**Milford Public Schools Curriculum**

**Department: Mathematics**
**Course Name: Grade 5 Math**

## UNIT 1

**Unit Title:** Multiplication and Division – Number Puzzles and Multiple Towers
**Unit Description:** Students refine and gain fluency in solving two-digit by two-digit multiplication problems, develop strategies for division problems with one- and two-digit divisors, and increase their knowledge of multiplication relationships by learning about prime factorization (e.g., 36 = 4 x 9 = (2 x 2) x 9 = 2 x 2 x 3 x 3).

## LEARNING GOALS

**Enduring Understanding(s):**
Multiplication problems can be manipulated by breaking apart numbers (distributive property) or using number sense to create an equivalent expression or series of expressions to make the problem easier to solve.
Multiplication and division are inverse operations. Division can be written as a missing factor multiplication problem.
Multiplication is repeated addition of equal sized groups and division is repeated subtraction of equal sized groups.
In a division problem, the divisor can have one of two different meanings. Either the divisor is the number of groups and the quotient is the amount in each group, or the divisor is the number of objects in each group and the quotient is the number of groups.
The equal sign shows equivalency which means that two expressions represent the same quantity.

**Essential Question(s):**
How and why do we manipulate multiplication problems?
How are multiplication and division related?
How are multiplication and division related to addition and subtraction?
What role does the divisor play in a division problem?
What does the equal sign mean?

**Content and Skills:**
Numbers can be broken into factors
A factor is a number that goes into another number evenly
A multiple of a number is the product of that number and another number
Many different expressions can be written for the same product
Prime factorization is the longest multiplication combination for a number (not using 1s as factors)
Breaking one number apart and multiplying the pieces by the other number gives the same product as multiplying the original numbers
Multiplication and division are inverse operations
Division can be written as a missing factor multiplication problem
Multiplication is repeated addition of equal sized groups
Division is repeated subtraction of equal sized groups
When the dividend cannot be equally grouped into the divisor, the left over pieces that remain are the remainder
There is always a decimal to the right of the ones place and when multiplying and dividing by a power of ten,

we are shifting digits relative to the decimal
To ensure the same expression gives the same result, mathematicians have agreed upon a standard order of operations

**Standards Addressed:**
5. OA.1. Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.
5. OA.2. Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.*
5. NBT.2. Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10
5. NBT.5. Fluently multiply multi-digit whole numbers using the standard algorithm.
5.NBT.6. Find whole-number quotients of whole numbers with up to four-digit dividends and two-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.

## UNIT 2

**Unit Title:** What's that Portion?
**Unit Description:** Students study the relationship among fractions and use this knowledge to add commonly used fractions. The mathematics focuses on adding and subtracting fractions by using reasoning about fraction equivalents and relationships. They us a variety of contexts and models, including area, number lines, and rotation to further understand the meaning of fractions and model their strategies. and by using different models of fractions, such a

Students work with clocks to find the fractional parts of the whole and add and subtract fractions. They find combinations of fractions with sums between 0 and 2, and add and subtract fractions using the number line.

## LEARNING GOALS

| **Enduring Understanding(s):** | **Essential Question(s):** |
|---|---|
| When adding or subtracting, quantities must be represented in like terms (fractions must have common denominators). | What must be true for us to be able to add or subtract fractions? |

**Content and Skills:**
Fractions can represent amounts between two whole numbers
On a number line, the numbers indicate the end of a length
The denominator tells how many equal pieces the whole is divided into
Larger denominators mean the whole is divided into more pieces, making each piece smaller
The numerator of a fraction tells how many equal pieces you have
To combine fractions, they must be written so all addends are breaking the whole into the same size pieces

**Standards Addressed:**
5.NF.1. Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. *For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.)*
5.NF.2. Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. *For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7< 1/2.*

## UNIT 3

**Unit Title:** What's that Portion?
**Unit Description:** This investigation gives students the opportunity to conceptualize multiplication and division of fractions. Students work with fractions, whole numbers and mixed numbers when multiplying and dividing. Many adults were taught "rules" for multiplying and dividing fractions, but never got the chance to build conceptual understanding.

## LEARNING GOALS

**Enduring Understanding(s):**
Fractions are a part to a whole
Fractions allow us to make sense of situations that involve numbers that are not whole.
The understanding of fractions and their relationship with each other and whole numbers is essential.

**Essential Question(s):**
How can understanding fractions make your life easier?
Why is it important to identify fractions as a part of a whole?
How can models help us understand the multiplication and division of fractions?
How do I use concrete materials and drawings to understand and show understanding of multiplying and dividing fractions?
How is multiplying or dividing whole numbers similar to multiplying or dividing fractions?

**Content and Skills:**
Fractional data can be displayed on line plots
Data on a line plot can be used to solve problems
A fraction *of* something indicates multiplication (2 groups *of* something is multiplication, $\frac{1}{2}$ *of* something is also multiplication)
Multiplying a proper fraction by a proper fraction means taking a part of a part, therefore the result is an even smaller part
When applying the algorithm for multiplying fractions, multiply the denominators to get the size of the pieces, and then multiply the numerators to get the number of those pieces.
Reason about dividing fractions by considering, "How many ____ are in ____?" ($6 \div \frac{1}{2}$ Reason: How many havles are in six?)
Reason about dividing fractions by writing the division equation as a missing-factor multiplication equation.

**Standards Addressed:**

5.MD.2

Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.

5.NF.4

Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.

5.NF.4.a

Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations $a \times q \div b$. For example, use a visual fraction model to show $(2/3) \times 4 = 8/3$, and create a story context for this equation. Do the same with $(2/3) \times (4/5) = 8/15$. (In general, $(a/b) \times (c/d) = ac/bd$.)

5.NF.4.b

Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.

5.NF.5 : 5.NF.5.a & 5.NF.5.b

Interpret multiplication as scaling (resizing), by: Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication & Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.

5.NF.6

Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

5.NF.7

Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.1

5.NF.7.a

Interpret division of a unit fraction by a non-zero whole number, and compute such quotients. For example, create a story context for $(1/3) \div 4$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(1/3) \div 4 = 1/12$ because $(1/12) \times 4 = 1/3$.

5.NF.7.b

Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for $4 \div (1/5)$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $4 \div (1/5) = 20$ because $20 \times (1/5) = 4$.

5.NF.7.c

Solve real world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models and equations to represent the problem. For example, how much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 1/3-cup servings are in 2 cups of raisins?

## UNIT 4

**Unit Title:** Decimals on Grids and Number Lines

**Unit Description:** In previous grades students were encouraged to pay close attention to how numbers were structured, the magnitude of numbers in relationship to other numbers, and how to use the relationships that exist within place value to add and subtract different quantities. Games like Close to 1,000 along with locating numbers on the 10,000 chart and exploring, selecting and describing strategies for addition and subtraction laid a foundation for supporting students through the adding and subtracting of decimals.

## LEARNING GOALS

**Enduring Understanding(s):**

Every fraction can be written as a decimal number.
Decimals have place values related by groups (powers) of 10.
Considering place value of the digits is critical when computing with decimals or numbers with decimal portions.
The decimal point is a reference point that makes it clear which digits are in which places.
Strategies for adding or subtracting decimals are an extension of strategies for adding or subtracting whole numbers.
A number line can be used to round whole numbers and decimals by making it easy to see which multiple of 10, 100, etc., or of 0.1, 0.01, etc., a number is closest to.
There is more than one way to estimate a sum, difference, product, or quotient. Each estimation technique gives one way to estimate by replacing numbers with other numbers that are close and easy to compute with mentally.

**Essential Question(s):**

How is a decimal similar to numbers I already know?
How do you read and write tenths, hundredths, and thousandths?
How do we represent decimals as part of a 100s grid?
How can you use a number line or grid to compare and order decimals?
What strategies do you use to add and subtract decimals?
How do you assess the reasonableness of your answer using estimation?

**Content and Skills:**

Representing tenths, hundredths, and thousandths on rectangular grids shows relationships between whole numbers and decimals.
A decimal is named by the smallest place. (0.2 is read as “two-tenths” but 0.23 is read as “twenty-three hundredths” not “two tenths and three hundredths”)
A zero in a decimal place can affect the value of the decimal. (0.2, 0.20, 0.02, or 0.203) When adding or subtracting decimals a zero cannot simply be “dropped”.
Decimals can be compared by considering the place value of the digits and comparing the decimals to landmarks of 0, ½, or 1.
Grids provide a visual model for addition and subtraction of decimals.
Decimals can be added using known combinations of whole numbers or adding by place.

**Standards Addressed:**

5.NBT.1 Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.
5.NBT.3 Read, write, and compare decimals to thousandths.

5.NBT.3.a Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., 347.392 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000).
5.NBT.3.b Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.
5.NBT.4 Use place value understanding to round decimals to any place.
5.NBT.5 Fluently multiply multi-digit whole numbers using the standard algorithm.
5.NBT.7 Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

**UNIT 5**

**Unit Title:** How Many People? How Many Teams?
**Unit Description:** Students find and study equivalent expressions for multiplication and division problems (e.g., 112 ÷ 8 = 28 ÷ 2). Students practice solving larger multiplication problems (3 digit x 2 digit) accurately and efficiently and study the U.S. algorithm for multiplication. Students gain fluency solving division problems with one-, two-, and three-digit divisors.

**LEARNING GOALS**

| **Enduring Understanding(s):** | **Essential Question(s):** |
|---|---|
| Multiplication and division are inverse operations.<br>Division can be written as a missing factor multiplication problem.<br>The standard multiplication algorithm breaks the calculation into simpler calculations using place values starting with the ones, then the tens, and so on.<br>Using basic facts and patterns can be helpful in dividing by multiples of 10.<br>Dividing by 2-digit divisors is an extension of the steps for dividing with 1-digit divisors. | What are different models for multiplication and division?<br>What are efficient methods for finding products and quotients? |

**Content and Skills:**
Halving one factor in a multiplication expression (a x b) and doubling the other factor maintains the same product.
Equivalent expressions can be made by multiplying one factor by a number and dividing the other factor by the same number.
Representations and story contexts can be used to explain thinking about multiplication and division and make meaning of the numbers.
A focus of the work is learning to make choices that improve efficiency in solving problems.

**Standards Addressed:**
**5.OA.2** Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.*
**5.NF.2** Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the

problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. *For example, recognize an incorrect result 2/5 + 1/2 = 3/7, by observing that 3/7 < 1/2*.
**5.NBT.5** Fluently multiply multi-digit whole numbers using the standard algorithm
**5.NBT.6** Find whole-number quotients of whole numbers with up to four-digit dividends and two-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.

## UNIT 6

**Unit Title:** Decimals on Grids and Number Lines
**Unit Description:** Students will learn how to multiply and divide decimals through reasoning about place value and noticing patterns. Students will reason about the placement of the decimal point in the product. They will discover the same strategies used for multiplying whole numbers can be used to multiply decimals as they develop conjectures and determine rules.

When dividing decimals students will think "How many ___ are in ___?" (How many one hundredths are in 2?) as they work with hundredths grids and use missing factor multiplication equations to make sense of the division. They continue to discuss the movement of the decimal point as they notice patterns in sets of equations. These conversations will help students develop conjectures and those conjectures will help them discover the rule about division with decimals.

Students will calculate with fractions and decimals by converting measurements within a given system. They will be given the measurement equivalents to help convert from one unit to another.

## LEARNING GOALS

**Enduring Understanding(s):**
Every fraction can be written as a decimal number.
Decimals have place values related by groups (powers) of 10.
The decimal point is a reference point that makes it clear which digits are in which places.
Fraction equivalents for decimals can be used to make sense of multiplying decimals. (4 x 0.1 = 0.4 and 4 x $\frac{1}{10} = \frac{4}{10}$).
Strategies for multiplying or dividing decimals are an extension of strategies for multiplying or dividing whole numbers.
There is more than one way to estimate a sum, difference, product, or quotient. Each estimation technique gives one way to estimate by replacing numbers with other numbers that are close and easy to compute with mentally.

**Essential Question(s):**
What strategies do you use to multiply and divide decimals?
What patterns do you see when you multiply or divide by the powers of 10?
What is similar and different about multiplying decimals by whole numbers and multiplying whole numbers by whole numbers?
What is similar about dividing decimals by whole numbers and dividing whole numbers by whole numbers? What is different?
Where do you place the decimal point when multiplying or dividing decimals?

**Content and Skills:**
Decimals like 0.1, 0.01, and 0.001 are powers of 10 just like the whole numbers 10, 100, 1000, 10,000, etc.
Grids and number lines provide a visual model for multiplication and division of decimals.
Knowing fraction equivalents of decimals helps to understand multiplying decimals
Strategies for multiplying whole numbers can be changed or extended to multiplying decimals and strategies for dividing whole numbers can be changed or extended to divide decimals.
There are two rules for multiplying decimals: Multiply like they're whole numbers. Think about how big the answer should be and put the decimal point where it makes the answer the right size. OR Multiply like they're whole numbers. Count how many decimal places are in the factors, and put that many decimal places in the product.
A rule for dividing decimals is to divide like they're whole numbers and then reason about the size of the answer. ("Counting the decimal places" like when multiplying decimals does not work for dividing decimals.)
Multiply to convert larger units to smaller units, divide when converting smaller units to larger units

**Standards Addressed:**
**5.NBT.2** Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.
**5.NBT.3** Read, write, and compare decimals to thousandths.
**5.NBT.3a** Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$.
**5.NBT.4** Use place value understanding to round decimals to any place.
**5.NBT.7** Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.
**5.OA.1** Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols. (TMM for Sessions 3A.8 & 3A.9)
**5.MD.1** Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.

## UNIT 7

**Unit Title:** 3D Geometry – Prisms and Pyramids
**Unit Description:** Students investigate concepts of volume by finding the volume of prisms, pyramids, cylinders, and cones. They use patterns of open boxes and build prisms from cubes to develop a strategy for finding the volume of any rectangular prism. Using concrete materials, they also examine the 3-to-1 volume relationship between related (having the same base and height) prisms and pyramids, and related cylinders and cones. Geometry work includes naming geometric solids and their attributes.

## LEARNING GOALS

| **Enduring Understanding(s):** | **Essential Question(s):** |
|---|---|
| Volume is a measurable attribute of 3D figures that quantifies the amount of space the figure occupies<br>Compound shapes can be broken into pieces whose volume can be calculated using multiplication then the partial volumes can be added to find the volume of the original shape. | What are measureable attributes of 3D figures?<br>How can the volume of a compound shape be determined? |

**Content and Skills:**
Three dimensional figures take up space which is called volume
Volume measurements are expressed with unit cubes
The order factors are multiplied in does not change the final product (commutative property of multiplication)
Multiplying the side lengths of a right rectangular prism or using a formula gives the same volume as filling it with unit cubes and counting them
Volume is additive – breaking a solid into parts, finding the volume of each part, and adding them together will give the same final volume as finding the volume of the original solid

**Standards Addressed:**
5. MD.3. Recognize volume as an attribute of solid figures and understand concepts of volume measurement.
a. A cube with side length 1 unit, called a "unit cube," is said to have "one cubic unit" of volume, and can be used to measure volume.
b. A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units.
5. MD.4. Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.
5. MD.5. Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.
a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.
b. Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.
c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems

## UNIT 8

**Unit Title:** Growth Patterns
**Unit Description:** Students investigate situations in which two quantities change in relation to each other. Students describe data about functional relationships, develop an overall sense of change from a graph, and understand how the changes and totals are related. They also compare two linear functions with different rates of change.

## LEARNING GOALS

| **Enduring Understanding(s):** | **Essential Question(s):** |
|---|---|
| Using Tables and Graphs-Using tables to represent change<br>Using Tables and Graphs-Using graphs to represent change<br>Linear Change-Describing and representing situations with a constant rate of change<br>Nonlinear Change-Describing and representing situations in which the rate of change is not constant | Is there a pattern or relationship here? If so, what is it? How will it help us predict what happens next? How much information do I need to know about the pattern in order to understand the whole pattern? What do I need to share with my audience to help them see the trends of the past and predict other relationships in the future? |

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**Content and Skills:**
Tables represent the relationship between two quantities.
Plotted points on a coordinate grid represent a situation in which one quantity is changing in relation to another.
An arithmetic expression can be written for finding the value of one quantity in terms of the other with a constant rate of change.
Symbolic letter notation can represent the value of one variable in terms of another variable.
Finding the perimeter and area of a rectangle.
Measuring length with meters and centimeters.

**Standards Addressed:**
**5.OA.1** Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.
**5.OA.2** Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. *For example, express the calculation "add 8 and 7, then multiply by 2" as 2 × (8 + 7). Recognize that 3 × (18932 + 921) is three times as large as 18932 + 921, without having to calculate the indicated sum or product.*
**5.OA.3** Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. *For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.*
**5.MD.1** Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.
**5.G.1** Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).
**5.G.2** Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.
**5.NBT.3a** Read and write decimals to thousandths using base-ten numerals, number names, and expanded form, e.g., $347.392 = 3 \times 100 + 4 \times 10 + 7 \times 1 + 3 \times (1/10) + 9 \times (1/100) + 2 \times (1/1000)$.
**5.NBT.3b** Compare two decimals to thousandths based on meanings of the digits in each place, using >, =, and < symbols to record the results of comparisons.

## UNIT 9

**Unit Title:** Measuring Polygons
**Unit Description:** These lessons develop ideas about the attributes of 2-dimensional shapes as well as how these attributes determine classification. Since the attributes that apply to grouping quadrilaterials (e.g. having four right angles, having four sides of the same length, or having two pairs of parallel sides) are independent, some quadrilaterals fit more than one category and therefore have more than one term that apply. For example, the characteristics of a square include having four sides of the same length and having four right angles; therefore a square is also a rhombus (a quadrilaterial with four sides of the same length) and a rectangle (a quadrilateral with four right angles).

## LEARNING GOALS

| **Enduring Understanding(s):** | **Essential Question(s):** |
|---|---|
| Polygons have special properties regarding their sides and angles.<br>Polygons have basic properties that help identify them. | What are different types of polygons and how to do their properties compare? |

**Content and Skills:**
Classify and describe two-dimensional shapes

**Standards Addressed:**
5.G.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.
5.G.4 Classify two-dimensional figures in a hierarchy based on properties.