



**Bluebonnet  
Learning™**

**Secondary Mathematics**

EDITION 1

# Geometry

## Materials List

**Acknowledgment**

Thank you to all the Texas educators and stakeholders who supported the review process and provided feedback. These materials are the result of the work of numerous individuals, and we are deeply grateful for their contributions.

**Notice**

These learning resources have been built for Texas students, aligned to the Texas Essential Knowledge and Skills, and are made available pursuant to Chapter 31, Subchapter B-1 of the Texas Education Code.

If you have further product questions or to report an error, please email [openeducationresources@tea.texas.gov](mailto:openeducationresources@tea.texas.gov).

# GEOMETRY MATERIALS

## Key

- Materials required to implement the lesson as written
- ▲ Optional materials, such as those associated with differentiation strategies

The Course Materials list provides an overall view of the materials required for each lesson in the course. Consult the specific Lesson Overview for additional details.

	Blank Paper	Calculators	Can	Cardboard	Centimeter Cubes	Clay	Coins	Colored Cubes	Colored Paper	Colored Pencils	Compass	Cone-Shaped Party Hat	Course Guide Resources	Cut-out Shapes	Dental Floss	Dry Erase Marker	Flashlight	Glue	Graph/Grid Paper	Highlighters	Index Cards	Isometric Paper	Lesson Specific Diagrams/Graphs/Figures	Lesson-Embedded Resources	Marbles	Markers	Measuring Tools	Mirrors
<b>MODULE 1 Reasoning with Shapes</b>																												
<b>TOPIC 1 Geometry Reasoning</b>																												
Introduction Lesson													●											●				
1 Points, Lines, Planes, Rays, and Line Segments										●																		
2 Formal Reasoning in Euclidean Geometry															▲													
3 Conjectures and Deductive Reasoning										▲	●																	
<b>TOPIC 2 Using a Rectangular Coordinate System</b>																												
1 Constructing a Coordinate Plane											●																	
2 Parallel and Perpendicular Lines										▲										▲								
3 Classifying Quadrilaterals on the Coordinate Plane										▲										▲								
4 Classifying Triangles on the Coordinate Plane																												
5 Area and Perimeter on the Coordinate Plane										▲																		
<b>TOPIC 3 Sequences of Rigid Motions</b>																												
1 Translations On and Off the Coordinate Plane																												
2 Sequences of Multiple Translations													▲							▲								
3 Reflections On and Off the Coordinate Plane									▲		●																	
4 Rotations On and Off the Coordinate Plane	▲								▲		●										▲							
5 Sequences of Transformations																												
<b>TOPIC 4 Congruence Through Transformations</b>																												
1 Reflectional and Rotational Symmetry																												
2 Proving Triangle Congruence Theorems									▲		●										▲							
3 Using Triangle Congruence to Solve Problems									▲																		▲	



# GEOMETRY MATERIALS

## Key

- Materials required to implement the lesson as written
- ▲ Optional materials, such as those associated with differentiation strategies

	Blank Paper	Calculators	Can	Cardboard	Centimeter Cubes	Clay	Coins	Colored Cubes	Colored Paper	Colored Pencils	Compass	Cone-Shaped Party Hat	Course Guide Resources	Cut-out Shapes	Dental Floss	Dry Erase Marker	Flashlight	Glue	Graph/Grid Paper	Highlighters	Index Cards	Isometric Paper	Lesson Specific Diagrams/Graphs/Figures	Lesson-Embedded Resources	Marbles	Markers	Measuring Tools	Mirrors
<b>MODULE 2 Justifying Mathematical Ideas and Arguments</b>																												
<b>TOPIC 1 Composing and Decomposing Shapes</b>																												
1 Using Circles to Make Conjectures										▲	●																	
2 Conjectures About Quadrilaterals										▲	●								▲									
3 Constructing an Inscribed Regular Polygon										▲	●								▲									
4 Conjectures About Triangles										▲	●																	
5 Points of Concurrency										▲	●																	
<b>TOPIC 2 Justifying Line and Angle Relationships</b>																												
1 Forms of Proof											●								●									
2 Proving Parallel Line Theorems											●								●									
3 Interior and Exterior Angles of Polygons	●									▲																		
4 Perpendicular Bisector and Isosceles Triangle Theorems										▲	●																	
5 Inverse, Contrapositive, Direct Proof, and Indirect Proof																					▲							
6 Angle Relationships Inside and Outside Circles											●																	
<b>TOPIC 3 Using Congruence Theorems</b>																												
1 Using Triangle Congruence to Determine Relationships Between Segments											●										▲							
2 Using Congruent Triangles to Determine Relationships Between Chords and Tangents											●																	
3 Properties of Quadrilaterals										▲									●									

# GEOMETRY MATERIALS

## Key

- Materials required to implement the lesson as written
- ▲ Optional materials, such as those associated with differentiation strategies

Note Card	Object(s)	Paper Clip	Paper Strips	Paper Towel	Patty Paper	Pencil	Pipe Cleaner	Poster Paper	Print-out Images	Problem-Solving Model Graphic Organizer	Protractors	Rulers	Scissors	Shape Models	Sphere	Sponge	Stackable Items	Stapler	Straightedges	String	Tape	Tape Measure	Technology	Triangles
-----------	-----------	------------	--------------	-------------	-------------	--------	--------------	--------------	------------------	---	-------------	--------	----------	--------------	--------	--------	-----------------	---------	---------------	--------	------	--------------	------------	-----------

MODULE 2 Justifying Mathematical Ideas and Arguments																									
TOPIC 1 Composing and Decomposing Shapes																									
1 Using Circles to Make Conjectures					▲							●	●							●					
2 Conjectures About Quadrilaterals					●							●	●							●					
3 Constructing an Inscribed Regular Polygon					●															●		▲			
4 Conjectures About Triangles			▲	▲	▲							●	●												
5 Points of Concurrency					▲							●								●					
TOPIC 2 Justifying Line and Angle Relationships																									
1 Forms of Proof													●							●					
2 Proving Parallel Line Theorems					●							▲	●							●					
3 Interior and Exterior Angles of Polygons									▲			▲	▲							●					
4 Perpendicular Bisector and Isosceles Triangle Theorems												●								●					
5 Inverse, Contrapositive, Direct Proof, and Indirect Proof																									
6 Angle Relationships Inside and Outside Circles												●								●					
TOPIC 3 Using Congruence Theorems																									
1 Using Triangle Congruence to Determine Relationships Between Segments										▲		●		▲						●					
2 Using Congruent Triangles to Determine Relationships Between Chords and Tangents											●									●					
3 Properties of Quadrilaterals											●		▲	●						▲				▲	

# GEOMETRY MATERIALS

## Key

- Materials required to implement the lesson as written
- ▲ Optional materials, such as those associated with differentiation strategies

	Blank Paper	Calculators	Can	Cardboard	Centimeter Cubes	Clay	Coins	Colored Cubes	Colored Paper	Colored Pencils	Compass	Cone-Shaped Party Hat	Course Guide Resources	Cut-out Shapes	Dental Floss	Dry Erase Marker	Flashlight	Glue	Graph/Grid Paper	Highlighters	Index Cards	Isometric Paper	Lesson Specific Diagrams/Graphs/Figures	Lesson-Embedded Resources	Marbles	Markers	Measuring Tools	Mirrors
<b>MODULE 3 Investigating Proportionality</b>																												
<b>TOPIC 1 Similarity</b>																												
1 Dilating Figures to Create Similar Figures																	▲											
2 Establishing Triangle Similarity Criteria										▲	●																	
3 Theorems About Proportionality										▲	●															▲		
4 More Similar Triangles																									▲			
5 Application of Similar Triangles																	▲										●	●
6 Partitioning Segments in Given Ratios										▲	●															▲		
<b>TOPIC 2 Trigonometry</b>																												
1 Introduction to Trigonometry		●								▲																		
2 Tangent Ratio and Inverse Tangent		●																	▲						▲			
3 Exploring Sine and Cosine Ratios		●																●										
4 Complement Angle Relationships		●																							▲			







# GEOMETRY MATERIALS

## Key

- Materials required to implement the lesson as written
- ▲ Optional materials, such as those associated with differentiation strategies

	Blank Paper	Calculators	Can	Cardboard	Centimeter Cubes	Clay	Coins	Colored Cubes	Colored Paper	Colored Pencils	Compass	Cone-Shaped Party Hat	Course Guide Resources	Cut-out Shapes	Dental Floss	Dry Erase Marker	Flashlight	Glue	Graph/Grid Paper	Highlighters	Index Cards	Isometric Paper	Lesson Specific Diagrams/Graphs/Figures	Lesson-Embedded Resources	Marbles	Markers	Measuring Tools	Mirrors		
<b>MODULE 5 Making Informed Decisions</b>																														
<b>TOPIC 1 Independence and Conditional Probability</b>																														
1 Compound Sample Spaces		▲																												
2 Compound Probability with <i>And</i>		●																					▲							
3 Compound Probability with <i>Or</i>							●																				▲			
4 Calculating Compound Probability																														
<b>TOPIC 2 Computing Probabilities</b>																														
1 Compound Probability for Data Displayed in Two-Way Tables		●						▲																						
2 Conditional Probability		●								●																▲	▲			
3 Permutations and Combinations		●																				▲								
4 Independent Trials		●																												
5 Expected Value		●																									▲			

# GEOMETRY MATERIALS

## Key

- Materials required to implement the lesson as written
- ▲ Optional materials, such as those associated with differentiation strategies

Note Card
Object(s)
Paper Clip
Paper Strips
Paper Towel
Patty Paper
Pencil
Pipe Cleaner
Poster Paper
Print-out Images
Problem-Solving Model Graphic Organizer
Protractors
Rulers
Scissors
Shape Models
Sphere
Sponge
Stackable Items
Stapler
Straightedges
String
Tape
Tape Measure
Technology
Triangles

MODULE 5 Making Informed Decisions													
TOPIC 1 Independence and Conditional Probability													
1 Compound Sample Spaces													▲
2 Compound Probability with <i>And</i>												●	
3 Compound Probability with <i>Or</i>													▲
4 Calculating Compound Probability												●	
TOPIC 2 Computing Probabilities													
1 Compound Probability for Data Displayed in Two-Way Tables													▲
2 Conditional Probability													
3 Permutations and Combinations	▲												
4 Independent Trials												●	▲
5 Expected Value												▲	

**ISBN: 978-1-970198-70-6**

© 2026 Texas Education Agency. Portions of this work are adapted, with permission, from the originals created by and copyright © 2021 Carnegie Learning, Inc.

This work is licensed under a Creative Commons Attribution-Non-Commercial-4.0 International License.

You are free:

**to Share**—to copy, distribute, and transmit the work  
**to Remix**—to adapt the work

Under the following conditions:

**Attribution**—You must attribute any adaptations of the work in the following manner:

This work is based on original works of the Texas Education Agency and Carnegie Learning, Inc. This work is made available under a Creative Commons Attribution-Non-Commercial-4.0 International License. This does not in any way imply endorsement by those authors of this work.

**NonCommercial**—You may not use this work for commercial purposes.

With the understanding that:

For any reuse or distribution, you must make clear to others the license terms of this work. The best way to do this is with a link to this web page:

<https://creativecommons.org/licenses/by-nc/4.0/>

Trademarks and trade names are shown in this book strictly for illustrative and educational purposes and are the property of their respective owners. References herein should not be regarded as affecting the validity of said trademarks and trade names.

Printed in the USA