

UNIT OF STUDY #5 Geometry

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| Title: Geometry | Subject/Course: Math | Length: 2 wks |
| Topic: Geometry | Grade: 4 | Designer: Shaundra Flanery Tammie Nelson Carrie Holt |
| UNIT GOALS AND EXPECTATIONS | | |
| IMPORTANT CONCEPTS: <ul style="list-style-type: none">The number of sides and angles determines the type of polygon.The size of an angle determines its type.Perpendicular lines are intersecting lines.A two dimensional figure can be translated, reflected or rotated.Every day objects are made up of geometric figures. | ESSENTIAL QUESTIONS: <ul style="list-style-type: none">How are geometric properties used to solve problems in every day life?How can plane and solid shapes be described?How are geometric figures constructed?How will a shape look when reflected, translated, and rotated? | |
| STUDENT LEARNING EXPECTATIONS: A.7.4.1 Identify, describe and generalize relationships in which quantities change proportionally G.8.4.2 Identify regular and irregular polygons including octagons G.8.4.3a Identify, draw, and describe a line, line segment, ray G.8.4.3b Identify, draw, and describe angle G. 8.4.3c Identify, draw, and describe intersecting lines G.8.4.3d Identify, draw, and describe perpendicular G.8.4.3e Identify, draw, and describe parallel lines | G.8.4.4 Identify and describe intersecting, perpendicular, and parallel lines in problem solving context. G.8.4.5 Classify angles relative to 90 degrees as more than, less than, or equal to 90 degrees G.9.4.1 Determine the result of a transformation of a two dimensional figure as a slide, flip, or turn and justify the answer G.11.4.2 Create new figures by combining and subdividing models of existing figures in multiple ways and record results in a table | |
| SPECIFIC DECLARATIVE KNOWLEDGE – What I know <ul style="list-style-type: none">Vocabulary Terms: Point, Line, Line Segment, Ray, Plane, Angle, Vertex, Protractor, Degree, Right Angle, Acute Angle, Obtuse Angle, Straight Angle, Intersecting Lines, Parallel Lines, Perpendicular Lines, Geometry, Polygon, Triangle, Quadrilateral, Pentagon, Hexagon, Octagon, Regular Polygon, Parallelogram, Rhombus, Trapezoid, Square, Rectangle, Venn Diagram, Line symmetry, Rotational Symmetry, Transformation, Translation, Reflection, Rotation, TessellationRecognize the difference between 2 and 3 D shapesExplain the difference between regular and irregular polygons.Recognize the properties of intersecting | SPECIFIC PROCEDURAL KNOWLEDGE – What I need to do <ul style="list-style-type: none">Students will locate geometric shapes in various settings.Students will classify shapes based on their properties.Draw pictures that relate to the vocabulary words.Draw the translation, reflection, and rotation of a figure.Students will construct regular and irregular polygons.Measure angles | |

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| <ul style="list-style-type: none"> perpendicular lines and parallel lines. Understand that a slide is a translation, a flip is a reflection, and turn is a rotation. Recognize the differences in straight, acute, right, and obtuse angles. Understand that multiple figures can be constructed by using the same geometric shapes | |
| UNIT ASSESSMENTS (Include tasks related to Dimensions 3 and 4 and Bloom's Taxonomy) | |
| Open Response: Marian Follows A Route (application, and synthesis) Graphic Organizer on finding lines, line segments, and rays in various settings and art. Checklist on "What's My Shape?" activity | |
| Traditional Assessments: TLI Quiz, Homework, Class work, Vocabulary Quiz, Test | Other Evidence of Learning: |

| ACTIVITIES AND LEARNING EXPERIENCES | Resources |
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| <ul style="list-style-type: none"> Daily prior knowledge will be assessed by using one of the following: KWL charts, brainstorming, anticipation guides, admit slips, think-pair-share and problems of the day. Introduce geometry through <u>The Greedy Triangle</u> All About Triangles song Four Step Vocabulary Process on the following terms: Line, Line Segment, and Ray Vocabulary Game: "Draw Me" Teacher demonstration of the difference between 2 & 3D shapes Activity: What's My Shape? Classifying polygons Small Groups: Regular and Irregular Polygons using geoboards Locate line, line segments and rays in various settings. Harcourt intervention on line relationships. Small groups: Map activity showing line relationships. Pairs: Make human angles. | Burns, Marilyn Math Jingles Building Academic Vocabulary Marzano, Robert and Pickering, Debra Van De Walle, John Harcourt |

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| <ul style="list-style-type: none"> • Small Groups: Interactive protractor on smartboard • Introduce transformations through Dumpr.net • <u>Flips, Slides, and Turns</u> book | Dumpr.net |
| Career Connections | |
| Graphic Designer, Architect, Taxi Driver | |