

GEOMETRY

	Content	Skills	Assessment	Resources
1 st S E M E S T E R	Unit 1: Tools of Geometry <ul style="list-style-type: none"> Patterns & Inductive Reasoning Vocabulary Measuring segments & angles Classifying angles Good definitions Basic Constructions Deductive reasoning Properties of equality & $\cong$ Special angle pairs Midpoint & distance formulas Reasoning Proof Transformation and Symmetry Congruent Figures 	<ul style="list-style-type: none"> Review Inductive & deductive reasoning Identify geometric vocabulary Construct segments, angles, angle bisectors Review midpoint & distance formulas Learn to measure segments with a ruler Learn to measure angles with a protractor Distinguish between interior & exterior Review algebra solving skills Identify & construct incenter, circumcenter, <ul style="list-style-type: none"> centroid, orthocenter Review basic properties Write elementary proofs Conditional and Biconditional Statements Deductive Reasoning Proving Angles Congruent 	<ul style="list-style-type: none"> Quizzes Chapter Test Notebook Check 	<ul style="list-style-type: none"> <u>GEOMETRY.</u> Houghton, Mifflin, Harcourt 2018 All Thing Geometry Curriculum-TPT Other Resources as needed for supplement
	Unit 2 Module 4: Parallel and Perpendicular Lines <ul style="list-style-type: none"> // lines & related angles Proving lines // Constructing // & $\perp$ lines Perspective drawing Spherical geometry 	<ul style="list-style-type: none"> Identify pairs of angles formed by 2 // lines Relating measures of angles Write proof involving // lines Construct // & $\perp$ lines 	<ul style="list-style-type: none"> Quizzes Chapter Test Notebook Check String Art Project 	<ul style="list-style-type: none"> <u>GEOMETRY.</u> Houghton, Mifflin, Harcourt 2018 All Thing Geometry Curriculum-TPT Other Resources as needed for supplement
	Unit 2 Modules 5 & 6: Proving Triangles Congruent <ul style="list-style-type: none"> SSS, SAS, ASA, AAS Congruent right triangles 	<ul style="list-style-type: none"> Realize needed items to obtain a unique triangle Review constructions with given lengths & angles Continue formal proof See relation of right triangle theorems to other theorems 	<ul style="list-style-type: none"> Quizzes Chapter Test Notebook Check 	<ul style="list-style-type: none"> <u>GEOMETRY.</u> Houghton, Mifflin, Harcourt 2018

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	<ul style="list-style-type: none"> Using CPCTC in proof Proof Using more than one pair of $\cong$ triangles 	<ul style="list-style-type: none"> Use CPCTC correctly Become proficient with direct proof Recognize when to use HL as a theorem Prove with overlapping triangles 		<ul style="list-style-type: none"> All Thing Geometry Curriculum-TPT Other Resources as needed for supplement
Unit 2 Modules 7 & 8: Triangle Relationship	<ul style="list-style-type: none"> Logical Reasoning Isosceles triangles Direct (formal) proof Midsegments of triangles Indirect proof (paragraph) Triangle inequalities Bisectors & locus Concurrent lines 	<ul style="list-style-type: none"> Make a formal & an indirect proof Understand vocabulary for logical reasoning Construct: incenter, circumcenter, centroid, orthocenter Learn all properties of isosceles triangles Learn to write a proof alone Memorize properties of triangle midsegments Understand concept of indirect proof Apply triangle inequalities for angles & sides Work with 2D & 3D locus 	<ul style="list-style-type: none"> Quizzes chapter test Notebook check 	<ul style="list-style-type: none"> <u>GEOMETRY</u>. Houghton, Mifflin, Harcourt 2018 All Thing Geometry Curriculum-TPT Other Resources as needed for supplement
Unit 3 Modules 9 & 10: Quadrilaterals	<ul style="list-style-type: none"> Properties of parallelograms Proving a quadrilateral is a parallelogram Exploring diagonals of parallelograms Properties of special parallelograms Trapezoids & kites Organizing coordinate proofs Using coordinate geometry in proofs 	<ul style="list-style-type: none"> Understand relationship among angles, sides, diagonals Practice formal proof Find differences & similarity in rhombuses, rectangles, trapezoids, kites, squares Learn to set up coordinate proofs Memorize formulas Practice setting figures on coordinate plane & label correctly for polygon 	<ul style="list-style-type: none"> quizzes chapter test Notebook check Origami Project Semester Exam 	<ul style="list-style-type: none"> <u>GEOMETRY</u>. Houghton, Mifflin, Harcourt 2018 All Thing Geometry Curriculum-TPT Other Resources as needed for supplement
Unit 4 Modules 11 & 12: Similarity	<ul style="list-style-type: none"> Ratio, proportion, similarity 	<ul style="list-style-type: none"> Review ratio & proportion with similar polygons Use AA~, SAS~, SSS~ in proof Learn right Δ similarity 	<ul style="list-style-type: none"> quizzes chapter test Notebook check 	<ul style="list-style-type: none"> <u>GEOMETRY</u>. Houghton,

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	<ul style="list-style-type: none"> • Proving triangles similar – AA, SAS, SSS • Similarity in right triangles • Proportions & similar triangles • Perimeters & areas (similar) • Areas & volumes (similar) 	<ul style="list-style-type: none"> • Understand similarity for area, perimeter, length in figures • Learn ratios with // lines & angle bisectors • Discover ratio of length, area, volume in ~ figures • Find the geometric mean of two numbers 		<p>Mifflin, Harcourt 2018</p> <ul style="list-style-type: none"> • All Thing Geometry Curriculum-TPT • Other Resources as needed for supplement
	<p>Unit 5 Modules 13 & 14: Right Triangle Trigonometry</p> <ul style="list-style-type: none"> • Tangent ratio • Sine & cosine ratio • Angles of elevation & depression • Vectors & trigonometry • Adding vectors • Trigonometry & area 	<ul style="list-style-type: none"> • Memorize 3 basic trig ratios • Use ratios to find lengths of sides of triangles • See applications of trig: planets, surveying, roof pitch, angles of elevation & depression • Learn to use trig functions on calculator • Learn to set mode back to degrees • Introduce vector addition • Memorize 3 basic trig ratios • Use ratios to find lengths of sides of triangles • See applications of trig: planets, surveying, roof pitch, angles of elevation & depression • Describe vectors in ordered pair notation • Learn to use trig functions on calculator • Learn to set mode back to degrees • Introduce vector addition 	<ul style="list-style-type: none"> • quizzes • chapter test • Notebook check 	<ul style="list-style-type: none"> • <u>GEOMETRY.</u> Houghton, Mifflin, Harcourt 2018 • All Thing Geometry Curriculum-TPT • Other Resources as needed for supplement
	<ul style="list-style-type: none"> • Unit 6 Module 2: Transformations • Translations • Reflections • Rotations • Symmetry • Dilations • Composition and Tessellations 	<ul style="list-style-type: none"> • Be able to map a translation, reflection, rotation and dilation of an image • Identify transformations on graphs and in pictures 	<ul style="list-style-type: none"> • Quizzes • chapter test • Notebook check • Tessellation activity • Scavenger Hunt 	<ul style="list-style-type: none"> • <u>GEOMETRY.</u> Houghton, Mifflin, Harcourt 2018 • All Thing Geometry Curriculum-TPT • Other Resources as

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	<p>Area</p> <ul style="list-style-type: none"> Perimeter & area of polygons Area of parallelograms & triangles Pythagorean theorem & converse Special right triangles Areas of trapezoids & polygons Circles Area of sectors & segments of circles 	<ul style="list-style-type: none"> Memorize formulas for common geometric figures Know Pythagorean theorem & special right triangles Find area of sectors & segments of circles Apply area & perimeter ideas to real life problems Write formulas & then substitute Use Pythagorean theorem, special right triangle, Isosceles triangle properties to find perimeter & area Find area & perimeter of irregular figures Recognize trapezoids – distinguish height & bases 	<ul style="list-style-type: none"> Quizzes chapter test Notebook check 	<ul style="list-style-type: none"> <u>GEOMETRY.</u> Houghton, Mifflin, Harcourt 2018 All Thing Geometry Curriculum-TPT Other Resources as needed for supplement
	<p>Unit 7 Modules 18 & 19: Surface Area and Volume</p> <ul style="list-style-type: none"> Space figures & nets Surface Area – prisms & cones Volume – prisms & cylinders Spheres – area & volume Composite space figures Geometric probability 	<ul style="list-style-type: none"> Explore package design Understand & draw nets Find surface area of prisms, cylinders, pyramids, cones Find volumes of prisms, cylinders, pyramids, cones Explore formulas for spheres Use probability formulas applied to geometry Define arc length & congruent arcs Find are of sectors & segments of circles 	<ul style="list-style-type: none"> Quizzes chapter test Notebook check 	<ul style="list-style-type: none"> <u>GEOMETRY.</u> Houghton, Mifflin, Harcourt 2018 All Thing Geometry Curriculum-TPT Other Resources as needed for supplement
	<p>Unit 6 Modules 15-17: Chords, Secants, & Tangents</p> <ul style="list-style-type: none"> Circles in coordinate plane Properties of tangents Properties of chords & arcs Inscribed angles Angles formed by chords, secants, tangents Circles & length of segments 	<ul style="list-style-type: none"> Write equation on circle – at origin & otherwise Understand relation of arcs, tangents, chords of circles Learn relation of angles & length of segments inside circles & on tangents Learn ratios for inscribed & central angles Learn vocabulary for secants & tangents Learn properties of chord & arcs in the same & congruent circles 	<ul style="list-style-type: none"> quizzes homework collections chapter test Flip Chart Project Semester Exam 	<ul style="list-style-type: none"> <u>GEOMETRY.</u> Houghton, Mifflin, Harcourt 2018 All Thing Geometry Curriculum-TPT

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				<ul style="list-style-type: none">• Other Resources as needed for supplement
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