Centerville-Abington Elementary Curriculum Mapping
Math – Excel Grade 4 (1st Nine Weeks) Diane Luken (updated 7-21-15)

Unit/ Chapter/ Lesson	Indiana Standard(s)	Key Questions	Resources/Activities	Vocabulary	Assessments
Sadlier, Chapter 1, lessons 1-4	4.NS.1 Read and write whole numbers up to 1,000,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 1,000,000.	What is one million? What are ways to write numbers up to one million?	Sadlier, Grade 4, Chapter 1, Lessons 1, 2, 3, and 4 Extension: Primary Grade Challenge Math, pages 1-8 (Number Patterns)	Expanded form Standard form Word form Millions	Chapter 1 test
Sadlier, Chapter 1, Lesson 6	4.NS.2: Compare two whole numbers up to 1,000,000 using >, =, and < symbols.	How are whole numbers up to one million compared and ordered?	Sadlier, Grade 4, Chapter 1, Lesson 6	Compare Order Greater than Less than Greatest Least	Chapter 1 test
Sadlier, Chapter 1, Lesson 7	Foundation Lesson; no existing 4th grade standard	How is a number line used as a tool to order numbers?	Sadlier, Grade Four, Chapter 1, Lesson 7	Number line Halfway point	Chapter 1 test
Sadlier, Chapter 1, Lesson 10	4.NS.9: Use place value understanding to round multi-digit whole numbers to any given place value.	What are the rules for rounding whole numbers and decimal numbers (money amounts)?	Sadlier, Grade Four, Chapter 1, Lesson 10	Round	Chapter 1 test

Sadlier, Chapter 1, Lessons 8 and 11	4.M.3: Use the four operations (addition, subtraction, multiplication and division) to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit	How is the value of money determined? How does one make change from a purchase?	Sadlier, Grade 4, Chapter 1, Lessons 8 and 11	Change Making change	Chapter 1 test
Sadlier, Chapter 13, Lesson 3	4.NS.6: Write tenths and hundredths in decimal and fraction notations. Use words, models, standard form and expanded form to represent decimal numbers to hundredths. Know the fraction and decimal equivalents for halves and fourths (e.g., 1/2 = 0.5 = 0.50, 7/4 = 1 3/4 = 1.75).	What is the value of 10ths and 100ths in decimal numbers? How are decimal numbers rounded?	Sadlier, Grade 4, Chapter 13, Lesson 3	Decimal number Tenths Hundredths	Teacher generated test question
	4.NS.6: Write tenths and hundredths in decimal and fraction notations. Use words, models, standard form and expanded form to represent decimal numbers to hundredths. Know the fraction and decimal equivalents for halves and fourths (e.g., 1/2 = 0.5 = 0.50, 7/4 = 1 3/4 = 1.75).	How are fractions and decimal numbers related?	Teacher generated lesson Extension: Primary Grade Challenge Math, pages 267-274, Decimals and Why We Need Them	Decimal numbers Fractional numbers	Teacher made test question

Sadlier, Chapter 1, Lessons 12 and 13	PS.1: Make sense of problems and persevere in solving them. PS.2: Reason abstractly and quantitatively. PS.3: Construct viable arguments and critique the reasoning of others. PS.7: Look for and make use of structure.	How does the problem solving strategy of "Make a Table" help to solve problems? How does one know when to use the "Make a Table" problem solving strategy?	Sadlier, Grade 4, Chapter 1, Lessons 12 and 13	Make a Table	Chapter 1 test
Sadlier, Chapter 13, Lessons 4 and 5	4.NS.7: Compare two decimals to hundredths by reasoning about their size based on the same whole. Record the results of comparisons with the symbols >, =, or	How does one compare and order decimal numbers?	Sadlier, Grade 4, Chapter 13, Lessons 4 and 5		Teacher generated test question
Sadlier, Chapter 2, Lessons 1, 2, and 3	Foundational Lesson; no 4th grade standard exists for this lesson	How will the concepts and properties of addition and subtraction contribute to one's understanding of mathematics?	Sadlier, Grade 4, Chapter 2, Lessons 1, 2, and 3	Commutative Property Associative Property Identity Property	Chapter 2 test
Sadlier, Chapter 2, Lessons 4 and 5	4.AT.1: Solve real-world problems involving addition and subtraction of multi-digit whole numbers (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).	What are variables? How are variables used?	Sadlier, Grade 4, Chapter 2, Lessons 4 and 5 Extension: Primary Challenge Math, pages 200-210, The Language of Math	Variable Mathematical expressions Compensation Minuend Subtrahend Difference	Chapter 2 test

Sadlier, Chapter 2, Lesson 6	PS.4: Model with mathematics.	What strategies might be used to add or subtract mentally?	Sadlier, Grade 4, Chapter 2, Lesson 6		Chapter 2 test
Sadlier, Chapter 2, Lesson 7; Chapter 3, Lesson 1	PS.4: Model with mathematics.	How is rounding used to estimate sums and differences?	Sadlier, Grade 4, Chapter 2, Lesson 7; Chapter 3, Lesson 1	Estimate Front-end estimation	Chapter 2 test Chapter 3 test
Sadlier, Chapter 2, Lesson 8 Sadlier, Chapter 13, Lessons 8 and 9	4.M.3: 3: Use the four operations (addition, subtraction, multiplication and division) to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	How does one add and subtract money? How does one add and subtract decimal numbers? (No longer a fourth grade standard)	Sadlier, Grade 4, Chapter 2, Lesson 8 Teacher generated lesson to extend money concepts to decimal numbers Extension: Primary Challenge Math, pages 27-36, Mental Math: Making Change	Hundredths Tenths	Chapter 2 test Teacher generated test problems for decimal numbers

Sadlier, Chapter 2, Lessons 10 and 11	4.AT.1: Solve real-world problems involving addition and subtraction of multi-digit whole numbers (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem). PS.1: Make sense of problems and persevere in solving them. PS.2: Reason abstractly and quantitatively PS.3: Construct viable arguments and critique the reasoning of others. PS.4: Model with mathematics. PS.7: Look for and make use of structure.	How does the problem solving strategy of logical reasoning help to solve math problems? How does one know when to use the strategy of logical reasoning to solve math problems?	Sadlier, Grade 4, Chapter 2, Lessons 10 and 11		Chapter 2 test
Sadlier, Chapter 3, Lessons 2 through 10	4.C.1: Add and subtract multi-digit whole numbers fluently using a standard algorithmic approach.	How are the addition and subtraction algorithms for whole numbers used?	Sadlier, Grade 4, Chapter 3, Lessons 2 through 10		Chapter 3 test

Sadlier, Chapter 3, Lessons 11 and 12	PS.1: Make sense of problems and persevere in solving them. PS.2: Reason abstractly and quantitatively PS.3: Construct viable arguments and critique the reasoning of others. PS.4: Model with mathematics. PS.7: Look for and make use of structure.	How does one use knowledge of addition and subtraction to solve problems? How does a person know when to use addition or subtraction to solve math problems?	Sadlier, Grade 4, Chapter 3, Lessons 11 and 12		Chapter 3 test
Sadlier, Chapter 6, Lesson 1	4.M.1: Measure length to the nearest quarter-inch, eighth-inch, and millimeter	How does one use a ruler to measure to the nearest inch, half-inch, quarter-inch, and eighth of an inch?	Sadlier, Grade 4, Chapter 6, Lesson 1	Length Linear measure Inch Half-inch Quarter-inch Eighth-inch	Chapter 6 test
Sadlier, Chapter 6, Lessons 2 and 3	4.M.3: Use the four operations (addition, subtraction, multiplication and division) to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	How does one rename and add or subtract customary units of length?	Sadlier, Grade 4, Chapter 6, Lessons 2 and 3	Distance Equivalent measures	Chapter 6 test

Sadlier, Chapter 6, Lessons 4, 5, 6, 7, 8, and 9	4.M.2: Know relative sizes of measurement units within one system of units, including km, m, cm; kg, g; lb, oz; l, ml; hr, min, sec. Express measurements in a larger unit in terms of a smaller unit within a single system of measurement. Record measurement equivalents in a two column table. 4.M.3: Use the four operations (addition, subtraction, multiplication and division) to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	What are customary and metric units of capacity, weight, and distance?	Sadlier, Grade 4, Chapter 6, Lessons 4, 5, 6, 7, 8, and 9 Extension: Primary Challenge Math, pages 96-103, Measurement: How Much will I Need? AND, pages 179-188, How Much Does it Weigh?	Capacity Ounce Fluid ounce Milliliter Liter Weight Ounce Pound Ton Gram Milligram Centimeter Decimeter Millimeter Kilometer	Chapter 6 test

Sadlier, Chapter 6, Lessons 11 and 12	4. M.3: Use the four operations (addition, subtraction, multiplication and division) to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money. Include addition and subtraction problems involving simple fractions and problems that require expressing measurements given in a larger unit in terms of a smaller unit.	How does one determine elapsed time?	Sadlier, Grade 4, Chapter 6, Lessons 11 and 12	Elapsed time	Chapter 6 test

Curriculum Mapping
Math – Excel Grade 4
2nd Nine Weeks

Unit/ Chapter/ Lesson	Indiana Standard(s)	Key Questions	Resources/Activities	Vocabulary	Assessments
Sadlier, Chapter 4, Lesson 1	PS.1: Make sense of problems and persevere in solving them. PS.7: Look for and make use of structure.	What is the zero property of multiplication? What is the identity property of multiplication and division?	Sadlier, Grade 4, Lesson 1	Identity property Zero property Commutative property Associative property	Chapter 4 test
Sadlier, Chapter 4, Lesson 2	4.AT.3: Interpret a multiplication equation as a comparison (e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7, and 7 times as many as 5). Represent verbal statements of multiplicative comparisons as multiplication equations.	How does one read and understand a multiplication sentence?	Teacher-generated lesson		Teacher made test question

	4.AT.2: Recognize and apply the relationships between addition and multiplication, between subtraction and division, and the inverse relationship between multiplication and division to solve real-world and other mathematical problems. 4.AT.3: Interpret a multiplication equation as a comparison (e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7, and 7 times as many as 5). Represent verbal statements of multiplicative comparisons as multiplication equations.	How is addition related to multiplication? How is subtraction related to division? How are the operations connected to each other?	Teacher-generated lesson Extension: Primary Challenge Math, pages 60-72, Relationship of Multiplication to Addition	Array Repeated Addition Repeated Subtraction Inverse	

Sadlier, Chapter 4, Lesson 1	4.C.7: Show how the order in which two numbers are multiplied (commutative property) and how numbers are grouped in multiplication (associative property) will not change the product. Use these properties to show that numbers can by multiplied in any order. Understand and use the distributive property.	What are the properties of multiplication? How do the properties of multiplication impact the operation of multiplication?	Sadlier, Grade 4, Chapter 4, Lesson 1	Commutative Property of Multiplication Associative Property of Multiplication	Chapter 4 test
Sadlier, Chapter 4, lessons 4, 6, 7, and 9	4.C.2: Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning 4.C.4: Multiply fluently within 100.	How does one multiply multi-digit numbers by a one-digit number?	Sadlier, Grade 4, Chapter 4, Lessons 4, 6, 7, and 9	Factors	Chapter 4 test

Sadlier, Chapter 4, Lessons 12, 13, and 14	4.C.2: Multiply a whole number of up to four digits by a one-digit whole number and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Describe the strategy and explain the reasoning 4.C.4: Multiply fluently within 100.	How does one multiply multi-digit numbers by factors greater than 10?	Sadlier, Grade 4, Chapter 4, Lessons 12, 13, and 14		Chapter 4 test
Sadlier, Chapter 4, Lessons 15 and 16	PS.1: Make sense of problems and persevere in solving them. PS.2: Reason abstractly and quantitatively PS.3: Construct viable arguments and critique the reasoning of others. PS.4: Model with mathematics. PS.6: Attend to precision. PS.7: Look for and make use of structure.	How does one use the "Work Backwards" strategy to solve problems? How does one know when it is appropriate to use the "Work Backwards" strategy?	Sadlier, Grade 4, Chapter 4, Lessons 15 and 16		Chapter 4 test

Sadlier, Chapter 5, Lesson 1	PS.4: Model with mathematics. PS.7: Look for and make use of structure. PS.8: Look for and express regularity in repeated reasoning.	What is division?	Sadlier, Grade 4, Chapter 5, Lesson 1 Extension: Primary Challenge Math, pages 132-141, Let's Share	Divide Separate Dividend Divisor Quotient	Chapter 5 test
Sadlier, Chapter 5, Lesson 2	4.AT.2: Recognize and apply the relationships between addition and multiplication, between subtraction and division, and the inverse relationship between multiplication and division to solve real-world and other mathematical problems.	How are division and multiplication related?	Sadlier, Grade 4, Chapter 5, Lesson 2	Inverse operation Related facts	Chapter 5 test

	4.NS.8: Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number 4.AT.2: Recognize and apply the relationships between addition and multiplication, between subtraction and division, and the inverse relationship between multiplication and division to solve real-world and other mathematical problems.	How are division and multiplication related to each other?	Kendall-Hunt	Factors Factor pairs	Teacher made test question

Sadlier, Chapter 5, Lesson 7	4.NS.8: Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number PS.1: Make sense of problems and persevere in solving them. PS.2: Reason abstractly and quantitatively. PS.5: Use appropriate tools strategically. PS.7: Look for and make use of structure. PS.8: Look for and express regularity in repeated reasoning.	What are the divisibility rules?	Sadlier, Grade 4, Chapter 5, Lesson 7	Divisible Divisibility Rules	Chapter 5 test

Sadlier, Chapter 5, Lesson 3	4.AT.1: Solve real-world problems involving addition and subtraction of multi-digit whole numbers (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem). 4.AT.3: Interpret a multiplication equation as a comparison (e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7, and 7 times as many as 5). Represent verbal statements of multiplicative comparisons as multiplication equations. 4.AT.4: Solve real-world problems with whole numbers involving multiplicative comparison (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem), distinguishing multiplicative comparison from additive comparison. [In grade 4, division problems should not include a remainder.]	How does one find missing dividends and divisors? How does one determine the value of a variable in a multiplication or division equation?	Sadlier, Grade 4, Chapter 5, Lesson 3	Missing divisor Missing dividend Missing factor	Chapter 5 test

Sadlier, Chapter 14, Lessons 1 and 2 (with modifica-tions)	4.AT.6: Understand that an equation, such as y = 3x + 5, is a rule to describe a relationship between two variables and can be used to find a second number when a first number is given. Generate a number pattern that follows a given rule.	What is a variable? How does one use variables when writing and solving equations?	Sadlier, Grade 4, Chapter 14, Lessons 1 and 2	Variable Equation	Chapter 14 test
Sadlier, Chapter 5, Lesson 4	PS.1: Make sense of problems and persevere in solving them. PS.2: Reason abstractly and quantitatively. PS.3: Construct viable arguments and critique the reasoning of others. PS.4: Model with mathematics. PS.5: Use appropriate tools strategically PS.7: Look for and make use of structure. PS.8: Look for and express regularity in repeated reasoning.	How does one extend number patterns and find pattern rules?	Sadlier, Grade 4, Chapter 5, Lesson 4	Number pattern rule	Chapter 5 test

Sadlier, Chapter 5, Lessons 6, 8, 9, 10, 11, 12, and 14	4.C.3: Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning.	How does the division algorithm work?	Sadlier, Grade 4, Chapter 5, Lessons 6, 8, 9, 10, 11, 12, and 14 Extension: Alternative Placement for Primary Challenge Math, pages 136-142, Let's Share	Divisor Dividend Quotient Remainder	Chapter 5 test
Sadlier, Chapter 5, Lesson 15	No Fourth Grade Standard for this lesson	How does one find the answer to a number sentence that includes multiple operations and numbers?	Sadlier, Grade 4, Chapter 5, Lesson 15	Order of Operations	Chapter 5 test
Sadlier, Chapter 5, Lessons 17 and 18	PS.1: Make sense of problems and persevere in solving them. PS.2: Reason abstractly and quantitatively. PS.3: Construct viable arguments and critique the reasoning of others. PS.4: Model with mathematics. PS.6: Attend to precision. PS.7: Look for and make use of structure.	How does one use the problem solving strategy of "Interpret the Remainder" in word problems? How does one know when to use the problem solving strategy of "Interpret the Remainder"?	Sadlier, Grade 4, Chapter 5, Lessons 17 and 18 Indiana Department of Education Resources; lesson titled "Competing Coasters" (computer activity)		Chapter 5 test

Sadlier, Chapter 7, Lessons 1, 2, 3, 4, and 5	4.DA.1: Formulate questions that can be addressed with data. Use observations, surveys, and experiments to collect, represent, and interpret the data using tables (including frequency tables), line plots, and bar graphs. 4.DA.3: Interpret data displayed in a circle graph.	What is the purpose of different graphs like pictographs, bar graphs, line graphs, circle graphs, tally charts, and line plots? How does one read and interpret these graphs?	Sadlier, Grade 4, Chapter 7, Lessons 1, 2, 3, 4, and 5	Pictograph Bar graph Line graph Circle graph Tally chart Line plot	Chapter 7 test
Sadlier, Chapter 7, Lesson 6	PS.3: Construct viable arguments and critique the reasoning of others. PS.4: Model with mathematics. PS.5: Use appropriate tools strategically. PS.6: Attend to precision.	What are tree diagrams? How does one use and make a tree diagram?	Sadlier, Grade 4, Chapter 7, Lesson 6	Tree diagram Factors	Chapter 7 test
	4.DA.2: Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using data displayed in line plots.	How does one represent data on number lines and in tables?	Indiana Department of Education resources; Lessons titled “Dealing with Data in the Elementary School” and “What is the Best Chip?” Teacher-generated lesson	Data Line Plot Frequency Table Number Line	Survey project

	4.DA.1: Formulate questions that can be addressed with data. Use observations, surveys, and experiments to collect, represent, and interpret the data using tables (including frequency tables), line plots, and bar graphs. 4.DA.2: Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using data displayed in line plots.	How do I make my own survey and show the data?	IDOE resources—"Dealing with Data in the Elementary School" and "Competing Coasters" (computer lab activity) Teacher generated lesson	Survey Outcome Data Frequency table	Survey project
Sadlier, Chapter 7, Lessons 9 and 10	PS.1 PS.2 PS.3 PS.4 PS.5 PS.6 PS.7 PS.8	How are graphs and diagrams used to solve problems?	Sadlier, Grade 4, Chapter 7, Lessons 9 and 10		Chapter 7 test

Curriculum Mapping
Math – Excel Grade 4
3rd Nine Weeks

Unit/ Chapter/ Lesson	Indiana Standard(s)	Key Questions	Resources/Activities	Vocabulary	Assessments
Sadlier, Chapter 8, Lessons 1, 4, 5, and 7	4.NS.4: Explain why a fraction, a/b, is equivalent to a fraction, (n × a)/(n × b), by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions. [In grade 4, limit denominators of fractions to 2, 3, 4, 5, 6, 8, 10, 25, 100.]	What are fractions? What are equivalent fractions?	Sadlier, Grade 4, Chapter 8, Lessons 1, 4, 5, and 7 Fraction Circle Manipulatives	Numerator Denominator Equivalent fraction	Chapter 8 test
	4.NS.6: Write tenths and hundredths in decimal and fraction notations. Use words, models, standard form and expanded form to represent decimal numbers to hundredths. Know the fraction and decimal equivalents for halves and fourths (e.g., 1/2 = 0.5 = 0.50, 7/4 = 1 3/4 = 1.75).	How does one manipulate decimal-equivalent fractions?	Teacher-generated lesson		Teacher made test question

Sadlier, Chapter 8, Lesson 6	4.NS.8: Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number.	What are factors? How does one find common factors?	Sadlier, Grade 4, Chapter 8, Lesson 6	Common factors Greatest common factor (GCF)	Chapter 8 test
Sadlier, Chapter 8, Lesson 8	Foundation lesson; no 4th grade standard	What are mixed numbers?	Sadlier, Grade 4, Chapter 8, Lesson 8 Fraction Circle Manipulatives	Mixed number	Chapter 8 test
Sadlier, Chapter 8, Lessons 9 and 10	4.NS.5: Compare two fractions with different numerators and different denominators (e.g., by creating common denominators or numerators, or by comparing to a benchmark, such as 0, 1/2, and 1). Recognize comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or	How are fractions compared and ordered?	Sdlier, Grade 4, Chapter 8, Lessons 9 and 10 Fraction Circle Manipulatives		Chapter 8 test

Sadlier, Chapter 8, Lessons 11 and 12	4.AT.5: Solve real-world problems involving addition and subtraction of fractions referring to the same whole and having common denominators (e.g., by using visual fraction models and equations to represent the problem). PS.1 PS.2 PS.3 PS.4 PS.5 PS.6 PS.7 PS.8	How are logical reasoning and analogies used to solve problems? When is it appropriate to use logical reasoning and analogy in problem solving situations?	Sadlier, Grade 4, Chapter 8, Lessons, 11 and 12		Chapter 8 test
Sadlier, Chapter 9, Lessons 1 and 2	4.C.5: Add and subtract fractions with common denominators. Decompose a fraction into a sum of fractions with common denominators. Understand addition and subtraction of fractions as combining and separating parts referring to the same whole.	How does one add and subtract fractions?	Sadlier, Grade 4, Chapter 9, Lessons 1 and 2 Extension: Primary Challenge Math, pages 37-47, Balance It Fraction Circle Manipulatives	Like denominators	Chapter 9 test

Sadlier, Chapter 9, Lesson 3	Foundational Lesson for: 4.C.6: Add and subtract mixed numbers with common denominators (e.g. by replacing each mixed number with an equivalent fraction and/or by using properties of operations and the relationship between addition and subtraction).	What are improper fractions? What are different ways to name improper fractions?	Sadlier, Grade 4, Chapter 9, Lesson 3	Improper fractions	Chapter 9 test
Sadlier, Chapter 9, Lesson 5	4.C.6: Add and subtract mixed numbers with common denominators (e.g. by replacing each mixed number with an equivalent fraction and/or by using properties of operations and the relationship between addition and subtraction).	How does one add and subtract mixed numbers?	Sadlier, Grade 4, Chapter 9, Lesson 5 Fraction Circle Manipulatives		Chapter 9 test
Sadlier, Chapter 9, Lessons 6, 7, and 8	4.NS.5: Compare two fractions with different numerators and different denominators (e.g., by creating common denominators or numerators, or by comparing to a benchmark, such as 0, 1/2, and 1). Recognize comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols >, =, or	How does one add and subtract fractions with unlike denominators?	Sadlier, Grade 4, Chapter 9, Lessons 6, 7, and 8	Multiples Common multiples Lease common multiple (LCM)	Chapter 9 test

Sadlier, Chapter 9, Lesson 10	4.NS.3: Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers. Name and write mixed numbers using objects or pictures. Name and write mixed numbers as improper fractions using objects or pictures	How does one find the fractional part of a whole number?	Sadlier, Grade 4, Chapter 9, Lesson 10 Extension: Primary Challenge Math, pages 48-59, Oh No, I Have to Change the Recipe!		Chapter 9 test
Sadlier, Chapter 10, Lessons 1 and 3	4.G.4: Identify, describe, and draw rays, angles (right, acute, obtuse), and perpendicular and parallel lines using appropriate tools (e.g., ruler, straightedge and technology). Identify these in two-dimensional figures.	How does one name and interpret lines and line segments?	Sadlier, Chapter 10, Lessons 1 and 3	Point Line segment Line Endpoint Intersecting lines Perpendicular lines Parallel lines	Chapter 10 test

Sadlier, Chapter 10, Lesson 2	4.G.3: Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint. 4.G.4: Identify, describe, and draw rays, angles (right, acute, obtuse), and perpendicular and parallel lines using appropriate tools (e.g., ruler, straightedge and technology). Identify these in two-dimensional figures. 4.M.6: Measure angles in whole-number degrees using appropriate tools. Sketch angles of specified measure. PS.5: Use appropriate tools strategically.	How does one name, interpret, and draw angles? How does one use a protractor to measure angles and rays?	Sadlier, Grade 4, Chapter 10, Lesson 2	Ray Angle Side Vertex Right angle Acute angle Obtuse angle Straight angle Degrees Protractor	Chapter 10 test
Sadlier, Chapter 10, Lesson 4	4.M.5: Understand that an angle is measured with reference to a circle, with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. Understand an angle that turns through 1/360 of a circle is called a "one-degree angle," and can be used to measure other angles. Understand an angle that turns through n one-degree angles is said to have an angle measure of n degrees.	What is a circle? What do angles and circles have in common?	Sadlier, Grade 4, Chapter 10, Lesson 4 Teacher-generated extension lesson	Circle Center point Radius Diameter Circumference Chord 360* Simple closed curve	Chapter 10 test

Sadlier, Chapter 10, Lessons 5 and 6	4.G.1: Identify, describe, and draw parallelograms, rhombuses, and trapezoids using appropriate tools (e.g., ruler, straightedge and technology).	What are polygons? How are polygons defined?	Sadlier, Grade 4, Chapter 10, Lessons 5 and 6 Indiana State Standards resources; lessons titled "Sorting Polygons" and "Rectangles and Parallelograms"	Plane Figure Regular polygon Irregular polygon Triangle Quadrilateral Pentagon Hexagon Octagon Parallelogram Rectangle Square Rhombus Trapezoid	Chapter 10 test
Sadlier, Chapter 10, Lesson 7	4.G.5: Classify triangles and quadrilaterals based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles (right, acute, obtuse).	How are triangles classified? What is a right triangle?	Sadlier, Grade 4, Chapter 10, Lesson 7	Right triangle Scalene triangle Isosceles triangle Equilateral triangle	Chapter 10 test
	4.G.2: Recognize and draw lines of symmetry in two-dimensional figures. Identify figures that have lines of symmetry.	What is symmetry?	Teacher-generated lesson	Symmetry Line of symmetry	Teacher-made test question

Sadlier, Chapter 11, Lesson 1	4.M.4: : Apply the area and perimeter formulas for rectangles to solve real-world problems and other mathematical problems. Recognize area as additive and find the area of complex shapes composed of rectangles by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts; apply this technique to solve real-world problems and other mathematical problems.	What is a formula? What is the formula for perimeter? How does one use the perimeter formula?	Sadlier, Grade 4, Chapter 11, Lesson 1	Formula Length Width	Chapter 11 test
Sadlier, Chapter 11, Lesson 2	4.M.4: : Apply the area and perimeter formulas for rectangles to solve real-world problems and other mathematical problems. Recognize area as additive and find the area of complex shapes composed of rectangles by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts; apply this technique to solve real-world problems and other mathematical problems.	What is area? What is the formula for area? How does one use the formula for area?	Sadlier, Grade 4, Chapter 11, Lesson 2 Extension: Primary Challenge Math, pages 245-255, Fantastic Formulas	Area Length Width Square units	Chapter 11 test

Sadlier, Chapter 11, Lesson 3	4.M.4: : Apply the area and perimeter formulas for rectangles to solve real-world problems and other mathematical problems. Recognize area as additive and find the area of complex shapes composed of rectangles by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts; apply this technique to solve real-world problems and other mathematical problems. 4.M.6: Measure angles in whole-number degrees using appropriate tools. Sketch angles of specified measure.	How can figures with matching areas have the different perimeters? How can figures with the same perimeter have different area? How does one determine the area of a complex figure?	Sadlier, Grade 4, Chapter 11, Lesson 3	Complex figure	Chapter 11 test

Curriculum Mapping
Math – Excel Grade 4
4th Nine Weeks

Unit/ Chapter/ Lesson	Indiana Standard(s)	Key Questions	Resources/Activities	Vocabulary	Assessments
Sadlier, Chapter 11, Lessons 4 and 5	Not a fourth grade standard	What are solid figures? How does one describe solid figures? How do solid figures compare to plane figures?	Sadlier, Grade 4, Chapter 11, Lessons 4 and 5	Solid figure Face Edge Vertex Cube Rectangular prism Triangular prism Square pyramid Flat surface Curved surface Cylinder Cone Sphere 2-dimensional figure 3-dimensional figure	Chapter 11 test
Sadlier, Chapter 11, Lessons 6 and 7	Not a fourth grade standard	What is volume? How does one determine volume?	Sadlier, Grade 4, Chapter 11, Lessons 6 and 7	Volume Cubic unit	Chapter 11 test
Sadlier, Chapter 12, Lessons 1 and 2	Extends 4.C. 3	How does one use basic math facts to divide when using divisors that are multiples of 10?	Sadlier, Grade 4, Chapter 12, Lessons 1 and 2	Dividend Divisor Quotient	Chapter 12 test

Sadlier, Chapter 12, Lessons 4, 5, 6 7, 8, 9, and 10	Extends 4.C.3	How does one divide using 2-digit divisors?	Sadlier, Grade 4, Chapter 12, Lessons 4, 5, 6, 7, 8, 9, and 10?		Chapter 12 test
Sadlier, Chapter 12, Lessons 11 and 12	Extends 4.C.3	What is the problem solving strategy "Use More than 1 Step"? How does one use the problem solving strategy of "Use More than 1 Step?" How does one know when to use "Use More than 1 Step"?	Sadlier, Grade 4, Chapter 12, Lessons 11 and 12		Chapter 12 test
Sadlier, Chapter 14, Lesson 3	Extends 4.AT.1 4.AT.3 4.AT.4 4.AT.6	What is a function table? How does a function table work?	Sadlier, Grade 4, Chapter 14, Lesson 3	Function Function table Output Input	Chapter 14 test
Sadlier, Chapter 14, Lesson 4	Extends 4.AT.6	How can a function table be used to graph an equation?	Sadlier, Grade 4, Chapter 14, Lesson 4	Coordinate grid Ordered pairs	Chapter 14 test
Sadlier, Chapter 14, Lesson 5	Not a fourth grade standard	How does one compare algebraic expressions using equality and inequality symbols?	Sadlier, Grade 4, Chapter 14, Lesson 5	Equality Inequality	Chapter 14 test
Sadlier, Chapter 14, Lesson 6	Not a fourth grade standard	What is order of operations? How does one use order of operations rules to simplify expressions?	Sadlier, Grade 4, Chapter 14, Lesson 6	Simplify Order of operations Parentheses	Chapter 14 test

Sadlier, Chapter 14, Lessons 7 and 8	Extends: PS.1 PS.2 PS.3 PS.4 PS.5 PS.6 PS.7 PS.8	What is the "More than One Way" problem solving strategy? How does one use the "More than One Way" problem solving strategy?	Sadlier, Grade 4, Chapter 14, Lessons 7 and 8		Chapter 14 test

Additional Resources

http://www.uen.org/Lessonplan/LPview.cgi?grade=4

- This is a Utah Education Network site loaded with lesson plan ideas and references to websites and other hard copy resources.

http://www.superteacherworksheets.com/full-index.html

- This site offers kid-friendly worksheets, project ideas, and learning centers for all facets of math. The site is free.