Math Competencies- Grade 4		
Lin-Wood Proficiencies (COMPETENCY)	**I Can Statements**	**Standards**
Numbers & Operations in Base 10 Students will demonstrate an understanding of place values by explaining whole numbers, number names, place values, rounding, and comparing numbers.	1. I can explain the relationship between place-values by multiplying by ten to move one place value to the left and by dividing by ten to move one place value to the right. 2. I can read whole numbers using word, expanded, and standard forms. 3. I can write whole numbers using word, expanded, and standard forms. 4. I can compare two multi-digit numbers using >, =, and < symbols. 5. I can round numbers to any given place value up to one million.	4.NBT.A.1 4.NBT.A.2 4.NBT.A.3
Numbers & Operations in Base 10 Students will demonstrate an understanding of adding and subtracting multi-digit whole numbers by adding and subtracting numbers using the standard algorithm. ***and*** Students will demonstrate an understanding of multiplying two two-digit numbers and of multiplying and dividing whole numbers of up to four digits by a one-digit whole number multiply two two-digit numbers, using multiple strategies based on place value and properties of operations.	1. I can add and subtract multi-digit whole numbers using the standard algorithm with ease. 2. I can multiply a multi-digit number (up to four digits) by a single-digit whole number using a variety of strategies. 3. I can multiply two two-digit numbers using a variety of strategies. 4. I can divide a multi-digit number (up to four digits) by a single digit whole number using a variety of strategies. 5. I can show the relationship between multiplication and division using arrays, area models, and/or equations.	4.NBT.B.4, 4.NBT.B.5 4.NBT.B.6
Operations & Algebraic Thinking Students will demonstrate an	1. I can understand that multiplication can be seen as a comparison of two groups (24 is 4 groups of six and 24 is 6 groups of four).	4.OA.A.1 4.OA.A.2 4.OA.A.3

understanding of solving for an unknown quantity, represented by a variable, by solving word problems using the four operations, including multi-step, those in which the remainder must be interpreted, and those involving multiplicative comparison.	2. I can tell which quantity is being multiplied and which quantity is telling how many times, given a multiplicative comparison situation. 3. I can write equations for multiplicative comparison contextual situations. 4. I can solve word problems involving multiplication and division using visual models and equations; using a variable for the unknown quantity. 5. I can tell when they should add or when they should multiply when solving a problem. 6. I can solve multi-step problems with all four operations and use a variable for the unknown quantity. 7. I can interpret any remainder based on the context of a given problem. 8. I can use mental math, estimation, and rounding strategies to see if the answer is reasonable.	
Operations & Algebraic Thinking Students will demonstrate an understanding of algebra patterns and concepts by finding factor pairs for a given number (up to 100), knowing if a number is prime, composite, or neither, and in creating, extending, and identifying patterns in a given rule.	1. I can find all factor pairs for any whole number up to 100. 2. I can check a number to see if it is a multiple of a given single digit number. 3. I can determine if a whole number from 1 to 100 is prime or composite. 4. I can create/extend a number pattern that follows a given rule. 5. I can create/extend a shape pattern that follows a given rule. 6. I can notice and point out different features in a pattern not stated in the given rule.	4.OA.B.4 4.OA.C.5
Number & Operations-Fractions Students will demonstrate an understanding of comparing fractions through a variety of strategies to describe equivalency or not, justifying their conclusions, and record the results with the symbols <, =, >.	1. I can use visual models, words, and numbers to show/explain why fractions are equivalent. 2. I can generate a rule for finding equivalent fractions. 3. I can recognize equivalent fractions. 4. I can understand that fraction comparisons need to refer to the same whole. 5. I can compare two fractions by creating common numerators or common denominators. 6. I can compare two fractions using benchmark fractions. 7. I can compare fractions using the symbols <, =, and >.	4.NF.A.1 4.NF.A.2
Number & Operations-Fractions Students will demonstrate an	1. I can add fraction units to get a fraction greater than one. 2. I can understand that one can add and subtract fractions with the	4.NF.B.3, 4.NF.B.3.A

understanding of adding, subtracting fractions and mixed numbers with common denominators and of multiplying a whole number by a fraction, using visual models and equations, in numerical and word problems.	same whole (denominator). 3. I can decompose fractions less than one into fractional parts with the same denominator using visual models, words, or numbers. 4. I can decompose mixed numbers and fractions equal to or greater than one into fractional parts with the same denominator, using visual models, words, or numbers. 5. I can replace mixed numbers with an equivalent fraction greater than one. 6. I can add and subtract mixed numbers with like denominators. 7. I can solve word problems involving addition and subtraction of fractions using visual models and equations. 8. I can use multiplication understandings to multiply a fraction by a whole number. 9. I can multiply a fraction by a whole number using visual models and equations. 10. I can explain how a/b is a multiple of 1/b using visual models and numbers. 11. I can solve word problems involving multiplication of a fraction by a whole number using visual models and numbers. 12. I can rename a fraction with a denominator of 10 as an equivalent fraction with a denominator of 100. 13. I can recognize that two fractions with unlike denominators can be equivalent. 14. I can add two fractions, one with a denominator of 10 and one with a denominator of 100.	4.NF.B.3.B 4.NF.B.3.C 4.NF.B.3.D 4.NF.B.4 4.NF.B.4.A 4.NF.B.4.B 4.NF.B.4.C 4.NF.C.5
Number & Operations-Fractions Students will demonstrate an understanding of decimals by explaining decimal notation, renaming fractions as decimals, decimal size comparisons, and solving decimal word problems.	1. I can write a fraction with a denominator of 10 or 100 as a decimal. 2. I can locate a decimal on a number line. 3. I can understand that decimal comparisons need to refer to the same whole. 4. I can use visual models to compare two decimals. 5. I can compare two decimals (to hundredths) using <, =, and > symbols.	4.NF.C.6, 4.NF.C.7
Measurement & Data Students will demonstrate an understanding of measurement by completing and describing non-metric and metric measurements, solving measurement problems using formulas and solving problems involving time.	1. I can explain the relative sizes of units within the same system of measurement. 2. I can change larger units into smaller units within the same system of measurement. 3. I can record measurement equivalence within a system in a two column table. 4. I can represent measurement quantities using diagrams such as a number line with a measurement scale. 5. I can use the four operations to solve measurement word	4.MD.A.1 4.MD.A.2 4.MD.A.3

	problems, including those with simple fraction or decimal measures. 6. I can use the four operations to solve measurement word problems, including those that require expressing measurements in a larger unit in terms of a smaller unit. 7. I can apply the formula for the perimeter of a rectangle to solve real world and number problems. 8. I can •Apply the formula for the area of a rectangle to solve real world and number problems.	
Measurement & Data Students will demonstrate an understanding of line plots by describing and creating line plots, values on a plot, fraction plotting, and answering line plot questions.	1. I can create a line plot to display a data set of measurements given in fractions of a unit. 2. I can use information from a line plot to solve problems which may involve fractional measurements.	4.MD.B.4
Measurement & Data AND Geometry Students will demonstrate an understanding of lines (including parallel, perpendicular, and line of symmetry), angles, and shapes by describing, constructing, and identifying angles, two-dimensional figures, and classifying two-dimensional figures.	1. I can understand that angles are formed when two rays share an endpoint. 2. I can understand that an angle is a fraction of a circle. 3. I can understand the concept of angle measurement as degrees within a circle (1 circle = 360 degrees). 4. I can explain how an angle is measured by its reference to a circle. 5. I can understand how angles are measured in degrees. 6. I can measure angles (in whole degrees) using a protractor. 7. I can use a protractor to help sketch an angle to a specified measure. 8. I can understand that an angle can be decomposed into smaller non-overlapping parts (angles). 9. I can understand that the angle measure of the whole is the sum of the measures of its parts. 10. I can solve real world and number problems involving addition and subtraction to find unknown angles on a diagram. 11. I can draw (and label) points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. 12. I can identify points, lines, line segments, rays, angles (right, acute, obtuse), and parallel and perpendicular lines in two dimensional figures.	4.MD.C.5 4.MD.C.5.A 4.MD.C.5.B 4.MD.C.6 4.MD.C.7 4.G.A.1 4.G.A.2 4.G.A.3

	13. I can identify right angles. 14. I can identify right triangles. 15. I can classify two-dimensional figures based on parallel or perpendicular lines and sizes of angles. 16. I can recognize a line of symmetry as a line across a figure when folded so that each half matches the other. 17. I can identify a line of symmetry for a two-dimensional figure. 18. I can draw a line of symmetry for a two-dimensional figure.	