

Grade: 6	Geometry		7 Weeks
Unit: 4			
Progression			
5th Grade	<p>Students learned to</p> <ul style="list-style-type: none"> Multiply fractions using an area model Graph points in the coordinate plane Understand Volume Find volume using unit cubes 		
6th Grade	<p>Students will learn to:</p> <ul style="list-style-type: none"> Find the area of polygon Plot a polygon in the Cartesian coordinate plane Use a net to represent a 3-D figure and be able to find the surface area Of a polyhedron made up of rectangles and triangles 		
7 th Grade	<p>Students will extend their work</p> <ul style="list-style-type: none"> Find the area of composed figures Find the area and circumference of a circle Find the surface area of solids Find the volume of solids 		

STUDENT LEARNING GOALS

Solve real-world and mathematical problems involving area, surface area, and volume.

CCSS.MATH.CONTENT.6.G.A.1

Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.

CCSS.MATH.CONTENT.6.G.A.2

Find the volume of a right rectangular prism with fractional edge lengths by packing it with unit cubes of the appropriate unit fraction edge lengths, and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = bh$ to find volumes of right rectangular prisms with fractional edge lengths in the context of solving real-world and mathematical problems.

CCSS.MATH.CONTENT.6.G.A.3

Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.

CCSS.MATH.CONTENT.6.G.A.4

Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.

Interdisciplinary Standards			
Technology Integration <i>(Appendix C)</i>	21st Century Skills <i>(Appendix D)</i>	(Vocabulary from RCC) Polygon Base Net Surface area Triangular prism Pyramid	
IS1. Information Strategies IS2. Information Use	TCS1. Use of Information TCS5. Problem Solving		
Enduring Understandings <ul style="list-style-type: none"> I can find the area of triangles, quadrilaterals, and other polygons I can solve problems with polygons in the coordinate plane I can use nets to find the surface area of three-dimensional figures I can find the volume of a rectangular prism with fractional edge lengths 		Essential Questions <ul style="list-style-type: none"> How can I find the area of polygons? How can I solve problems with polygons in the coordinate plane? How can I use nets to find the surface area of three-dimensional figures How can I find the volume of a rectangular prism with fractional edge lengths? 	

Assessment Plan			
Summative Assessment(s)/Performance Based Assessments including 21st Century Learning		Formative and Diagnostic Assessment(s)	
RCC Interim Assessment, Student p.262 - 263 RCC Performance Task, Student p 264		STAR Math Assessment (Fall) RCC Embedded Tasks and Assessments	
Learning Plan Components			
Text	Ready Common Core Mathematics Instruction 2, 2014, Curriculum Associates, ISBN: 978-0-7609-8637-0		
Print	Ready Common Core Mathematics Teacher Resource Book 2, 2014, Curriculum Associates, ISBN: 978-0-7609-8644-8		
Electronic	www.teacher-toolbox.com www.stratfordmath.wikispaces.com www.xtramath.org		
Week 1	Students will: Identify special quadrilaterals Relate the area of triangle and the area of rectangles Identify the relationship between bases and heights in polygons Decompose and compose polygons into rectangle and triangles to find the area		
Lessons	Tasks / Activities	Worksheets	Technology
<u>RCC Lesson 22:</u> Area of Polygons RCC TE 236 - 245	(From RCC Teacher Book and supplemental) Visual: 237 Hands On: 240, 242, 245 Differentiated: 245	RCC Practice Pages 220 - 229	Teacher Toolbox Ready Lessons Tools for Instruction Interactive Tutorials
Week 2	Students will: <ul style="list-style-type: none"> • Understand that a line segment from one coordinate pair to another represents a distance. • Understand that if two coordinates have the same X or Y value they are on the same line • Find the distance between two points on the coordinate plane • Plot points in all four quadrants of the Cartesian coordinate plane • Plot a polygon in the Cartesian coordinate plane with given coordinates 		
Lessons	Tasks / Activities	Worksheets	Technology
<u>RCC Lesson 23:</u> Polygons in the Coordinate Plane	(From RCC Teacher Book and supplemental) Visual: 237 Hands On: 248, 250, 255 Differentiated: 255 Concept Extension: 255 Real World: 248	RCC Practice 231 - 239	Teacher Toolbox Ready Lessons Tools for Instruction Interactive Tutorials

Week 3	Students will: <ul style="list-style-type: none"> Recognize that surfaces of three-dimensional shapes are composed of two dimensional faces (polygons). Use a net to represent a 3 – D figure (polyhedron). Use a net to find the surface area of a polyhedron made up of rectangle and triangles. 		
Lessons	Tasks / Activities	Worksheets	Technology
<u>RCC Lesson 24:</u> Nets and Surface Area	(From RCC Teacher Book and supplemental) Visual: 257 Hands On: 257, 259, 260 Differentiated: 267 Concept Extension: 263, 264 Real World: 257, 258	RCC 240 - 251	Teacher Toolbox Ready Lessons Tools for Instruction Interactive Tutorials
Week 4	Students will: <ul style="list-style-type: none"> Measure with fractional units that requires relating multiplication with fractions Use these formulas: $V = lwh$ and $V = Bh$ Prove that the volume formula works by creating diagrams of prisms with unit fraction edge lengths and showing how unit fraction cubes pack them. 		
Lessons	Tasks / Activities	Worksheets	Technology
<u>RCC Lesson 25:</u> Volume	(From RCC Teacher Book and supplemental) Visual: Hands On: 272, 277 Differentiated: 273, 277 Concept Extension: Real World: 270	RCC 252 - 261	Teacher Toolbox Ready Lessons Tools for Instruction Interactive Tutorials