

Camelot Learning
Scope and Sequence
Geometry and Measurement

Time: 40 minute Lessons

Lesson	Learning Quest	Concept/Skill	NCTM Standard	NCTM Expectation
<p>Lesson 1: Finding Perimeter</p> <p>Lesson 2: Finding Perimeter Review</p>	<p>How can you find the distance around (perimeter) a planned castle?</p>	<ul style="list-style-type: none"> • Addition facts practice • Identify and describe polygons and quadrilaterals • Calculate the perimeter of quadrilaterals • Determine the appropriate operation to solve a problem • Use a ruler to measure to the nearest $\frac{1}{4}$ inch • Performs calculations on a calculator 	<p>Number and Operations</p> <p>Geometry</p> <p>Measurement</p>	<ul style="list-style-type: none"> • Develop fluency in adding and multiplying whole numbers • Identify, compare, and analyze attributes of two and three-dimensional shapes and develop vocabulary to describe the attributes • Build and draw geometric objects • Use geometric models to solve problems in measurement • Develop strategies for calculating perimeters of regular and irregular shapes • Select and apply appropriate standard units (inches) and tools to measure lengths (perimeter) • Select appropriate methods and tools for computing with whole numbers such as calculators
<p>Lesson 3: Measuring With a Ruler</p> <p>Lesson 4: Measuring With a Ruler Review</p>	<p>How can you find distances on a map using a ruler and a map scale?</p>	<ul style="list-style-type: none"> • Addition facts practice • Measure distances on a map using the scale and key • Measure with a ruler accurately to the nearest $\frac{1}{4}$ inch • Determine the appropriate operation to solve problems 	<p>Number and Operations</p> <p>Measurement</p>	<ul style="list-style-type: none"> • Develop fluency in adding and multiplying whole numbers • Select and apply standard units (inches) and tools to measure lengths • Select appropriate tools and methods for computing with fractions • Identify and use relationships between operations, such as

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		<ul style="list-style-type: none"> • Tournament Time explanation 	Communication	<p>division s the inverse of multiplication</p> <ul style="list-style-type: none"> • Carry out simple unit conversions • Communicate mathematical thinking coherently and clearly • Use the language of mathematics to express mathematical ideas precisely
<p>Lesson 5: 2-Dimensional Net to 3-Dimensional Figure</p> <p>Lesson 6: 2-Dimensional Net to 3-Dimensional Figure Review</p>	How can you recognize if a flat shape can be folded into a solid figure?	<ul style="list-style-type: none"> • Addition facts practice • Describe and name solid figures • Determine the number of sides and edges of a solid figure • Construct three-dimensional figures using nets 	<p>Number and Operations</p> <p>Geometry</p>	<ul style="list-style-type: none"> • Develop fluency in adding whole numbers • Identify, compare, and analyze attributes of two and three-dimensional shapes and develop vocabulary to describe the attributes • Classify two and three-dimensional shapes according to their properties • Build and draw geometric objects • Identify and build a three-dimensional object from two-dimensional representations of that object • Identify a two-dimensional representation of a three-dimensional object (nets)
<p>Lesson 7: Movement of a Figure or Object</p> <p>Lesson 8: Movement of a Figure</p>	How can you describe the movement of a shape or object?	<ul style="list-style-type: none"> • Multiplication facts practice • Recognize and describe transformations • Identify and describe 	<p>Number and Operations</p> <p>Geometry</p>	<ul style="list-style-type: none"> • Develop fluency in multiplying whole numbers • Describe location and movements using common language and geometric vocabulary • Predict the results of sliding,

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or Object Review		<p>polygons</p> <ul style="list-style-type: none"> • Collect data on a frequency table • Tournament Time explanation 	<p>Data Analysis and Probability</p> <p>Communication</p>	<p>flipping, and turning two-dimensional shapes (pattern blocks)</p> <ul style="list-style-type: none"> • Build and draw geometric objects • Identify, compare, and analyze attributes of two and three-dimensional shapes and develop vocabulary to describe the attributes • Collect and represent data using tables and graphs • Communicate mathematical thinking coherently and clearly • Use the language of mathematics to express mathematical ideas precisely
<p>Lesson 9: Tangram Transformations</p> <p>Lesson 10: Tangram Transformations Review</p>	How can you create a new shape by combining shapes?	<ul style="list-style-type: none"> • Addition facts practice • Identify and name polygons • Determine congruent figures • Recognize transformations (translations, reflections, and rotations) 	<p>Number and Operations</p> <p>Geometry</p>	<ul style="list-style-type: none"> • Develop fluency of adding whole numbers • Identify, compare, and analyze attributes of two and three-dimensional shapes and develop vocabulary to describe the attributes • Describe location and movement using common language and geometric vocabulary • Predict and describe the results of sliding, flipping, and turning two-dimensional shapes • Investigate, describe, and reason about the results of combining and transforming shapes (tangrams)
Lesson 11:	How can you use	<ul style="list-style-type: none"> • Subtraction facts 	Number and	<ul style="list-style-type: none"> • Develop fluency of subtracting

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<p>Benchmarks to Measure Lengths</p> <p>Lesson 12: Benchmarks to Measure Lengths Review</p>	<p>familiar benchmarks to estimate sizes?</p>	<p>practice</p> <ul style="list-style-type: none"> • Estimate lengths • Identify equivalent units of measurement (conversions) • Use a ruler to measure in inches 	<p>Operations</p> <p>Measurement</p>	<p>whole numbers</p> <ul style="list-style-type: none"> • Understand how to measure using nonstandard and standard units • Use repetition of a single unit to measure something larger than the unit • Use tools to measure • Develop common referents for measures to make comparisons and estimates • Carry out simple conversions within a system of measurement
<p>Lesson 13: Calculating the Area of a Rectangle</p> <p>Lesson 14: Calculating the Area of a Rectangle Review</p>	<p>How can you quickly figure out the number of tiles you need to fill an area?</p>	<ul style="list-style-type: none"> • Addition facts practice • Reviews basic multiplication facts • Finding sums of basic fraction • Identify and name quadrilaterals • Calculate the area of quadrilaterals • Determine which operations to use when solving problems • Tournament Time explanation 	<p>Number and Operations</p> <p>Geometry</p> <p>Measurement</p> <p>Communication</p>	<ul style="list-style-type: none"> • Develop fluency in adding and multiplying whole numbers • Use visual models and equivalent forms to add commonly used fractions • Identify, compare, and analyze attributes of two and three-dimensional shapes and develop vocabulary to describe the attributes • Select and apply appropriate standard units and tools to measure length and area • Develop, understand, and use formulas to find the area of rectangles • Communicate mathematical thinking coherently and clearly • Use the language of mathematics to

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				express mathematical ideas precisely
<p>Lesson 15: Congruent Figures</p> <p>Lesson 16: Congruent Figures Review</p>	How can you create congruent shapes with tangram pieces?	<ul style="list-style-type: none"> • Subtraction facts practice • Identify and name polygons • Recognize transformations • Determine congruent figures • Determine similar figures • Use problem solving strategies • Tournament Time explanation 	<p>Number and Operations</p> <p>Geometry</p> <p>Measurement</p> <p>Communication</p>	<ul style="list-style-type: none"> • Develop fluency in subtracting whole numbers • Identify, compare, and analyze attributes of two and three-dimensional shapes and develop vocabulary to describe the attributes • Describe location and movement using common language and geometric vocabulary • Predict and describe the results of sliding, flipping, and turning two-dimensional shapes • Investigate, describe, and reason about the results of combining and transforming shapes (tangrams) • Explore congruence and similarity • Investigate and describe the results of combining and transforming shapes • Build new knowledge through problem solving • Communicate mathematical thinking coherently and clearly • Use the language of mathematics to express mathematical ideas precisely
Lesson 17: Regular Polygons	Why are regular polygons special?	<ul style="list-style-type: none"> • Addition facts practice 	Number and Operations	<ul style="list-style-type: none"> • Develop fluency in adding whole numbers

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<p>Lesson 18: Regular Polygons Review</p>		<ul style="list-style-type: none"> • Describe and name regular polygons • Determine equilateral figures • Use problem solving strategies • Tournament Time explanation 	<p>Geometry</p> <p>Measurement</p> <p>Communication</p>	<ul style="list-style-type: none"> • Identify, compare, and analyze attributes of two and three-dimensional shapes and develop vocabulary to describe the attributes • Classify two and three-dimensional shapes according to their properties • Build and draw geometric objects • Understand relationships among the angles and lengths of sides of a figure • Select and apply appropriate standard units and tools to measure length • Communicate mathematical thinking coherently and clearly • Use the language of mathematics to express mathematical ideas precisely
<p>Lesson 19: Perimeter in Metric Units</p> <p>Lesson 20: Perimeter in Metric Units Review</p>	<p>What are the perimeters of tangram pieces?</p>	<ul style="list-style-type: none"> • Addition facts practice • Use a ruler to measure to the nearest millimeter • Identify equivalent units of measurement • Calculate perimeter of polygons • Use mental math strategies to solve problems • Determine which 	<p>Number and Operations</p> <p>Measurement</p>	<ul style="list-style-type: none"> • Develop fluency in adding whole numbers • Select and apply appropriate standard units (metric) and tools to measure length • Carry out simple unit conversions within a system of measurement • Develop strategies for calculating perimeters of regular and irregular shapes • Select appropriate methods and tools for computing with whole

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		operation will solve a problem		numbers (mental computation)
<p>Lesson 21: Looking at Area as a Pattern</p> <p>Lesson 22: Looking at Area as a Pattern Review</p>	<p>Do all polygons with the same area look the same?</p>	<ul style="list-style-type: none"> • Multiplication facts practice • Identify factors and multiples • Calculate area of quadrilaterals • Calculate perimeter of quadrilaterals • Determine which operation to use when solving a problem • Use problem solving strategies 	<p>Number and Operations</p> <p>Geometry</p> <p>Measurement</p> <p>Problem Solving</p>	<ul style="list-style-type: none"> • Develop fluency in multiplying whole numbers • Use factors and multiples to solve problems • Build geometric objects • Select and apply appropriate standard units and tools to measure length and area • Develop, understand, and use formulas to find the area of rectangles • Develop strategies for calculating perimeters of regular and irregular shapes • Explore what happens to measurements of a two-dimensional shape such as its perimeter and area when the shape is changed in some way • Apply and adapt a variety of appropriate strategies to solve problems
<p>Lesson 23: Line Language</p> <p>Lesson 24: Line Language Review</p>	<p>Can you name that line and angle?</p>	<ul style="list-style-type: none"> • Multiplication facts practice • Identify and describe angles • Identify and describe parallel, intersecting, 	<p>Number and Operations</p> <p>Measurement</p>	<ul style="list-style-type: none"> • Develop fluency in multiplying whole numbers • Select and apply appropriate standard units and tools to measure the size of angles • Describe location using geometric

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		<ul style="list-style-type: none"> and perpendicular lines • Measure angles with a protractor • Use problem solving strategies • Tournament Time explanation 	Geometry Problem Solving Communication	vocabulary <ul style="list-style-type: none"> • Solve problems that arise in mathematics and in other contexts (map) • Communicate mathematical thinking coherently and clearly • Use the language of mathematics to express mathematical ideas precisely
Lesson 25: Measuring Angles With a Protractor Lesson 26: Measuring Angles With a Protractor Review	How can you use a protractor to measure an angle?	<ul style="list-style-type: none"> • Addition facts practice • Identify and describe angles • Construct and measure angles with a protractor 	Number and Operations Measurement	<ul style="list-style-type: none"> • Develop fluency in adding whole numbers • Select and apply appropriate standard units and tools to measure the size of angles • Draw geometric objects with specified properties such as lengths or angle measures
Lesson 27: Two and Three Dimensional Shapes Lesson 28: Two and Three Dimensional Shapes Review	What shapes make up familiar three dimensional shapes?	<ul style="list-style-type: none"> • Multiplication facts practice • Identify and describe solid figures • Determine the number of sides and edges of a solid figure • Construct three-dimensional figures using nets • Tournament Time explanation 	Number and Operations Geometry	<ul style="list-style-type: none"> • Develop fluency in multiplying whole numbers • Identify, compare, and analyze attributes of two and three-dimensional shapes and develop vocabulary to describe the attributes • Classify two and three-dimensional shapes according to their properties • Build and draw geometric objects • Identify and build a three-dimensional object from two-dimensional representations of that object

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			Communication	<ul style="list-style-type: none"> • Identify a two-dimensional representation of a three-dimensional object (nets) • Communicate mathematical thinking coherently and clearly • Use the language of mathematics to express mathematical ideas precisely
<p>Lesson 29: Transformations</p> <p>Lesson 30: Transformations Review</p>	<p>What does a picture look like in a mirror?</p>	<ul style="list-style-type: none"> • Subtraction facts practice • Recognize transformations (slides and flips) • Use transformations of figures to create mirror images • Use problem solving strategies • Tournament Time explanation 	<p>Number and Operations</p> <p>Geometry</p>	<ul style="list-style-type: none"> • Develop fluency in subtracting whole numbers • Identify, compare, and analyze attributes of two and three-dimensional shapes and develop vocabulary to describe the attributes • Describe location and movement using common language and geometric vocabulary • Predict and describe the results of sliding, flipping, and turning two-dimensional shapes • Investigate, describe, and reason about the results of combining and transforming shapes (tangram puzzle) • Describe sizes, positions, and orientations of shapes under informal transformations such as flips, turns, and slides • Examine the congruence, similarity, and line of symmetry of objects

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			<p>Problem Solving</p> <p>Communication</p>	<p>using transformations</p> <ul style="list-style-type: none"> • Apply and adapt a variety of appropriate strategies to solve problems • Communicate mathematical thinking coherently and clearly • Use the language of mathematics to express mathematical ideas precisely
<p>Lesson 31: Estimate and Compare Weights</p> <p>Lesson 32: Estimate and Compare Weights Review</p>	<p>How much does a knight weigh when he is fully armed?</p>	<ul style="list-style-type: none"> • Basic facts practice • Estimate weight • Determine equivalent units of measurement • Use problem solving strategies 	<p>Number and Operations</p> <p>Measurement</p>	<ul style="list-style-type: none"> • Develop fluency in adding, subtracting, multiplying, and dividing whole numbers • Select and use benchmarks to estimate measurements (weight) • Understand such attributes as weight and select the appropriate type of unit for measuring • Carry out simple conversions within a system (customary) of measurement • Develop common referents for measures to make comparisons and estimates • Apply and adapt a variety of appropriate strategies to solve problems
<p>Lesson 33: Congruency</p>	<p>How can you create congruent shapes with</p>	<ul style="list-style-type: none"> • Subtraction facts practice 	<p>Number and Operations</p>	<ul style="list-style-type: none"> • Develop fluency in subtracting whole numbers

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		<ul style="list-style-type: none"> • Tournament Time explanation 	Communication	<p>dimensional shapes and designs</p> <ul style="list-style-type: none"> • Examine the congruence, similarity, and line of symmetry of objects using transformations • Communicate mathematical thinking coherently and clearly • Use the language of mathematics to express mathematical ideas precisely
<p>Lesson 37: Tessellations</p> <p>Lesson 38: Tessellations Review</p>	How can you cover an area without any spaces or openings (tessellate) with equilateral polygons?	<ul style="list-style-type: none"> • Multiplication facts practice • Identify and describe polygons • Determine equilateral figures • Recognize and use transformations • Identifies and describes symmetry • Create tessellations • Use problem solving strategies • Tournament Time explanation 	<p>Number and Operations</p> <p>Geometry</p>	<ul style="list-style-type: none"> • Develop fluency in multiplying whole numbers • Identify, compare, and analyze attributes of two and three-dimensional shapes and develop vocabulary to describe the attributes • Classify two and three-dimensional shapes according to their properties • Build and draw geometric objects • Understand relationships among the angles and lengths of sides of a figure • Predict and describe the results of sliding, flipping, and turning two-dimensional shapes • Investigate, describe, and reason about the results of combining and transforming shapes (pattern blocks) • Describe sizes, positions, and orientations of shapes under

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			<p>Problem Solving</p> <p>Communication</p>	<p>informal transformations such as flips, turns, and slides</p> <ul style="list-style-type: none"> • Examine the congruence, similarity, and line of symmetry of objects using transformations • Investigate, describe, and reason about the results of combining and transforming shapes • Apply and adapt a variety of appropriate strategies to solve problems • Communicate mathematical thinking coherently and clearly • Use the language of mathematics to express mathematical ideas precisely
<p>Lesson 39: Telling Time and Elapsed Time</p> <p>Lesson 40: Telling Time and Elapsed Time Review</p>	<p>How can you use your knowledge of minutes and hours to determine a future or past time?</p>	<ul style="list-style-type: none"> • Addition facts practice • Use number sense to determine elapsed time • Tell time to the nearest hour, half hour, and minute 	<p>Number and Operations</p> <p>Measurement</p>	<ul style="list-style-type: none"> • Develop fluency in adding whole numbers • Use a variety of methods and tools to compute, including objects, mental computation, estimation, and paper and pencil • Select and apply appropriate standard units and tools to measure time