

Lavallette Elementary School	
Content Area: Mathematics Course Title: Mathematics	Grade Level: Third Grade
Unit Plan 1 Number and Operations in Base 10	September - October Ongoing
Unit Plan 2 Operations and Algebraic Thinking	October - December Ongoing
Unit Plan 3 Number and Operations - Fractions	January - February Ongoing
Unit Plan 4 Measurement and Data	March - April Ongoing
Unit Plan 5 Geometry	May Ongoing
Updated: August 2018 by Sharon Carroll	Board Approved: October 16, 2018

Standards for Mathematical Practice	
<i>The following standards for mathematical practice should be incorporated in all units.</i>	
MP.1 Make sense of problems and persevere in solving them.	<ul style="list-style-type: none"> Find meaning in problems Look for entry points Analyze, conjecture and plan solution pathways Monitor and adjust Verify answers Ask themselves the question: "Does this make sense?"

<p>MP.2 Reason abstractly and quantitatively.</p>	<p>Make sense of quantities and their relationships in problems Learn to contextualize and decontextualize Create coherent representations of problems</p>
<p>MP.3 Construct viable arguments and critique the reasoning of others.</p>	<p>Understand and use information to construct arguments Make and explore the truth of conjectures Recognize and use counterexamples Justify conclusions and respond to arguments of others</p>
<p>MP 4 Model with mathematics.</p>	<p>Apply mathematics to problems in everyday life Make assumptions and approximations Identify quantities in a practical situation Interpret results in the context of the situation and reflect on whether results make sense</p>
<p>MP.5 Use appropriate tools strategically</p>	<p>Consider the available tools when solving problems Are familiar with tools appropriate for their grade or course (pencil and paper, concrete models, ruler, protractor, calculator, spreadsheet, computer programs, digital content located on a website and other technological tools) Make sound decisions of which of these tools might be helpful</p>
<p>MP.6 Attend to precision.</p>	<p>Communicate precisely to others Use clear definitions, state the meaning of symbols and are careful specifying units of measure and labeling axes Calculate accurately and efficiently</p>
<p>MP.7 Look for and make use of structure</p>	<p>Discern patterns and structures Can step back for an overview and shift perspective See complicated things as single objects or as being composed of several objects</p>
<p>MP.8 Look for and express regularity in repeated reasoning.</p>	<p>Notice if calculations are repeated and look for both general methods and shortcuts. In solving problems, maintain oversight of the process while attending to detail Evaluate the reasonableness of their immediate results</p>

**Lavallette School
MATHEMATICS CURRICULUM
Unit Overview**

Content Area: Mathematics

Grade Level: Third Grade

Domain (Unit Title): Number and Operations in Base Ten

Cluster: 3.NBT

Cluster Summary:

- Use place value understanding and properties of operations to perform multi-digit arithmetic

Primary Interdisciplinary Connections:

Science	measurement (distance, weight, and growth), data analysis and collection, experiments relating to Molecules to Organisms and EcoSystems
Social Studies	economics & money, weather patterns, geography & map skills, and graphing
Language Arts	math journals, word problem comprehension, math stories, open-ended math questions, multi-step problems, math literature
Technology	8.1- Educational Technology: use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. interactive whiteboard lessons, independent centers, classroom websites, online resources and apps

21st Century Themes:

Global Awareness	Students work with word problems containing names of people
-------------------------	---

	and locations around the world to develop understanding of diverse cultures and lifestyles.
Financial Literacy	Students will use addition and subtract to make appropriate financial choices.
Communication and Collaboration	Students will use mathematical arguments to articulate thoughts and ideas with peers and teachers.

College and Career Readiness

Mathematics programs develops a deep understanding of mathematics by building a strong foundation of number sense at the elementary level before moving into more advanced content. Students will learn to make sense of problems and persevere in problem solving, reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others, model with mathematics, use appropriate tools strategically, attend to precision, look for and make use of a structure, and look for and express regularity in repeated reasoning.

Learning Targets

Content Standards: NBT

Number	Standard for Mastery
3.NBT.1	Use place understanding to round to the nearest 10 and 100.
3.NBT.2	Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
3.NBT.3	Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9×80 , 5×60) using strategies based on place value and properties of operations.
Number	Standard for Introduction
4.NBT.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.
4.NBT.3	Use place value understanding to round multi-digit whole numbers to any place.
4.NBT.5	Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value

	and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
4.NBT.6	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

<p>Unit Essential Questions</p> <ul style="list-style-type: none"> • How can numbers be expressed, ordered and compared? • How does understanding place value help us add and subtract large numbers? • How are the operations of addition and subtraction related? • What are efficient methods for multiplying by multiples of ten? 	<p>Unit Enduring Understandings <i>Students will understand that...</i></p> <ul style="list-style-type: none"> • building and taking apart numbers provides a deep understanding of the base 10 number system. • knowledge and use of place value for large numbers provides context for distances. • addition and subtraction are related • knowledge of place value and properties of operations can help when multiplying by multiples of ten.
--	--

<p>Unit Objectives <i>Students will know...</i></p> <ul style="list-style-type: none"> • place value and properties of operations to add and subtract. • how to use a variety of estimation strategies (e.g., rounding and mental math) for estimating both quantities and the result of computations to determine if something is reasonable. • multiples of ten are based on place value. 	<p>Unit Objectives <i>Students will be able to...</i></p> <ul style="list-style-type: none"> • fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. • use place value to round whole numbers to the nearest 10 or 100. • multiply one digit whole numbers by multiples of 10.
---	--

**Lavallette School
MATHEMATICS CURRICULUM
Unit Overview**

Content Area: Mathematics

Grade Level: Third Grade

Domain (Unit Title): Operations and Algebraic Thinking

Cluster: 3.OA

Cluster Summary:

- Represent and solve problems involving multiplication and division
- Understand properties of multiplication and the relationship between multiplication and division
- Multiply and divide within 100
- Solve problems involving the four operations, and identify and explain patterns in arithmetic

Primary Interdisciplinary Connections:

Science	measurement (distance, weight, and growth), data analysis and collection, experiments relating to Engineering and Design .
Social Studies	economics & money, weather patterns, geography & map skills, and graphing
Language Arts	math journals, word problem comprehension, math stories, open-ended math questions, multi-step problems, math literature
Technology	8.1- Educational Technology: use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. interactive whiteboard lessons, independent centers, classroom websites, online resources and apps

21st Century Themes:

Global Awareness	Students work with word problems containing names of people and locations around the world.
-------------------------	---

Communication and Collaboration	Students use mathematical arguments to articulate thoughts and ideas with peers and teachers
Critical Thinking and Problem Solving	Students use various types of reasoning as appropriate to solve a mathematical problem.

College and Career Readiness

Mathematics programs develops a deep understanding of mathematics by building a strong foundation of number sense at the elementary level before moving into more advanced content. Students will learn to make sense of problems and persevere in problem solving, reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others, model with mathematics, use appropriate tools strategically, attend to precision, look for and make use of a structure, and look for and express regularity in repeated reasoning.

Learning Targets

Content Standards:

Number	Standard for Mastery
3.OA.1	Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as 5×7 .
3.OA.2	Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects. For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.
3.OA.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
3.OA.4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = _ \div 3$, $6 \times 6 = ?$
3.OA.5	Apply properties of operations as strategies to multiply and divide.

	Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)
3.OA.6	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers
3.OA.7	Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
3.OA.8	Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.
3.OA.9	Understand division as an unknown-factor problem. For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.

<p>Unit Essential Questions</p> <ul style="list-style-type: none"> • What do multiplication and division mean? • How are multiplication and division related? • Why do we use symbols to represent missing numbers? • What strategies can be used to learn multiplication and division facts? • How can multiplication and division facts with smaller numbers be applied to larger numbers? • How can we predict the next element in a pattern? 	<p>Unit Enduring Understandings</p> <p><i>Students will understand that...</i></p> <ul style="list-style-type: none"> • the four basic arithmetic operations are interrelated, and the properties of each may be used to understand the others. • mathematical concepts can be understood using a variety of models. • numbers are able to represent quantity, position, location, and relationships, and symbols may be used to express these relationships.
---	---

Unit Objectives

Students will know...

- multiplication and division can be applied in real world situations.
- problem solving in daily life may include unknown variables that impact outcomes.
- patterns exist in the relationship of multiplication and division.

Unit Objectives

Students will be able to...

- interpret products of whole numbers.
- interpret whole number quotients.
- use multiplication and division to solve word problems.
- determine the unknown whole number in an equation of three whole numbers.
- apply properties of operations to multiply and divide
- memorize all products of two single-digit numbers.
- solve two step word problems using four operations and solving for the unknown.
- identify patterns in arithmetic.

**Lavallette School
MATHEMATICS CURRICULUM
Unit Overview**

Content Area: Mathematics

Grade Level: Third Grade

Domain (Unit Title): Number and Operations - Fractions

Cluster: 3.NF

Cluster Summary:

- Develop understanding of fractions as numbers

Primary Interdisciplinary Connections:

Science	measurement (distance, weight, and growth), data analysis and collection
Social Studies	economics & money, weather patterns, geography & map skills, and graphing
Language Arts	math journals, word problem comprehension, math stories, open-ended math questions, multi-step problems, math literature
Technology	8.1- Educational Technology: use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. interactive whiteboard lessons, independent centers, classroom websites, online resources and apps

21st Century Themes:

Global Awareness	Students work with word problems containing names of people and locations around the world to develop understanding of diverse cultures and lifestyles.
Communication and Collaboration	Students use mathematical arguments to articulate thoughts and ideas with peers and teachers

Civic Literacy	Students understand the skills of mapping, gridding, compass directions, and cardinal directions
-----------------------	--

College and Career Readiness

Mathematics programs develops a deep understanding of mathematics by building a strong foundation of number sense at the elementary level before moving into more advanced content. Students will learn to make sense of problems and persevere in problem solving, reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others, model with mathematics, use appropriate tools strategically, attend to precision, look for and make use of a structure, and look for and express regularity in repeated reasoning.

Learning Targets

Content Standards: NF

Number	Standard for Mastery
3.NF.1	Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size $1/b$.
3.NF.2	Understand a fraction as a number on the number line; represent fractions on a number line diagram. a. Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$ and that the endpoint of the part based at 0 locates the number $1/b$ on the number line. b. Represent a fraction a/b on a number line diagram by marking off a lengths $1/b$ from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the number a/b on the number line.
3.NF.3	Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size. a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line. b. Recognize and generate simple equivalent fractions, e.g., $1/2 = 2/4$, $4/6 = 2/3$. Explain why the fractions are equivalent using a visual fraction model. c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. Examples: Express 3 in the form $3 = 3/1$; recognize that $6/1 = 6$; locate $4/4$ and 1 at the same point of a number line

	<p>diagram.</p> <p>d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model.</p>
Number	Standard for Introduction
4.NF.6	Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as $\frac{62}{100}$; describe a length as 0.62 meters; locate 0.62 on a number line diagram.
4.NF.7	Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual model.

<p>Unit Essential Questions</p> <ul style="list-style-type: none"> • How many ways can a whole number be represented? • How do we show part of a unit? • How can a fraction be represented in different equivalent forms? 	<p>Unit Enduring Understandings</p> <p><i>Students will understand that...</i></p> <ul style="list-style-type: none"> • fractions represent equal parts of a whole unit • fractions are represented on a number line • fractions with different numerators and denominators can be compared by reasoning about their size
---	---

<p>Unit Objectives</p> <p><i>Students will know...</i></p> <ul style="list-style-type: none"> • fractions represent equal parts of a whole unit. • fractions are represented on a number line. • fractions can still be equivalent even though they appear to be different 	<p>Unit Objectives</p> <p><i>Students will be able to...</i></p> <ul style="list-style-type: none"> • construct a fraction based on an object partitioned into equal parts. • compare fractions by using visual fraction models and number lines to understand equivalent fractions. • compare two fractions with the same numerator or the same denominator by reasoning about
--	---

their size.

**Lavallette School
MATHEMATICS CURRICULUM
Unit Overview**

Content Area: Mathematics

Grade Level: Third Grade

Domain (Unit Title): Measurement and Data

Cluster: 3.MD

Cluster Summary:

- Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects
- Represent and interpret data
- Geometric measurement: understand concepts of area and relate area to multiplication and to addition
- Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures

Primary Interdisciplinary Connections:

Science	measurement (distance, weight, and growth), data analysis and collection, experiments relating to Motions and Stability, Heredity, Biological Evolution and Earth Systems.
Social Studies	economics & money, weather patterns, geography & map skills, and graphing
Language Arts	math journals, word problem comprehension, math stories, open-ended math questions, multi-step problems, math literature
Technology	8.1- Educational Technology: use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge. interactive whiteboard lessons, independent centers, classroom websites, online resources and apps

21st Century Themes:

Global Awareness	Students work with word problems containing names of people and locations around the world to develop understanding of diverse cultures and lifestyles.
Communication and Collaboration	Students use mathematical arguments to articulate thoughts and ideas with peers and teachers

College and Career Readiness

Mathematics programs develops a deep understanding of mathematics by building a strong foundation of number sense at the elementary level before moving into more advanced content. Students will learn to make sense of problems and persevere in problem solving, reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others, model with mathematics, use appropriate tools strategically, attend to precision, look for and make use of a structure, and look for and express regularity in repeated reasoning.

Learning Targets**Content Standards: MD**

Number	Standard for Mastery
3.MD.1	Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.
3.MD.2	Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.
3.MD.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.

3.MD.4	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.
3.MD.5	<p>a. Recognize area as an attribute of plane figures and understand concepts of area measurement. A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.</p> <p>b. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.</p>
3.MD.6	Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).
3.MD.7	<p>Relate area to the operations of multiplication and addition.</p> <p>a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.</p> <p>b. Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.</p> <p>c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.</p> <p>d. Recognize area as additive. Find areas of rectangular figures by decomposing them into non- overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.</p>
Number	Standard for Introduction
4.MD.1	Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.
4.MD.5	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:
4.MD.6	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.

Unit Essential Questions

- Why is it important to be able to tell time?
- How do data displays help us understand information?
- What is the purpose of measurement?
- How can measurements be used to solve real world problems?

Unit Enduring Understandings

Students will understand that...

- time measurement is a means to organize and structure each day and our lives.
- collection and use of data provides better understanding of people and the world.
- measurements can be used to describe, compare, and make sense of phenomena.
- everyday objects have a variety of attributes, each of which can be measured in many ways.
- what we measure affects how we measure it.

Unit Objectives

Students will know...

- time increments on analog and digital clocks.
- data can be displayed using various types of graphs to organize and explain information.
- lengths can be measured to describe countless objects.
- how to measure and estimate liquid volumes and masses of objects.
- how to measure area of given shapes and objects.
- how to relate area to the operations of multiplication and addition.
- how to identify the perimeter of a shape.
- how to solve word problems using perimeter and area.

Unit Objectives

Students will be able to...

- tell and write time to the nearest minute and measure time intervals. Solve word problems involving addition and subtraction of time intervals in minutes.
- interpret and represent data by solving 1 step and 2 step word problems based on information presented in graphs.
- measure lengths indirectly and by repeating length units.
- measure and estimate liquid volumes and masses using specific units such as grams, kilograms, and liters.
- measure the area of a given shape by counting unit squares (square cm, square m, square in, etc.).
- measure the area of a rectangle by

	<p>multiplying side lengths or using repeated addition.</p> <ul style="list-style-type: none"> • recognize that the perimeter is found along the outside of a given shape and can problem solve to find an unknown side length. • comprehend that perimeter and area are used to solve real world problems.
--	---

Lavallette School MATHEMATICS CURRICULUM Unit Overview	
Content Area: Mathematics	Grade Level: Third Grade
Domain (Unit Title): Geometry	
Cluster: 3.G	
Cluster Summary: <ul style="list-style-type: none"> • Reason with shapes and their attributes 	
Primary Interdisciplinary Connections:	
Science	measurement (distance, weight, and growth), data analysis and collection
Social Studies	economics & money, weather patterns, geography & map skills, and graphing
Language Arts	math journals, word problem comprehension, math stories, open-ended math questions, multi-step problems, math literature

Technology	<p>8.1- Educational Technology: use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.</p> <p>interactive white board lessons, independent centers, classroom websites, online resources and apps</p>
-------------------	---

21st Century Themes:

Global Awareness	Students work with word problems containing names of people and locations around the world to develop understanding of diverse cultures and lifestyles.
Communication	Students use mathematical arguments to articulate thoughts and ideas with peers and teachers
Civic Literacy	Students understand the skills of mapping, gridding, and compass directions

College and Career Readiness

Mathematics programs develops a deep understanding of mathematics by building a strong foundation of number sense at the elementary level before moving into more advanced content. Students will learn to make sense of problems and persevere in problem solving, reason abstractly and quantitatively, construct viable arguments and critique the reasoning of others, model with mathematics, use appropriate tools strategically, attend to precision, look for and make use of a structure, and look for and express regularity in repeated reasoning.

Learning Targets

Content Standards: G

Number	Standard for Mastery
3.G.1	Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

3.G.2	Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as $\frac{1}{4}$ of the area of the shape.
Number	Standard for Introduction
4.MD.7	Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.
4.G.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
4.G.2	Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.
4.G.3	Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

Unit Essential Questions

- What words in geometry are also used in daily life?
- Why can different geometric terms be used to name the same shape?

Unit Enduring Understandings

Students will understand that...

- geometric figures are described by their attributes
- attributes of objects can be measured with appropriate tools

Unit Objectives

Students will know...

- how spatial relationships can be described by careful use of geometric language.
- how geometric relationships help to solve problems and/or make sense

Unit Objectives

Students will be able to...

- use properties of standard 2-D shapes to identify, classify, and describe (vertex, side, edge, face, and angle).
- recognize rhombus, rectangles,

of phenomena	<p>and squares as examples of quadrilaterals and determine examples of quadrilaterals that do not belong.</p> <ul style="list-style-type: none"> partition shapes (unit fractions) into sections to determine parts of a whole.
--------------	--

Evidence of Learning

- Suggested Formative Assessments:**
- Teacher Observation
 - Performance Assessment
 - Exit Slips/Slate Assessment
 - Portfolios/Journals
 - Pre-Assessment
 - Games
 - Anecdotal Records
 - Oral Assessment/Conferencing
 - Daily Classwork

- Suggested Summative Assessments:**
- Tests
 - Quizzes
 - National/State/District Assessments

- Suggested Modifications (ELLs, Special Education, Gifted and Talented):**
- Low Level Strategies:
- Modified classroom and homework assignments
 - Teacher tutoring
 - Parent - teacher communication
 - Anchor charts and visual aids
 - Flexible grouping
 - Teacher - student goal setting
 - Technology integration
 - Centers
 - Response to intervention
- High Level Strategies
- Multi-step and higher level math problems
 - Enrich problems
 - Extend activities
 - Centers
 - Student driven activities

- Student choice activities
- Peer tutoring

Suggested activities for lesson plans:

Math Literature:

Shapes:

When a Line Bends . . . A Shape Begins by Rhonda Gowler Greene

Shapes, Shapes, Shapes by Tanya Hoban

Cubes, Cones, Cylinders, & Spheres by Tanya Hoban (Introduction)

Lines, Segments, Rays, and Angles by Claire Piddick

The Greedy Triangle by Marilyn Burns

Websites:

www.tenmarks.com

www.mathisfun.com

www.sumdog.com

www.multiplication.com

www.mathgametime.com

www.mrnussbaum.com

www.interactivesites.weebly.com

IPAD games:

Shape Invaders

Teacher Notes: