| EnVision Math Unit Lesson Plan | | Common Core Standards: |
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| **Grade Level:** Fourth Grade | **Topic 16:** Lines, Angles, and Shapes | 4.G.1; 4.G.2; 4.G.3; 4.MD.5.a; 4.MD.5.b; 4.MD.6; 4.MD.7 |

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| **Instructional Emphasis:** Geometry | **Essential Questions:** |
| **Big Ideas:**<br>• 16-1: Point, line, and plane are the core attributes of space objects, and real-world situations can be used to think about these attributes.<br>• 16-2: Line segments and rays are sets of points that describe parts of lines, shapes and solids. Angles are formed by two intersecting lines or by rays with a common endpoint and are classified by size.<br>• 16-3: The measure of an angle depends upon the fraction of the circle cut off by its rays.<br>• 16-4, 16-5: The unit for measuring the size of the opening of an angle is 1 degree.<br>• 16-6: Angle measures can be added or subtracted.<br>• 16-7, 16-8, 16-9: Two-dimensional or plane shapes have many properties that make them different from one another. Polygons can be described and classified by their sides and angles.<br>• 16-10: Some shapes can be reflected across one or more lines passing through the shape so the shape folds onto itself exactly.<br>• 16-11: Commonalities in attributes of objects or situations can be found and used to make generalizations about relationships. | • What are some important geometric names for lines? (16-1)<br>• What geometric terms describe types of angles? (16-2)<br>• How do you find the measure of an angle using equivalent fractions? (16-3)<br>• How are angles measured? (16-4)<br>• How can you draw an angle? (16-5)<br>• How can you add and subtract to find unknown angle measures? (16-6)<br>• How do you identify polygons? (16-7)<br>• How can you classify triangles? (16-8)<br>• How can you classify quadrilaterals? (16-9)<br>• What is a line of symmetry? (16-10)<br>• How can you test generalizations? (16-11) |

| Lesson 1:<br>Points, Lines, and Planes | Lesson 2:<br>Line Segments, Rays, and Angles | Lesson 3:<br>Understanding Angles and Unit Angles | Lesson 4:<br>Measuring with Unit Angles | Lesson 5:<br>Measuring Angles |
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| **Vocabulary:**<br>point; line; plane; parallel lines; intersecting lines; perpendicular lines<br><br>**Objective:**<br>Students will identify and describe points, lines, and planes.<br><br>**Materials:**<br>Centimeter Grid Paper (Teaching Tool 4)<br><br>**Content Reviewed:**<br>Order Whole Numbers; Subtraction; Fact Families; Round Whole Numbers; Multiplication; Two-Step Problem Solving | **Vocabulary:**<br>line segment; ray; angle; right angle; acute angle; obtuse angle; straight angle<br><br>**Objective:**<br>Students will learn geometric terms to describe parts of lines and types of angles.<br><br>**Materials:**<br>Dot Paper (Teaching Tool 7)<br><br>**Content Reviewed:**<br>Multiplication; Counting Money; Division; Parallel Lines; Fraction Equivalents; Intersecting Lines | **Vocabulary:**<br>degree; unit angle; angle measure<br><br>**Objective:**<br>Students will use unit angles and fractions of a circle to find angle measures.<br><br>**Materials:**<br>Clock Face (Teaching Tool 23)<br><br>**Content Reviewed:**<br>Order Fractions; Area; Perimeter; Multiplication; Estimating Sums<br><br>**Standard:**<br>4.MD.5.a; 4.MD.5; | **Vocabulary:**<br><br>**Objective:**<br>Students will use a smaller angle to measure a larger angle by repeating the unit.<br><br>**Materials:**<br>Pattern Blocks (or Teaching Tool 25)<br>Paper<br><br>**Content Reviewed:**<br>Multiplication; Equivalent Fractions; Division; Round Whole Numbers<br><br>**Standard:**<br>4.MD.5.b; 4.MD.5; | **Vocabulary:**<br>protractor<br><br>**Objective:**<br>Students will be able to measure and draw angles.<br><br>**Materials:**<br>Recording Sheet: Blank Protractors (Teaching Tool 34)<br>Rulers (or Teaching Tool 21)<br><br>**Content Reviewed:**<br>Counting Change; Subtraction; Expressions; Multiplication Facts; Addition Sentence; |

| Standard:<br>4.G.1 | Standard:<br>4.G.1 | 4.G.1 | 4.MD.5.a; 4.G.1 | Decimals; Patterns;<br>Compare Whole Numbers<br><br>Standard:<br>4.MD.6; 4.MD.5.a;<br>4.MD.5.b; 4.G.1 |
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| Assessment | Assessment | Assessment | Assessment | Assessment |
| Topic 16 Introduction<br>Daily Common Core Review<br>Problem-Based Interactive<br>Learning<br>Guided Practice<br>Independent Practice<br>Problem Solving<br>Quick Check Master<br>Center Activity<br>Reteaching, Practice, and<br>Enrichment Homework | Daily Common Core Review<br>Problem-Based Interactive<br>Learning<br>Guided Practice<br>Independent Practice<br>Problem Solving<br>Quick Check Master<br>Center Activity<br>Reteaching, Practice, and<br>Enrichment Homework | Daily Common Core Review<br>Problem-Based Interactive<br>Learning<br>Guided Practice<br>Independent Practice<br>Problem Solving<br>Quick Check Master<br>Center Activity<br>Reteaching, Practice, and<br>Enrichment Homework | Daily Common Core Review<br>Problem-Based Interactive<br>Learning<br>Guided Practice<br>Independent Practice<br>Problem Solving<br>Quick Check Master<br>Center Activity<br>Reteaching, Practice, and<br>Enrichment Homework | Daily Common Core Review<br>Problem-Based Interactive<br>Learning<br>Guided Practice<br>Independent Practice<br>Problem Solving<br>Quick Check Master<br>Center Activity<br>Reteaching, Practice, and<br>Enrichment Homework |
| Lesson 6:<br>Adding and Subtracting<br>Angle Measures | Lesson 7:<br>Polygons | Lesson 8:<br>Triangles | Lesson 9:<br>Quadrilaterals | Lesson 10:<br>Line Symmetry |
| Vocabulary:<br><br>Objective:<br>Students will find unknown angle measures by adding and subtracting.<br><br>Materials:<br>Protractors (Teaching Tool 22)<br>Rulers (Teaching Tool 21)<br><br>Content Reviewed:<br>Measurement; Fractions and Decimals; Fact Families; Multiplication; Number Patterns; Angle Measures<br><br>Standard:<br>4.MD.7; 4.MD.5.a;<br>4.MD.5.b; 4.MD.6 | Vocabulary:<br>polygon; side; vertex; triangle; quadrilateral; pentagon; hexagon; octagon<br><br>Objective:<br>Students will learn to identify polygons.<br><br>Materials:<br>Polygons (per group) (Teaching Tool 25)<br><br>Content Reviewed:<br>Multiply by 10s; Round Whole Numbers; Angles; Multiplication; Place Value; Multiple-Step Problem<br><br>Standard:<br>4.G.2 | Vocabulary:<br>equilateral triangle; isosceles triangle; scalene triangle; right triangle; acute triangle; obtuse triangle<br><br>Objective:<br>Students will learn to identify and classify triangles.<br><br>Materials:<br>Polygons (Teaching Tool 25) (per group)<br><br>Content Reviewed:<br>Counting Change; Division; Polygons; Compatible Numbers; Place Value; Multiplication<br><br>Standard: | Vocabulary:<br>rhombus; trapezoid; parallelogram; rectangle; square<br><br>Objective:<br>Students will learn to identify quadrilaterals.<br><br>Materials:<br>Polygons (Teaching Tool 25) (per group)<br><br>Content Reviewed:<br>Round Whole Numbers; Multiplication; Counting Money; Classify Triangles; Subtraction; Polygons<br><br>Standard:<br>4.G.2 | Vocabulary:<br>symmetric; line of symmetry<br><br>Objective:<br>Students will determine if a plane figure has line symmetry and if so, how many lines of symmetry it has.<br><br>Materials:<br>Scissors<br>Paper<br><br>Content Reviewed:<br>Round Whole Numbers; Convert Customary Units; Interpret Informal Language; Counting Money; Geometric Figures; Division with Remainders; Counting |

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| Assessment | Assessment | Assessment | Assessment | Assessment |
| Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework | Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework | Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework | Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework | Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity Reteaching, Practice, and Enrichment Homework |
| Lesson 11: Problem Solving: Make and Test Generalizations | | | | |
| Vocabulary:<br><br>Objective: Students will solve problems by making and testing generalizations.<br><br>Materials:<br><br>Content Reviewed: Compare Decimals; Convert Customary Units; Multiplication; Fractions; Geometry; Subtraction<br><br>Standard: 4.G.2; 4.OA.5 | | | | |
| Assessment | | | | |
| Daily Common Core Review Problem-Based Interactive Learning Guided Practice Independent Practice Problem Solving Quick Check Master Center Activity | | | | |

| Reteaching, Practice, and Enrichment Homework Topic 16 Assessment | | | | |
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