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

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 4 th 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: <u>Primary</u> <u>Challenge Math</u> , pages 200-210, The Language of Math	Variable Mathematical expressions Compensation Minuend Subtrahend Difference	Chapter 2 test

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

Sadlier,	4.AT.1: Solve real-world	How does the problem	Sadlier, Grade 4,	Chapter 2 test
Chapter 2,	problems involving addition	solving strategy of logical	Chapter 2, Lessons 10	
Lessons 10	and subtraction of multi-	reasoning help to solve	and 11	
and 11	digit whole numbers (e.g.,	math problems?		
	by using drawings and	TT 1 1 1		
	equations with a symbol for	How does one know when		
	the unknown number to	to use the strategy of		
	represent the problem).	math problems?		
	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.			
	DC 4. Madal with			
	PS.4: Model with			
	mainematics.			
	PS 7 : Look for and make			
	FS.7. LOOK for and make			
	use of subclufe.			
Sadlier	AC1: Add and subtract	How are the addition and	Sadlier Grade /	Chapter 3 test
Chapter 3	multi-digit whole numbers	subtraction algorithms for	Chapter 3 Lessons ?	Chapter 5 test
Lessons ?	fluently using a standard	whole numbers used?	through 10	
through 10	algorithmic approach		unough to	
unough 10	argonumme approach.			

Sadlier,	PS.1: Make sense of	How does one use	Sadlier, Grade 4,		Chapter 3 test
Chapter 3,	problems and persevere in	knowledge of addition and	Chapter 3, Lessons 11		_
Lessons 11	solving them.	subtraction to solve	and 12		
and 12	-	problems?			
	PS.2: Reason abstractly and	-			
	quantitatively	How does a person know			
	1 5	when to use addition or			
	PS.3: Construct viable	subtraction to solve math			
	arguments and critique the	problems?			
	reasoning of others.				
	6				
	PS.4: Model with				
	mathematics.				
	PS.7: Look for and make				
	use of structure.				
Sadlier,	4.M.1: Measure length to	How does one use a ruler	Sadlier, Grade 4,	Length	Chapter 6 test
Chapter 6,	the nearest quarter-inch,	to measure to the nearest	Chapter 6, Lesson 1	Linear measure	-
Lesson 1	eighth-inch, and millimeter	inch, half-inch, quarter-	-	Inch	
		inch, and eighth of an		Half-inch	
		inch?		Quarter-inch	
				Eighth-inch	
Sadlier,	4.M.3: Use the four	How does one rename and	Sadlier, Grade 4,	Distance	Chapter 6 test
Chapter 6,	operations (addition,	add or subtract customary	Chapter 6, Lessons 2		_
Lessons 2	subtraction, multiplication	units of length?	and 3	Equivalent	
and 3	and division) to solve real-	-		measures	
	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.				

Sadlier,	4.M.2: Know relative sizes	What are customary and	Sadlier, Grade 4,	Capacity	Chapter 6 test
Chapter 6,	of measurement units within	metric units of capacity,	Chapter 6, Lessons 4, 5,	Ounce	
Lessons 4,	one system of units,	weight, and distance?	6, 7, 8, and 9	Fluid ounce	
5, 6, 7, 8,	including km, m, cm; kg, g;			Milliliter	
and 9	lb, oz; l, ml; hr, min, sec.		Extension: Primary	Liter	
	Express measurements in a		Challenge Math, pages	Weight	
	larger unit in terms of a		96-103, Measurement:	Ounce	
	smaller unit within a single		How Much will I Need?	Pound	
	system of measurement.		AND, pages 179-188,	Ton	
	Record measurement		How Much Does it	Gram	
	equivalents in a two column		Weigh?	Milligram	
	table.		C	Centimeter	
				Decimeter	
	4.M.3: Use the four			Millimeter	
	operations (addition,			Kilometer	
	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				
				1	

Sadlier,	4. M.3: Use the four	How does one determine	Sadlier, Grade 4,	Elapsed time	Chapter 6 test
Chapter 6,	operations (addition,	elapsed time?	Chapter 6, Lessons 11		
Lessons 11	subtraction, multiplication		and 12		
and 12	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.				

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	How is addition related to	Teacher-generated	Array	
apply the relationships	multiplication?	lesson		
between addition and			Repeated	
multiplication, between	How is subtraction related to	Extension: Primary	Addition	
subtraction and division,	division?	Challenge Math, pages		
and the inverse		60-72, Relationship of	Repeated	
relationship between	How are the operations	Multiplication to	Subtraction	
multiplication and	connected to each other?	Addition		
division to solve real-			Inverse	
world and other				
mathematical problems.				
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.				

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

Sadlier,	4.C.2: Multiply a whole	How does one multiply multi-	Sadlier, Grade 4,	Chapter 4 test
Chapter 4,	number of up to four	digit numbers by factors	Chapter 4, Lessons 12,	
Lessons 12,	digits by a one-digit	greater than 10?	13, and 14	
13, and 14	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.			
Sodian	DC 1. Malza cance of	How doog one use the "Work	Sodiion Crode 1	Chapter 4 test
Chapter 4	problems and persevere	Backwards" strategy to solve	Chapter 4 Lessons 15	Chapter 4 test
Lessons 15	in solving them	problems?	and 16	
and 16	in solving them.	problems:	and 10	
and 10	PS 2: Reason abstractly	How does one know when it is		
	and quantitatively	appropriate to use the "Work		
		Backwards" strategy?		
	PS.3: Construct viable			
	arguments and critique			
	the reasoning of others.			
	C			
	PS.4: Model with			
	mathematics.			
	PS.6: Attend to			
	precision.			
	PS 7. Look for and			
	make use of structure			
	make use of subcture.			

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

4.NS.8: Find all factor	How are division and	Kendall-Hunt	Factors	Teacher made test
pairs for a whole	multiplication related to each			question
number in the range 1–	other?		Factor pairs	
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.				

Sadlier	4 NS 8. Find all factor	What are the divisibility rules?	Sadlier Grade A	Divisible	Chapter 5 test
Chapter 5	pairs for a whole	what are the divisionity fules:	Chapter 5 Lasson 7	DIVISION	Chapter 5 test
Lagger 7	pumbon in the renge 1		Chapter 5, Lesson 7	Divisibility Dulas	
Lesson /	number in the range 1–			Divisionity Rules	
	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				
	and quantitutivery.				
	DS 5. Use appropriate				
	tools strategically				
	tools strategically.				
	DS 7. Look for and				
	FS.7. LOOK IOI allu				
	make use of structure.				
	PS.8: Look for and				
	express regularity in				
	repeated reasoning.				

Sadlier,	4.AT.1: Solve real-	How does one find missing	Sadlier, Grade 4,	Missing divisor	Chapter 5 test
Chapter 5,	world problems	dividends and divisors?	Chapter 5, Lesson 3		
Lesson 3	involving addition and			Missing dividend	
	subtraction of multi-	How does one determine the			
	digit whole numbers	value of a variable in a		Missing factor	
	(e.g., by using drawings	multiplication or division		0	
	and equations with a	equation?			
	symbol for the unknown				
	number to represent the				
	number to represent the				
	problem).				
	1 AT 3. Interpret a				
	4.A1.5. Interpret a				
	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.				
	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. IIn				
	grade 4. division				
	problems should not				
	include a remainder 1				1.5
	menude a remainder.j				16
	1				1

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

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

Sadlier, Chapter 7	4.DA.1: Formulate	What is the purpose of different graphs like	Sadlier, Grade 4, Chapter 7, Lessons 1, 2	Pictograph Bar graph	Chapter 7 test
Lassons 1	addressed with data Use	nictographs, her graphs, line	2 4 and 5	Lino graph	
$\frac{1}{2} \frac{2}{3} \frac{4}{4} \text{ and}$	addressed with data. Use	graphs, circle graphs, tally	<i>5</i> , <i>4</i> , and <i>5</i>	Circle graph	
2, 3, 4, and 5	and experiments to	charts and line plots?		Tally chart	
5	and experiments to	charts, and fine plots?		Line plot	
	interpret the data using	How does one read and		Line plot	
	tables (including	interpret these graphs?			
	frequency tables) line	interpret these graphs.			
	plots and bar graphs				
	pious, and bar graphs.				
	4.DA.3: Interpret data				
	displayed in a circle				
	graph.				
Sadlier,	PS.3: Construct viable	What are tree diagrams?	Sadlier, Grade 4,	Tree diagram	Chapter 7 test
Chapter 7,	arguments and critique		Chapter 7, Lesson 6	-	_
Lesson 6	the reasoning of others.	How does one use and make a		Factors	
		tree diagram?			
	PS.4: Model with				
	mathematics.				
	PS.5: Use appropriate				
	tools strategically.				
	DC 6. Attend to				
	PS.0. Attend to				
	1 DA 2. Make a line	How does one represent data	Indiana Department of	Data	Survey project
	Plot to display a data set	on number lines and in tables?	Education resources:	Line Plot	Survey project
	of measurements in	on number mies and m tables?	Lessons titled "Dealing	Frequency Table	
	fractions of a unit $(1/2)$		with Data in the	Number Line	
	1/4, $1/8$). Solve		Elementary School" and		
	problems involving		"What is the Best		
	addition and subtraction		Chip?"		
	of fractions by using		L .		
	data displayed in line		Teacher-generated		
	plots.		lesson		

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

Curriculum Mapping Math – Excel Grade 4 3^{rd Nine Weeks}

Unit/ Chapter/ Lesson	Indiana Standard(s)	Key Questions	Resources/Activities	Vocabulary	Assessments
Sadlier,	4.NS.4: Explain why a	What are fractions?	Sadlier, Grade 4,	Numerator	Chapter 8 test
Chapter 8,	fraction, a/b, is equivalent to	What are equivalent	Chapter 8, Lessons 1, 4,	Demonstration	
Lessons 1, 4, 5, and 7	a fraction, $(n \times a)/(n \times b)$, by using visual fraction models.	fractions?	5, and /	Denominator	
., e, uite /	with attention to how the		Fraction Circle	Equivalent	
	number and size of the parts		Manipulatives	fraction	
	differ even though the two fractions themselves are the				
	same size. Use this principle				
	to recognize and generate				
	equivalent fractions. [In				
	of fractions to 2, 3, 4, 5, 6, 8,				
	10, 25, 100.]				
	4.NS.6: Write tenths and	How does one manipulate	Teacher-generated		Teacher made test
	fraction notations. Use	fractions?	lesson		question
	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, $7/4 = 1.3/4 = 1.75$)				

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 4 th 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,	4.AT.5: Solve real-world problems involving addition	How are logical reasoning and analogies used to solve	Sadlier, Grade 4, Chapter 8, Lessons, 11		Chapter 8 test
Lessons	and subtraction of fractions	problems?	and 12		
11 and 12	referring to the same whole	XX71 · · ·			
	and having common	When is it appropriate to			
	denominators (e.g., by using	use logical reasoning and			
	visual fraction models and	analogy in problem solving			
	equations to represent the	situations?			
	problem).				
	DC 1				
	DS 2				
	PS 3				
	PS 4				
	PS 5				
	PS 6				
	PS.7				
	PS.8				
Sadlier,	4.C.5: Add and subtract	How does one add and	Sadlier, Grade 4,	Like	Chapter 9 test
Chapter 9,	fractions with common	subtract fractions?	Chapter 9, Lessons 1	denominators	
Lessons 1	denominators. Decompose a		and 2		
and 2	fraction into a sum of				
	fractions with common		Extension: Primary		
	denominators. Understand		Challenge Math, pages		
	addition and subtraction of		37-47, Balance It		
	fractions as combining and				
	separating parts referring to		Fraction Circle		
	the same whole.		Manipulatives		

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

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. 	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
	4.M.6: Measure angles in whole-number degrees using appropriate tools. Sketch angles of specified measure.PS.5: Use appropriate tools strategically.				
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,	4.G.1: Identify, describe,	What are polygons?	Sadlier, Grade 4,	Plane	Chapter 10 test
Chapter	and draw parallelograms,	1 20	Chapter 10, Lessons 5	Figure	
10,	rhombuses, and trapezoids	How are polygons defined?	and 6	Regular polygon	
Lessons 5	using appropriate tools (e.g.,			Irregular polygon	
and 6	ruler, straightedge and		Indiana State Standards	Triangle	
	technology).		resources; lessons titled	Quadrilateral	
			"Sorting Polygons" and	Pentagon	
			"Rectangles and	Hexagon	
			Parallelograms"	Octagon	
				Parallelogram	
				Rectangle	
				Square	
				Rhombus	
				Trapezoid	
Sadlier,	4.G.5: Classify triangles and	How are triangles	Sadlier, Grade 4,	Right triangle	Chapter 10 test
Chapter	quadrilaterals based on the	classified?	Chapter 10, Lesson 7	Scalene triangle	
10, Lesson	presence or absence of			Isosceles triangle	
7	parallel or perpendicular	What is a right triangle?		_	
	lines, or the presence or			Equilateral	
	absence of angles (right,			triangle	
	acute, obtuse).				
	4.G.2: Recognize and draw	What is symmetry?	Teacher-generated	Symmetry	Teacher-made test
	lines of symmetry in two-		lesson		question
	dimensional figures. Identify			Line of symmetry	
	figures that have lines of				
	symmetry.				

Sadlier,	4.M.4: : Apply the area and	What is a formula?	Sadlier, Grade 4,	Formula Longth	Chapter 11 test
11, Lesson	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	What is the formula for perimeter? How does one use the perimeter formula?	Chapter 11, Lesson 1	Width	
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: <u>Primary</u> <u>Challenge Math</u> , pages 245-255, Fantastic Formulas	Area Length Width Square units	Chapter 11 test

Sadlier,	4.M.4: : Apply the area and	How can figures with	Sadlier, Grade 4,	Complex figure	Chapter 11 test
Chapter	perimeter formulas for	matching areas have the	Chapter 11, Lesson 3		
11, Lesson	rectangles to solve real-	different perimeters?			
3	world problems and other				
	mathematical problems.	How can figures with the			
	Recognize area as additive	same perimeter have			
	and find the area of complex	different area?			
	shapes composed of				
	rectangles by decomposing	How does one determine			
	them into non-overlapping	the area of a complex			
	rectangles and adding the	figure?			
	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.				

Curriculum Mapping Math – Excel Grade 4 4th Nine Weeks

Unit/ Chapter/ Lesson	Indiana Standard(s)	Key Questions	Resources/Activiti es	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,	Extends:	What is the "More than One	Sadlier, Grade 4,	Chapter 14 test
Chapter 14,	PS.1	Way" problem solving	Chapter 14,	
Lessons 7	PS.2	strategy?	Lessons 7 and 8	
and 8	PS.3			
	PS.4	How does one use the "More		
	PS.5	than One Way" problem		
	PS.6	solving strategy?		
	PS.7			
	PS.8			

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.