

Fourth Grade

Marion Public Schools Math Curriculum Alignment

	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
ext	<b><i>N.ME.04.01 Read and write numbers to 1,000,000; relate them to the quantities they represent; compare and order.</i></b>	IV. Number Sense and Numeration	IV.1 Students experience counting and measuring activities to develop intuitive sense about numbers, develop understanding about properties of numbers, understand the need for and existence of different sets of numbers, and investigate properties of special numbers. IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations.	IV.1.1 Develop and understanding of whole numbers and read, write, and count using whole numbers; investigate basic concepts of fractions and decimals. IV.2.3 Investigate ways numbers are used.	<b>Investigations:</b> Landmarks in the Thousands "How much is 1000?" <b>Supplemental</b> place value sliders Great Place Value Race Game It's in the Cards Game	<b>Saddleback p. 14 and 11</b>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
ext	<i><b>N.ME.04.02 Compose and decompose numbers using place value to 1,000,000.</b></i>	IV. Number Sense and Numeration V. Numerical and Algebraic Operations and Analytical Thinking	IV.1 Students experience counting and measuring activities to develop intuitive sense about numbers, develop understanding about properties of numbers, understand the need for and existence of different sets of numbers, and investigate properties of special numbers. V.1 Students understand and use various types of operations to solve problems.	IV.1.1 Develop and understanding of whole numbers and read, write, and count using whole numbers; investigate basic concepts of fractions and decimals. IV.1.3 Develop an understanding of the properties of numbers and of the properties of the special numbers 0 and 1. V.1.3 Explore properties of operations and give examples of how they use those properties.	<b>Investigations:</b> Grade 5 Building on Numbers You Know, Inv. 4 Calculating Forms Game building numbers with dice and numeral cards	<b>Steck Vaugh p. 4 and 5</b>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
ext	<p><b><i>N.ME.04.03</i></b>  <b><i>Understand the magnitude of numbers up to 1,000,000; recognize the place values of numbers and the relationship of each place value to the place to its right.</i></b></p>	<p>IV. Number Sense and Numeration</p>	<p>IV.1 Students experience counting and measuring activities to develop intuitive sense about numbers, develop understanding about properties of numbers, understand the need for and existence of different sets of numbers, and investigate properties of special numbers.                      IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations.                      IV.3 Students investigate relationships such as equality, inequality, inverses, factors and multiples, and represent and compare very large and very small numbers.</p>	<p>IV.1.1 Develop and understanding of whole numbers and read, write, and count using whole numbers; investigate basic concepts of fractions and decimals. IV.1.3 Develop an understanding of the properties of numbers and of the properties of the special numbers 0 and 1. IV.2.1 Represent whole numbers, fractions and decimals using concrete, pictorial and symbolic representations.                      IV.3.1 Compare and order numbers using "equal" "less than" or "greater than."</p>	<p><b>Supplemental</b> Place Cards game Name that Symbol game</p>	<p><b>Mailbox p.21</b></p>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
ext	<i>N.ME.04.04 Find all factors of any whole number through 50, list factor pairs, and determine if a one-digit number is a factor of a given whole number.</i>				<p><b>Investigations:</b> Landmarks in the Thousands, Investigations 1 and 2, Packages and Groups, Inv. 1 skip counting</p> <p><b>Supplemental</b> Factor Face-off game</p>	<b>Investigations End of Unit p. 61-65</b>	
core	<i>N.ME.04.05 List the first ten multiples of a given one-digit whole number; determine if a whole number is a multiple of a given one-digit whole number.</i>	IV. Number Sense and Numeration	IV.3 Students investigate relationships such as equality, inequality, inverses, factors and multiples, and represent and compare very large and very small numbers.	IV.3.3 Classify numbers as even or odd and explore concepts of factors and multiples.	<p><b>Investigations:</b> Arrays and Shares, Inv. 1 skip counting multiples chart</p>	<b>Investigations End of Unit p. 61-65</b>	
ext	<i>N.MR.04.06 Know that some numbers including 2,3,4,7, and 11 have exactly two factors (1 and the number itself) and are called prime numbers.</i>	IV. Number Sense and Numeration	IV.3 Students investigate relationships such as equality, inequality, inverses, factors and multiples, and represent and compare very large and very small numbers.	IV.3.3 Classify numbers as even or odd and explore concepts of factors and multiples.	<p><b>Investigations</b> Grade 5: Mathematical Thinking, Inv. 1 Three in a Row Factor Game Multiples Chart</p>	<b>Investigations End of Unit p. 61-65</b>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
core	<i>N.MR.04.07 Use factors and multiples to compose and decompose whole numbers.</i>	IV. Number Sense and Numeration	IV.3 Students investigate relationships such as equality, inequality, inverses, factors and multiples, and represent and compare very large and very small numbers.	IV.3.3 Classify numbers as even or odd and explore concepts of factors and multiples.	<b>Investigations:</b> Landmarks in the Thousands, Inv. 1	<b>Investigations End of Unit p. 61-65</b>	
ext	<i>N.FL.04.08 Add and subtract whole numbers fluently.</i>	V. Numerical and Algebraic Operations and Analytical Thinking	V.1 Students understand and use various types of operations to solve problems.	V.1.2 Develop and apply the appropriate method of computation from among mental computation, estimation, paper and pencil or calculators; explain why they are choosing a method and how they know which operations to perform in a given situation.	<b>Investigations:</b> Mathematical Thinking p.1-63 Landmarks in the Thousands, Inv. 2 Card/ dice games What's my rule game Number square <b>Supplemental</b> puzzler Mastering Math Facts	<b>Saddleback p. 52-55</b> <b>Mastering Math Facts</b>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
ext	<b><i>N.ME.04.09 Multiply two-digit numbers by 2,3,4,and 5 using the distributive property.</i></b>	IV. Number Sense and Numeration V. Numerical and Algebraic Operations and Analytical Thinking	IV.1 Students experience counting and measuring activities to develop intuitive sense about numbers, develop understanding about properties of numbers, understand the need for and existence of different sets of numbers, and investigate properties of special numbers. V.1 Students understand and us various types of operations to solve problems.	IV.1.3 Develop an understanding of the properties of numbers and of the properties of the special numbers 0 and 1. V.1.2 Develop and apply the appropriate method of computation from among mental computation, estimation, paper and pencil or calculators; explain why they are choosing a method and how they know which operations to perform in a given situation. V.1.3 Explore properties of operations and give examples of how they use those properties.	<b>Investigations:</b> Packages and Groups, Inv. 2 and 3 <b>Supplemental</b> white board practice Mastering Math Facts	<b>Saddleback p. 66</b> <b>Home school math worksheets</b> <b>Investigations p. 98-100 in assessment book</b> <b>Mastering Math Facts</b>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
	<i>N.ME.04.10 Multiply fluently any whole number by a one-digit number and a three-digit number by a two-digit number; for a two-digit by one-digit multiplication use distributive property to develop meaning for the algorithm.</i>	V. Numerical and Algebraic Operations and Analytical Thinking	V.1 Students understand and use various types of operations to solve problems.	V.1.2 Develop and apply the appropriate method of computation from among mental computation, estimation, paper and pencil or calculators; explain why they are choosing a method and how they know which operations to perform in a given situation. V.1.3 Explore properties of operations and give examples of how they use those properties.	<b>Supplemental</b> teacher modeling and practice on white boards Mastering Math Facts	<b>Saddleback p. 70-77 home school math worksheets Mastering Math Facts</b>	
core	<i>N.FL.04.11 Divide numbers up to four-digits by one-digit numbers and by 10.</i>	V. Numerical and Algebraic Operations and Analytical Thinking	V.1 Students understand and use various types of operations to solve problems.	V.1.2 Develop and apply the appropriate method of computation from among mental computation, estimation, paper and pencil or calculators; explain why they are choosing a method and how they know which operations to perform in a given situation.	<b>Investigations:</b> Packages and Groups, Inv. 3 <b>Supplemental</b> white board practice memory device (DMSCB) Mastering Math Facts	<b>Saddleback p. 89 home school math worksheets Mastering Math Facts</b>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
core	<i>N.FL.04.12 Find the value of the unknowns in equations.</i>	V. Numerical and Algebraic Operations and Analytical Thinking	V.2 Students analyze problems to determine an appropriate process for solution, and use algebraic notations to model or represent problems.	V.2.1 Write and solve open sentences and write stories to fit the open sentence. V.2.3 Find replacements for the variable(s) in open sentences.	<b>Supplemental</b> teacher modeling and practice on white boards	<b>home school math worksheets</b>	
ext	<i>N.MR.04.13 Use the relationship between multiplication and division to simplify computations and check results.</i>	V. Numerical and Algebraic Operations and Analytical Thinking	V.1 Students understand and use various types of operations to solve problems.	V.1.3 Explore properties of operations and give examples of how they use those properties.	<b>Investigations:</b> Landmarks in the Thousands, Inv. 2 <b>Supplemental</b> All in the Family Games	<b>Saddleback p. 83</b>	
future	<i>N.MR.04.14 Solve contextual problems involving whole number multiplication and division.</i>	V. Numerical and Algebraic Operations and Analytical Thinking	V.1 Students understand and use various types of operations to solve problems.	V.1.4 Apply operations efficiently and accurately in solving problems.	<b>Supplemental</b> Daily Word Problems Mastering Math Facts	<b>Saddleback p. 90 and 91 Mastering Math Facts</b>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
core	<b><i>N.ME.04.15 Read and interpret decimals up to two decimal places; relate to money and place value decomposition.</i></b>	IV. Number Sense and Numeration	IV.1 Students experience counting and measuring activities to develop intuitive sense about numbers, develop understanding about properties of numbers, understand the need for and existence of different sets of numbers, and investigate properties of special numbers. IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations.	IV.1.1 Develop and understanding of whole numbers and read, write, and count using whole numbers; investigate basic concepts of fractions and decimals. IV.1.2 Investigate and develop an understanding of the base 10 place value system. IV.2.1 Represent whole numbers, fractions and decimals using concrete, pictorial and symbolic representations.	<b>Investigations:</b> Money, Miles and Large Numbers, Inv. 1	<b>home school math worksheets</b>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
future	<b><i>N.ME.04.16 Know that terminating decimals represents fractions whose denominators are <math>10 \times 10 \times 10</math>, <math>10 \times 10 \times 10</math>, etc., e.g., powers of 10.</i></b>	IV. Number Sense and Numeration	<p>IV.1 Students experience counting and measuring activities to develop intuitive sense about numbers, develop understanding about properties of numbers, understand the need for and existence of different sets of numbers, and investigate properties of special numbers.</p> <p>IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations. V.1 Students understand and use various types of operations to solve problems.</p>	<p>IV.1.1 Develop and understanding of whole numbers and read, write, and count using whole numbers; investigate basic concepts of fractions and decimals. IV.2.1 Represent whole numbers, fractions and decimals using concrete, pictorial and symbolic representations. V.1.3 Explore properties of operations and give examples of how they use those properties.</p>	Investigations Grade5: Name that portion, inv. 3	assessment book-grade 5 investigations	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
ext	<b><i>N.ME.04.17 Locate tenths and hundredths on a number line.</i></b>	IV. Number Sense and Numeration	IV.1 Students experience counting and measuring activities to develop intuitive sense about numbers, develop understanding about properties of numbers, understand the need for and existence of different sets of numbers, and investigate properties of special numbers. IV.3 Students investigate relationships such as equality, inequality, inverses, factors and multiples, and represent and compare very large and very small numbers.	IV.1.1 Develop and understanding of whole numbers and read, write, and count using whole numbers; investigate basic concepts of fractions and decimals. IV.1.2 Investigate and develop an understanding of the base 10 place value system. IV.3.1 Compare and order numbers using "equal" "less than" or "greater than."	<b>Investigations</b> grade 5: Name that portion, inv. 3	<b>assessment book-grade 5 investigations</b>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
ext	<b><i>N.ME.04.18 Read, write, interpret, and compare decimals up to two decimal places.</i></b>	IV. Number Sense and Numeration	<p>IV.1 Students experience counting and measuring activities to develop intuitive sense about numbers, develop understanding about properties of numbers, understand the need for and existence of different sets of numbers, and investigate properties of special numbers.</p> <p>IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations.</p> <p>IV.3 Students investigate relationships such as equality, inequality, inverses, factors and multiples, and represent and compare very large and very small numbers.</p>	<p>IV.1.1 Develop and understanding of whole numbers and read, write, and count using whole numbers; investigate basic concepts of fractions and decimals.</p> <p>IV.1.2 Investigate and develop an understanding of the base 10 place value system.</p> <p>IV.2.1 Represent whole numbers, fractions and decimals using concrete, pictorial and symbolic representations.</p> <p>IV.2.2 Explore and recognize different representations for the same number and explain why they are the same.</p> <p>IV.3.1 Compare and order numbers using "equal" "less than" or "greater than."</p>	Investigations grade 5: Name that portion, inv. 3	<b>assessment book- grade 5 investigations</b>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
core	<b><i>N.MR.04.19 Write tenths and hundredths in decimal and fraction forms, and know the decimal equivalents for halves and fourths.</i></b>	IV. Number Sense and Numeration	IV.1 Students experience counting and measuring activities to develop intuitive sense about numbers, develop understanding about properties of numbers, understand the need for and existence of different sets of numbers, and investigate properties of special numbers. IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations.	IV.1.2 Investigate and develop an understanding of the base 10 place value system. IV.2.1 Represent whole numbers, fractions and decimals using concrete, pictorial and symbolic representations.	<b>Investigations</b> grade 5: Name that portion, inv. 3	<b>Investigations</b> end of unit assessment grade 5	

	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
ext	<b>N.ME.04.20</b> <b>Understand fractions as parts of a set of objects.</b>	IV. Number Sense and Numeration	<p>IV.1 Students experience counting and measuring activities to develop intuitive sense about numbers, develop understanding about properties of numbers, understand the need for and existence of different sets of numbers, and investigate properties of special numbers.</p> <p>IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations.</p> <p>IV.3 Students investigate relationships such as equality, inequality, inverses, factors and multiples, and represent and compare very large and very small numbers.</p>	<p>IV.1.1 Develop and understanding of whole numbers and read, write, and count using whole numbers; investigate basic concepts of fractions and decimals.</p> <p>IV.2.1 Represent whole numbers, fractions and decimals using concrete, pictorial and symbolic representations.</p> <p>IV.3.2 Use part-whole relationships to explore numbers, develop number concepts and understand computation.</p>	<p><b>Investigations:</b> Different Shares Equal Pieces, Inv. 1 and 2</p> <p><b>Supplemental</b> geo boards smarties/goldfish Name that Part game</p>	teacher created	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
core	<b><i>N.MR.04.21 Explain why equivalent fractions are equal, using models such as fraction strips or the number line for fractions with denominations of 12 or less, or equal to 100.</i></b>	IV. Number Sense and Numeration	IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations. IV.3 Students investigate relationships such as equality, inequality, inverses, factors and multiples, and represent and compare very large and very small numbers.	IV.2.2 Explore and recognize different representations for the same number and explain why they are the same. IV.3.2 Use part-whole relationships to explore numbers, develop number concepts and understand computation.	<b>Investigations:</b> Different Shares Equal Pieces, Inv. 1 and 2 <b>Supplemental</b> fraction strips number line	<b>Investigations End of Unit p.78-81</b>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
core	<b><i>N.MR.04.22 Locate fractions with denominations of 12 or less on the number line; include mixed numbers.</i></b>	IV. Number Sense and Numeration	IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations. IV.3 Students investigate relationships such as equality, inequality, inverses, factors and multiples, and represent and compare very large and very small numbers.	IV.2.1 Represent whole numbers, fractions and decimals using concrete, pictorial and symbolic representations. IV.2.2 Explore and recognize different representations for the same number and explain why they are the same. IV.3.2 Use part-whole relationships to explore numbers, develop number concepts and understand computation.	<b>Investigations:</b> Different Shares Equal Pieces, Inv. 3	<b>Investigations end of unit assessment p. 78-81</b>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
ext	<b>N.MR.04.23</b> <b>Understand the relationships among halves, fourths, and eighths and among thirds, sixths, and twelfths.</b>	IV. Number Sense and Numeration	IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations. IV.3 Students investigate relationships such as equality, inequality, inverses, factors and multiples, and represent and compare very large and very small numbers.	IV.2.2 Explore and recognize different representations for the same number and explain why they are the same. IV.3.1 Compare and order numbers using "equal" "less than" or "greater than."	<b>Investigations:</b> Different Shares Equal Pieces, Inv. 2 fraction sort	<b>Investigations end of unit assessment p. 78-81</b>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
future	<b><i>N.MR.04.24 Know that fractions of the form <math>m/n</math> where <math>m</math> is greater than <math>n</math>, are greater than 1 and are called improper fractions; locate improper fractions on the number line.</i></b>	IV. Number Sense and Numeration	IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations.	IV.2.1 Represent whole numbers, fractions and decimals using concrete, pictorial and symbolic representations. IV.2.2 Explore and recognize different representations for the same number and explain why they are the same.	<b>Investigations</b> Grade 5: Name that Portion, inv. 3	<b>home school math worksheets Saddleback p. 18</b>	
ext	<b><i>N.MR.04.25 Write improper fractions as mixed numbers, and understand that a mixed number represents the number of "wholes" and the part of a whole remaining.</i></b>	IV. Number Sense and Numeration	IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations.	IV.2.1 Represent whole numbers, fractions and decimals using concrete, pictorial and symbolic representations.	<b>Investigations</b> grade 3: Name that Portion, inv. 3	<b>home school math worksheets</b>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
ext	<b><i>N.MR.04.26 Compare and order up to three fractions with denominators 2,4, and 8, and 3,6, and 12 including improper fractions and mixed numbers.</i></b>	IV. Number Sense and Numeration	IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations. IV.3 Students investigate relationships such as equality, inequality, inverses, factors and multiples, and represent and compare very large and very small numbers.	IV.2.2 Explore and recognize different representations for the same number and explain why they are the same. IV.3.1 Compare and order numbers using "equal" "less than" or "greater than."	<b>Supplemental</b> fraction strips Sizing up Fractions game geo boards	<b>Saddleback p. 19</b>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
future	<b><i>N.MR.04.27 Add and subtract fractions less than 1 with denominators through 12 and/or 100, in cases where the denominators are equal or when one denominator is a multiple of the other.</i></b>	V. Numerical and Algebraic Operations and Analytical Thinking	V.1 Students understand and use various types of operations to solve problems.	V.1.2 Develop and apply the appropriate method of computation from among mental computation, estimation, paper and pencil or calculators; explain why they are choosing a method and how they know which operations to perform in a given situation.	<b>Investigations:</b> Different Shares Equal Pieces, Inv. 2 <b>Supplemental</b> Pizza Problem game	<b>Saddleback p. 58 and 60</b>	
future	<b><i>N.MR.04.28 Solve contextual problems involving sums and difference for fractions where one denominator is a multiple of the other (denominators 2 through 12, and 100).</i></b>	V. Numerical and Algebraic Operations and Analytical Thinking	V.1 Students understand and use various types of operations to solve problems.	V.1.2 Develop and apply the appropriate method of computation from among mental computation, estimation, paper and pencil or calculators; explain why they are choosing a method and how they know which operations to perform in a given situation. V.1.4 Apply operations efficiently and accurately in solving problems.	<b>Supplemental</b> Daily Word Problems	<b>Saddleback p. 62 and 63</b>	

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future	<b><i>N.MR.04.29 Find the value of an unknown in equations such as <math>1/8 + x = 5/8</math> or <math>3/4 - y + 1/2</math>.</i></b>	V. Numerical and Algebraic Operations and Analytical Thinking	V.2 Students analyze problems to determine an appropriate process for solution, and use algebraic notations to model or represent problems.	V.2.3 Find replacements for the variable(s) in open sentences.	<b>Supplemental</b> teacher modeling and practice on white boards	<b>home school math worksheets</b>	
future	<b><i>N.MR.04.30 Multiply fractions by whole numbers, using repeated addition and area or array models.</i></b>	IV. Number Sense and Numeration V. Numerical and Algebraic Operations and Analytical Thinking	IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations. V.1 Students understand and use various types of operations to solve problems.	IV.2.5 Select appropriate numbers and representations in order to solve problems. V.1.1 Use manipulative to model operations with numbers develop their own methods of recording operations; and relate their models and recordings to standard symbolic expressions and algorithms.	<b>Supplemental</b> teacher modeling and practice on white boards	<b>teacher created</b>	

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future	<b><i>N.MR.04.31 For problems that use addition and subtraction of decimals through hundredths, represent with mathematical statements and solve.</i></b>	IV. Number Sense and Numeration V. Numerical and Algebraic Operations and Analytical Thinking	IV.1 Students experience counting and measuring activities to develop intuitive sense about numbers, develop understanding about properties of numbers, understand the need for and existence of different sets of numbers, and investigate properties of special numbers. V.1 Students understand and use various types of operations to solve problems.	IV.1.4 Apply their understanding of number systems to model and solve problems. V.1.4 Apply operations efficiently and accurately in solving problems.	<b>Supplemental</b> teacher modeling and practice on white boards	<b>teacher created</b>	
future	<b><i>N.FL.04.32 Add and subtract decimals through hundredths.</i></b>	V. Numerical and Algebraic Operations and Analytical Thinking	V.1 Students understand and use various types of operations to solve problems.	V.1.2 Develop and apply the appropriate method of computation from among mental computation, estimation, paper and pencil or calculators; explain why they are choosing a method and how they know which operations to perform in a given situation.	<b>Supplemental</b> teacher modeling and practice on white boards	<b>home school math worksheets</b>	

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future	<b><i>N.FL.04.33 Multiply and divide decimals up to two decimal places by a one-digit whole number where the result is a terminating decimal.</i></b>	V. Numerical and Algebraic Operations and Analytical Thinking	V.1 Students understand and use various types of operations to solve problems.	V.1.2 Develop and apply the appropriate method of computation from among mental computation, estimation, paper and pencil or calculators; explain why they are choosing a method and how they know which operations to perform in a given situation.	<b>Supplemental</b> teacher modeling and practice on white boards	<b>teacher created</b>	
ext	<b><i>N.FL.04.34 Estimate the answers to calculations involving addition, subtraction, or multiplication.</i></b>	IV. Number Sense and Numeration V. Numerical and Algebraic Operations and Analytical Thinking	IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations. V.1 Students understand and use various types of operations to solve problems.	IV.2.4 Develop strategies for estimating quantity and evaluate the reasonableness of their estimates. V.1.2 Develop and apply the appropriate method of computation from among mental computation, estimation, paper and pencil or calculators; explain why they are choosing a method and how they know which operations to perform in a given situation.	<b>Investigations:</b> Money Miles and Large Numbers, Inv.2 <b>Supplemental</b> daily math problems	<b>Investigations end of unit assessment p. 87-89</b>	

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core	<b><i>N.FL.04.35 Know when approximation is appropriate and use it to check the reasonableness of answers; be familiar with common place-value errors in calculations.</i></b>	IV. Number Sense and Numeration V. Numerical and Algebraic Operations and Analytical Thinking	IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations. V.1 Students understand and use various types of operations to solve problems.	IV.2.4 Develop strategies for estimating quantity and evaluate the reasonableness of their estimates. V.1.2 Develop and apply the appropriate method of computation from among mental computation, estimation, paper and pencil or calculators; explain why they are choosing a method and how they know which operations to perform in a given situation.	MEAP Prep. Sample questions	MEAP released items	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
nasl	<b><i>N.FL.04.36 Make appropriate estimations and calculations fluently with whole numbers using mental math strategies.</i></b>	IV. Number Sense and Numeration V. Numerical and Algebraic Operations and Analytical Thinking	IV.2 Students recognize that numbers are used in different ways such as counting, measuring, ordering and estimating, understand and produce multiple representations of a number, and translate among equivalent representations. V.1 Students understand and use various types of operations to solve problems.	IV.2.4 Develop strategies for estimating quantity and evaluate the reasonableness of their estimates. V.1.2 Develop and apply the appropriate method of computation from among mental computation, estimation, paper and pencil or calculators; explain why they are choosing a method and how they know which operations to perform in a given situation.	<b>Supplemental</b> Ongoing instruction teacher modeling	<b>assessed within the context of daily assignments</b>	

Fourth Grade

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
core	<b><i>M.UN.04.01 Measure using common tools and select appropriate units of measure.</i></b>	II. Geometry and Measurement	II.3 Students compare attributes of two objects, or of one object with a standard unit, and analyze situations to determine what measurements should be made and to what level of precision.	II.3.1 Compare attributes of objects; develop standard units of measurement; and select and use standard tools for measurement. II.3.2 Identify the attribute to be measured and select the appropriate unit of measurement for length, mass, area, perimeter, capacity, time, temperature and money.	<b>Investigation</b> Grade 5: Measurement Benchmarks, Inv. 1 and 3 <b>Supplemental</b> Fill it up game Body Facts activity Classroom measurements Measurement Hunt	<b>Clarification document teacher created</b>	
core	<b><i>M.PS.04.02 Give answers to a reasonable degree of precision in the context of a given problem.</i></b>	II. Geometry and Measurement	II.3 Students compare attributes of two objects, or of one object with a standard unit, and analyze situations to determine what measurements should be made and to what level of precision.	II.3.3 Develop strategies for estimating measures and compare the estimates to the results of the measurement; decide if an estimate is "a good estimate."	<b>Supplemental</b> hands-on measurement	<b>Addison Wesley worksheets</b>	

Fourth Grade

Marion Public Schools Math Curriculum Alignment

	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
core	<b><i>M.UN.04.03 Measure and compare integer temperatures in degrees.</i></b>	II. Geometry and Measurement	II.3 Students compare attributes of two objects, or of one object with a standard unit, and analyze situations to determine what measurements should be made and to what level of precision.	II.3.1 Compare attributes of objects; develop standard units of measurement; and select and use standard tools for measurement.	<b>Investigations</b> Grade 5: Measurement Benchmarks, Inv. 2 and 3	<b>Addison Wesley worksheets</b>	
nasl	<b><i>M.TE.04.04 Measure surface area of cubes and rectangular prisms by covering and counting area of the faces.</i></b>	II. Geometry and Measurement	II.3 Students compare attributes of two objects, or of one object with a standard unit, and analyze situations to determine what measurements should be made and to what level of precision.	II.3.4 Explain the meaning of measurements and recognize that the number of units it takes to measure an object is related to the size of the unit.	<b>Investigations</b> Grade 5: Measurement Benchmarks, Inv. 1, 2 and 3 <b>Supplemental</b> unfix cubes and transparencies	<b>Investigations Grade 5 end of unit assessment</b>	

Fourth Grade

Marion Public Schools Math Curriculum Alignment

	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
core	<i>M.TE.04.05 Carry out the following conversions from one unit of measure to a larger or smaller unit of measure; meters to centimeters, kilograms to grams, liters to milliliters, hours to minutes, minutes to seconds, years to months, weeks to days, feet to inches, ounces to pounds (using numbers that involve only simple calculations.)</i>	II. Geometry and Measurement	II.3 Students compare attributes of two objects, or of one object with a standard unit, and analyze situations to determine what measurements should be made and to what level of precision.	II.3.4 Explain the meaning of measurements and recognize that the number of units it takes to measure an object is related to the size of the unit.	<b>Investigations</b> Grade 5: Measurement Benchmarks, Inv. 1,2,3	<b>Addison Wesley worksheets teacher created Mailbox worksheet</b>	
core	<i>M.TE.04.06 Know and understand the formulas for perimeter and area of a square and a rectangle; calculate the perimeters and areas of these shapes and combinations of these shapes using the formulas.</i>	II. Geometry and Measurement	II.1 Students develop spatial sense, use shape as an analytic and descriptive tool, identify characteristics and define shapes, identify properties and describe relationships among shapes.	II.1.7 Use shape, shape properties and shape relationships to describe the physical world and to solve problems.	<b>Investigations</b> Grade 5, Measurement Benchmarks, Inv. 1,2,and 3 <b>Supplemental</b> Perimeter and Area file folder game	<b>Clarification Document teacher created Mailbox worksheets home school math worksheets Steck Vaughn p. 150 and 151</b>	

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	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
core	<b><i>M.TE.04.07 Find one dimension of a rectangle given the other dimension and its perimeter or area.</i></b>	II. Geometry and Measurement	II.1 Students develop spatial sense, use shape as an analytic and descriptive tool, identify characteristics and define shapes, identify properties and describe relationships among shapes.	II.1.7 Use shape, shape properties and shape relationships to describe the physical world and to solve problems.	<b>Investigations</b> Grade 5: Picturing Polygons, Inv. 1,2,and 3	<b>Clarification document teacher created</b>	
ext	<b><i>M.TE.04.08 Find the side of a square given its perimeter of area.</i></b>	II. Geometry and Measurement	II.1 Students develop spatial sense, use shape as an analytic and descriptive tool, identify characteristics and define shapes, identify properties and describe relationships among shapes.	II.1.7 Use shape, shape properties and shape relationships to describe the physical world and to solve problems.	<b>Investigations</b> Grade 5: Picturing Polygons, Inv. 1,2 and 3	<b>Clarification document teacher created</b>	

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Marion Public Schools Math Curriculum Alignment

	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
future	<b><i>M.PS.04.09 Solve contextual problems about perimeter and area of squares and rectangles in compound shapes.</i></b>	II. Geometry and Measurement	II.1 Students develop spatial sense, use shape as an analytic and descriptive tool, identify characteristics and define shapes, identify properties and describe relationships among shapes. II.3 Students compare attributes of two objects, or of one object with a standard unit, and analyze situations to determine what measurements should be made and to what level of precision.	II.1.7 Use shape, shape properties and shape relationships to describe the physical world and to solve problems. II.3.6 Apply measurement to describe the real world and to solve problems.	<b>Investigations</b> Grade 5: Picturing Polygons, Inv. 1,2,and 3	<b>Clarification document teacher created Saddleback</b>	
ext	<b><i>M.TE.04.10 Identify right angles and compare angles to right angles.</i></b>	II. Geometry and Measurement	II.1 Students develop spatial sense, use shape as an analytic and descriptive tool, identify characteristics and define shapes, identify properties and describe relationships among shapes.	II.1.1 Recognize and name familiar shapes in one, two and three dimensions such as lines, rectangles and sphere and informally discuss the shape of a graph. II.1.2 Describe the attributes of familiar shapes.	<b>Investigations</b> Grade 5: Picturing Polygons, Inv. 1,2,and 3	<b>Investigations end of unit assessment-grade 5</b>	

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Marion Public Schools Math Curriculum Alignment

	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
future	<b><i>M.PS.04.11 Solve contextual problems about surface area.</i></b>	II. Geometry and Measurement	<p>II.1 Students develop spatial sense, use shape as an analytic and descriptive tool, identify characteristics and define shapes, identify properties and describe relationships among shapes. II.3 Students compare attributes of two objects, or of one object with a standard unit, and analyze situations to determine what measurements should be made and to what level of precision.</p>	<p>II.1.7 Use shape, shape properties and shape relationships to describe the physical world and to solve problems. II.3.6 Apply measurement to describe the real world and to solve problems.</p>	<p><b>Investigations</b> Grade 5: Picturing Polygons, Inv. 1,2 and 3</p>	<p><b>Investigations Grade 5 end of unit assessment</b></p>	

Fourth Grade

Marion Public Schools Math Curriculum Alignment

	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
ext	<b><i>G.GS.04.01 Identify and draw perpendicular, parallel, and intersecting lines using a ruler and a tool or object with a square 90 degree corner.</i></b>	II. Geometry and Measurement	II.1 Students develop spatial sense, use shape as an analytic and descriptive tool, identify characteristics and define shapes, identify properties and describe relationships among shapes. II.3 Students compare attributes of two objects, or of one object with a standard unit, and analyze situations to determine what measurements should be made and to what level of precision.	II.1.1 Recognize and name familiar shapes in one, two and three dimensions such as lines, rectangles and sphere and informally discuss the shape of a graph. II.1.4 Draw and build familiar shapes. II.1.6 Recognize parallel and perpendicular line segments and figures that have similarity and/or congruence. II.3.1 Compare attributes of objects; develop standard units of measurement; and select and use standard tools for measurement.	<b>Supplemental</b> teacher modeling and practice classroom examples geo boards	<b>ed helper worksheet clarifications document</b>	

Fourth Grade

Marion Public Schools Math Curriculum Alignment

	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
core	<b><i>G.GS.04.02 Identify basic geometric shapes including isosceles, equilateral, and right triangles, and use their properties to solve problems.</i></b>	II. Geometry and Measurement	II.1 Students develop spatial sense, use shape as an analytic and descriptive tool, identify characteristics and define shapes, identify properties and describe relationships among shapes.	II.1.1 Recognize and name familiar shapes in one, two and three dimensions such as lines, rectangles and sphere and informally discuss the shape of a graph. II.1.2 Describe the attributes of familiar shapes. II.1.3 Compare, sort and classify familiar shapes.	<b>Investigations</b> Grade 5: Picturing Polygons, Inv. 1,2,and 3 <b>Supplemental</b> angles angle rulers	<b>clarifications document</b> <b>MEAP released items</b>	
core	<b><i>G.GS.04.03 Identify and count the faces, edges, and vertices of basic three-dimensional geometric solids including cubes, rectangular prisms, and pyramids; describe the shape of their faces.</i></b>	II. Geometry and Measurement	II.1 Students develop spatial sense, use shape as an analytic and descriptive tool, identify characteristics and define shapes, identify properties and describe relationships among shapes.	II.1.1 Recognize and name familiar shapes in one, two and three dimensions such as lines, rectangles and sphere and informally discuss the shape of a graph. II.1.2 Describe the attributes of familiar shapes. II.1.3 Compare, sort and classify familiar shapes.	<b>Investigations:</b> Mathematical Thinking, Inv. 4	<b>Investigations end of unit assessment</b> <b>teacher created clarifications document</b> <b>MEAP released items</b>	

Fourth Grade

Marion Public Schools Math Curriculum Alignment

	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
ext	<b>G.TR.04.04</b> <b>Recognize plane figures that have line symmetry.</b>	II. Geometry and Measurement	II.1 Students develop spatial sense, use shape as an analytic and descriptive tool, identify characteristics and define shapes, identify properties and describe relationships among shapes. II.2 Students identify locations of objects, identify location relative to other objects, and describe the effects of transformations on an object.	II.1.5 Explore ways to combine, dissect and transform shapes. II.2.2 Locate and describe objects in terms of their orientation, direction and relative position, including up, down, front, back, N-S-E-W, flipped, turned, translated; recognize symmetrical objects and identify their lines of symmetry. II.2.3 Explore what happens to the size, shape, and position of an object after sliding, flipping, turning, enlarging or reducing it. II.2.5 Use concepts of position, direction and orientation to describe the physical world and to solve problems.	<b>Investigations:</b> Mathematical Thinking, Inv. 4	<b>teacher created</b> <b>Mailbox worksheets</b> <b>Clarifications document</b> <b>MEAP released items</b>	

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Marion Public Schools Math Curriculum Alignment

	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
core	<b>G.TR.04.05</b> <b>Recognize rigid motion transformations (flips, slides, turns) of a two-dimensional object.</b>	II. Geometry and Measurement	II.1 Students develop spatial sense, use shape as an analytic and descriptive tool, identify characteristics and define shapes, identify properties and describe relationships among shapes. II.2 Students identify locations of objects, identify location relative to other objects, and describe the effects of transformations on an object.	II.1.5 Explore ways to combine, dissect and transform shapes. II.1.6 Recognize parallel and perpendicular line segments and figures that have similarity and/or congruence. II.2.2 Locate and describe objects in terms of their orientation, direction and relative position, including up, down, front, back, N-S-E-W, flipped, turned, translated; recognize symmetrical objects and identify their lines of symmetry. II.2.3 Explore what happens to the size, shape, and position of an object after sliding, flipping, turning, enlarging or reducing it. II.2.5 Use concepts of position, direction and orientation to describe the physical world and to solve problems.	<b>Investigations</b> Covered in third grade <b>Supplemental</b> Transformations file folder game	<b>MEAP released items</b>	

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Marion Public Schools Math Curriculum Alignment

	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
core	<b><i>D.RE.04.01 Construct tables and bar graphs from given data.</i></b>	III. Data Analysis and Statistics	<p>III.1 Students collect and explore data, organize data into a useful form, and develop skill in representing and reading data displayed in different forms.</p> <p>III.2 Students examine data and describe characteristics of a distribution, relate data to the situation from which they arose, and use data to answer questions convincingly and persuasively.</p>	<p>III.1.1 Collect and explore data through counting, measuring and conducting surveys and experiments.</p> <p>III.1.2 Organize data using concrete objects, pictures, tallies, tables, charts, diagrams and graphs.</p> <p>III.2.5 Formulate questions and problems and gather and interpret data to answer those questions.</p>	<p><b>Investigations:</b> The Shape of Data, Inv. 1 and 2  <b>Supplemental</b>                      Make a Graph file folder game                      Read a Graph file folder game</p>	<p><b>Investigations end of unit assessment</b>  <b>teacher created clarifications document</b>  <b>MEAP released items</b></p>	

Fourth Grade

Marion Public Schools Math Curriculum Alignment

	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
core	<b><i>D.RE.04.02 Order a given set of data, find the median, and specify the range of values.</i></b>	III. Data Analysis and Statistics	<p>III.1 Students collect and explore data, organize data into a useful form, and develop skill in representing and reading data displayed in different forms.</p> <p>III.2 Students examine data and describe characteristics of a distribution, relate data to the situation from which they arose, and use data to answer questions convincingly and persuasively.</p>	<p>III.1.1 Collect and explore data through counting, measuring and conducting surveys and experiments.</p> <p>III.2.2 Describe the shape of the data using informal language.</p>	<p><b>Investigations:</b> The Shape of Data, Inv. 1 and 2  <b>Supplemental</b> Getting to Know You Poll                      Graphing Activities that Hit the Spot</p>	<p><b>Investigations end of unit assessment</b>  <b>teacher created clarifications document</b>  <b>MEAP released items</b></p>	

Fourth Grade

Marion Public Schools Math Curriculum Alignment

	GLCE	STRAND	CONTENT STANDARD	BENCHMARK	INSTRUCTION	ASSESSMENT	
core	<b><i>D.RE.04.03 Solve problems using data presented in tables and bar graphs,</i></b>	III. Data Analysis and Statistics	<p>III.1 Students collect and explore data, organize data into a useful form, and develop skill in representing and reading data displayed in different forms.</p> <p>III.2 Students examine data and describe characteristics of a distribution, relate data to the situation from which they arose, and use data to answer questions convincingly and persuasively.</p> <p>III.3 Students draw defensible inferences about unknown outcomes, make predictions, and identify the degree of confidence they have in their predictions.</p>	<p>III.1.2 Organize data using concrete objects, pictures, tallies, tables, charts, diagrams and graphs.</p> <p>III.1.3 Present data using a variety of appropriate representations and explain the meaning of the data.</p> <p>III.2.1 Read and explain data they have collected and organized themselves and progress to reading data from other sources.</p> <p>III.2.3 Draw, explain, and justify conclusions, such as trends based on data.</p> <p>III.2.4 Raise and answer questions about the source, collection, organization and presentation of data, as well as the conclusions drawn from the data; explore biases in the data.</p> <p>III.3.3 Formulate and communicate arguments and conclusions based on data and evaluate their arguments and those of others.</p>	<p><b>Investigations:</b> Shape of the Data, Inv. 1 and 2</p>	<p><b>Investigations end of unit assessment</b>  <b>teacher created clarifications document</b>  <b>MEAP released items</b></p>	