Mathematics, *TWE*, p. 392
- _____ In-Class Examples, *TWE*, p. 393
- _____ ⇨ *Study Guide Masters*, p. 72
- _____ Reteaching the Lesson, *TWE*, p. 393
- _____ ⇨ *CD-ROM Program*, Resource Lesson 9-6

3 PRACTICE/APPLY

- _____ Check for Understanding, *SE*, p. 394

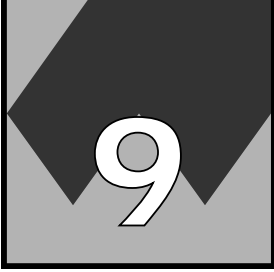
Homework Assignments (p. 394)	
_____ Core: 7-11 odd, 13-15	_____ Enriched: 6-10 even, 11, 13-15
_____ Optional: 12 (Working on the Chapter Project)	
_____ Alternate Assignment: _____	

- _____ Extra Practice, *SE*, p. 594
- _____ ⇨ *Practice Masters*, p. 72
- _____ ⇨ *Georgia Parent and Student Study Guide Workbook*, p. 80

4 ASSESS

- _____ Closing Activity, Writing, *TWE*, p. 394
- _____ ⇨ *Assessment and Evaluation Masters*, Quiz C, p. 240
- _____ Extending the Lesson, *TWE*, p. 394
- _____ ⇨ *Enrichment Masters*, p. 72

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Review and Assessment (pp. 398-403)



Teacher's Name _____ Dates _____

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



- _____ Study Guide and Assessment, *SE*, pp. 398-401
- _____ Standardized Test Practice, *SE*, pp. 402-403
- _____ Chapter Test, *SE*, p. 615

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

Multiple-Choice Tests

Free-Response Tests

- | | |
|---|---------------------------------------|
| _____ Form 1A, 1B, or 1C, pp. 225-230 | _____ Form 2A, 2B, or 2C, pp. 231-236 |
| _____ Standardized Test Practice, pp. 241-242 | _____ 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*
- _____ ⇔  *Georgia Parent and Student Study Guide Workbook*, p. 82
- _____ ⇔  *Georgia Stanford 9 Practice and Sample Test Workbook*

Interdisciplinary Investigation, SE, pp. 404-405

- _____ *Interdisciplinary Investigation*, TWE, pp. 404-405
- _____ ⇔ *Investigations and Projects Masters*, pp. 9-12

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