

Geometry

Course Curriculum

FALL SESSION (SEP - DEC) - 12 Classes	
Units	Topics
Unit 1A	<p><i>Chapter 1: Fundamentals of Geometry Reasoning</i></p> <ul style="list-style-type: none"> ● Geometry Notation ● Geometry Notation Practice ● All About Lines ● All About Planes ● Build It! ● Three Planes in Space
Unit 1B	<p><i>Chapter 1: Fundamentals of Geometry Reasoning (continued)</i></p> <ul style="list-style-type: none"> ● Build It! ● Three Planes in Space <p><i>Chapter 2: Uncovering All the Angles</i></p> <ul style="list-style-type: none"> ● Types of Angles ● Angles Activity
Unit 1C	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
Unit 1D	<p><i>Chapter 2: Uncovering All the Angles (continued)</i></p> <ul style="list-style-type: none"> ● Triangle Activity ● Triangle Practice ● Quadrilateral Activity ● Complementary and Supplementary Angles ● Vertical Angles
Unit 1E	<p><i>Chapter 2: Uncovering All the Angles (continued)</i></p> <ul style="list-style-type: none"> ● Angles Puzzle 1 ● Angles Puzzle 2 ● Parallel Lines and Transversals I ● Parallel Lines and Transversals II ● Puzzle 3 – The 20-Angle Problem
Unit 1F	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>

Unit 2A	<i>Chapter 3: Triangle Properties</i> <ul style="list-style-type: none"> • Sum of Angle Measures • Exterior Angle Exploration • Sum of Two Sides • Triangle Properties Practice
Unit 2B	<i>Chapter 3: Triangle Properties (continued)</i> <ul style="list-style-type: none"> • Triangle Opposite Property • Properties of Equilateral and Isosceles Triangles • Algebra and Geometry
Unit 2C	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
Unit 2D	<i>Chapter 4: The Pythagorean Theorem</i> <ul style="list-style-type: none"> • Exploration – What Is a Theorem? • Pythagorean Triples • Pythagorean Triples Practice • Using the Pythagorean Theorem
Unit 2E	<i>Chapter 4: The Pythagorean Theorem (continued)</i> <ul style="list-style-type: none"> • Pythagorean Theorem Applications • Solving Multi-Step Right Triangle Problems • Special Right Triangles – An Introduction
Unit 2F	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
WINTER SESSIONS (JAN - MAR) - 12 Classes	
Unit 3A	<i>Chapter 5: Uncovering All Polygons</i> <ul style="list-style-type: none"> • Polygons – Investigation of Angles and Sides • Polygons Angle Exploration • Summary of Polygon Properties • Diagonal Exploration • The Handshake Problem
Unit 3B	<i>Chapter 6: Quadrilateral and Parallelogram Properties</i> <ul style="list-style-type: none"> • The Quadrilateral Family • Venn Diagram Activity • Parallelogram Discovery • Parallelogram Properties • Working With Parallelograms • Experimenting With Parallelograms
Unit 3C	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>

Unit 3D	<i>Chapter 6: Quadrilateral and Parallelogram Properties (continued)</i> <ul style="list-style-type: none"> ● A Look at Trapezoids ● Kite! Kite! Kite! ● Critical Thinking About Quadrilaterals ● Midsegment Investigation ● Using Algebra to Solve Quadrilateral Problems ● Quadrilateral Matching
Unit 3E	<i>Chapter 7: Metric Geometry</i> <ul style="list-style-type: none"> ● Perimeter and Circumference ● Pi (π) Investigation ● Perimeter and Circumference Activity ● Archimedes' Idea for Approximating Pi ● Area of Parallelograms ● Parallelogram Area Activity
Unit 3F	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
Unit 4A	<i>Chapter 7: Metric Geometry (continued)</i> <ul style="list-style-type: none"> ● Area of Triangles and Trapezoids ● Discovering the Area of a Trapezoid ● Area of a Trapezoid ● Area of Circles ● The Arbelos Problem
Unit 4B	<i>Chapter 8: Geometric Constructions</i> <ul style="list-style-type: none"> ● A Geometric Construction ● How to Bisect an Angle ● How to Copy an Angle ● How to Construct a Perpendicular Bisector to a Line
Unit 4C	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
Unit 4D	<i>Chapter 8: Geometric Constructions (continued)</i> <ul style="list-style-type: none"> ● Finding the Median in a Triangle ● How To Construct a Line Parallel To Another Line ● Geometric Construction Review ● Problem-Solving With Geometric Constructions ● Problem-Solving With Impossible Constructions
Unit 4E	<i>Chapter 9: The Geometry of Three Dimensional Shapes</i> <ul style="list-style-type: none"> ● 3D Shapes – Prisms ● The Volume of Cylinders

	<ul style="list-style-type: none"> • Volumes of Pyramids and Cones • Turn Up the Volume!
Unit 4F	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
SPRING SESSION (APR - JUN) - 12 Classes	
Unit 5A	<i>Chapter 9: The Geometry of Three Dimensional Shapes (continued)</i> <ul style="list-style-type: none"> • Volume of a Sphere • Surface Area of Prisms • Surface Area of a Cylinder Activity • Finding Surface Area • Euler's Formula
Unit 5B	<i>Chapter 10: Symmetry and Transformations</i> <ul style="list-style-type: none"> • What is Vertical, Horizontal, and Point Symmetry? • Transformations – Reflections • Transformations – Translations
Unit 5C	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
Unit 5D	<i>Chapter 10: Symmetry and Transformations (continued)</i> <ul style="list-style-type: none"> • Transformations – Rotations • Transformations – Dilations • Glide Reflections and Compositions • Tessellations
Unit 5E	<i>Chapter 11: Proving Triangles Congruent</i> <ul style="list-style-type: none"> • Introduction to Proofs – Congruency • SSS Activity • SAS Activity
Unit 5F	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
Unit 6A	<i>Chapter 11: Proving Triangles Congruent (continued)</i> <ul style="list-style-type: none"> • ASA and AAS Activities • SSA Activity • The Essence of a Good Geometric Proof • Picture, Statement, and Reason
Unit 6B	<i>Chapter 11: Proving Triangles Congruent (continued)</i> <ul style="list-style-type: none"> • Finding Congruent Triangles • Two Column Proofs • Investigate Hypotenuse – Leg Theorem

Unit 6C	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>
Unit 6D	<p>Chapter 11: Proving Triangles Congruent (continued)</p> <ul style="list-style-type: none"> ● Similar Figures and Introduction to Similarity Proofs ● Proving Triangles Similar ● Test Your Reasoning Skills <p>Chapter 12: Coordinate Geometry</p> <ul style="list-style-type: none"> ● What is the Slope of a Line ● Slope Formula
Unit 6E	<p>Chapter 12: Coordinate Geometry (continued)</p> <ul style="list-style-type: none"> ● How to Write an Equation of a Line ● The Midpoint Formula ● The Distance Formula ● Review Your Formulas ● Introduction to Coordinate Proofs
Unit 6F	<i>Homework Review, 1 on 1 with Teacher, Bi-Weekly Test</i>