Centerville – Abington Elementary Curriculum Mapping
Math – Grade 3 EXCEL
1st Nine Weeks
Sadlier–Oxford; Progress in Mathematics
Chapters 1-4 (55 lessons)

Lesson	Indiana College and Career Ready Standard(s)	Key Concepts	Resources / Activities	Vocabulary	Assessments
Chapter 1		**Place Value**			
1-1	**MA.3.NS.1 MA.4.NS.1**	**Model and write 3-digit numbers in standard and expanded form.**	**Base ten blocks**	**Hundreds, expanded form, standard form, digit, place, value, word name**	**Diagnostic Pretest** **Practice Problems**
1-2	**MA.3.NS.2 MA.4.NS.1**	**Use models, number lines, and place value to compare 2- and 3-digit numbers; use the symbols < and >.**	**Base ten blocks, number lines, place-value frames**	**Compare**	**Practice Problems**
1-3	**MA.3.NS.2**	**Use a number line and place value to order 2- and 3-digit numbers from least to greatest and greatest to least.**	**Base ten blocks, spinners, place-value frames**	**Order, greatest, least**	**Practice Problems**
1-4	**MA.3.AT.6**	**Use skip counting to explore and complete counting patterns on a hundreds chart and in a series of numbers.**	**Number lines, hundred charts,**	**Count by, pattern**	**Practice Problems**
1-5		**Explore the magnitude of 1000.**	**10 x 10 grids, hundred flats**	**One thousand**	**Practice Problems**
1-6 &1-7	**MA.3.NS.1 MA.4.NS.1**	**Write 4-, 5-, and 6-digit numbers in standard and**	**Base ten blocks, place-value charts,**	**Thousands, ten thousands,**	**Practice Problems**

		expanded form.	**almanac**	**hundred thousands, period**	
1-8	**MA.4.NS.1**	**Compare two 4-, 5-, and 6-digit numbers and order a series of 3 numbers from least to greatest and greatest to least.**	**Base ten blocks, place-value chart**		**Practice Problems**
1-9	**MA.3.NS.9 MA.4.NS.9**	**Round 3- and 4-digit numbers to the nearest ten, hundred, or thousand**	**Number line, spinners**	**Round, round down, round up, nearest ten, nearest hundred, nearest thousand**	**Practice Problems**
1-10	**MA.3.C.1 MA.3.M.4**	**Determine the value of sets of coins and bills**	**Money, base ten blocks**	**Bills, dollar coin**	**Practice Problems**
1-11 Real Life Skill Application	**MA.3.M.4 MA.4.M3**	**Make and count change for amounts up to $10.00.**	**Money, items with price tags, newspapers**	**Change**	**Practice Problems**
1-12	**MA.3.NS.9**	**Compare dollar and cents money amounts (3 digits) and round to the nearest dollar.**	**Money, place-value frames, number lines**	**Nearest dollar**	**Practice Problems**
1-13		**Use the *Draw a Picture* strategy to solve problems**	**Place-value models**	**Ordinal numbers**	**Practice Problems**
1-14		**Solve problems involving place value or money using a variety of strategies.**	**Money, place-value models**		**Practice Problems Cumulative Review, Chapter 1 Post Test**

Chapter 2		Addition			
2-1	MA.3.C.1	Use strategies to add more than two 1-digit addends.	Ten-frames, counters, connecting cubes, Pennies	Tens, doubles, counting on, order, commutative property of addition	Diagnostic Pretest Practice Problems
2-2	MA.3.C.1	Find missing addends in additions facts		Missing addend, inverse operations	Practice Problems
2-3	MA.3.NS.9 MA.3.C.1	Add two 3-digit addends and money amounts without regrouping	Base ten blocks, place-value frames	Estimate, front-end estimation, front digits, sum, align	Practice Problems
2-4	MA.3.C.1	Use rounding to estimate sums to the nearest ten or hundred and to the nearest ten cents or dollar.	Number lines, place-value frames	Rounding	Practice Problems
2-5	MA.3.C.1	Add two 2-digit addends and money amounts regrouping ones as tens.	Base ten blocks, Money, place-value frames		Practice Problems
2-6	MA.3.C.1	Use models to explore regrouping tens and hundreds.	Base ten blocks		Practice Problems
2-7& 2-8	MA.3.C.1	Use models and the addition algorithm to add 2-digit addends and money amounts, regrouping ones and tens.	Base ten blocks, Money, place-value frames		Practice Problems
2-9 & 2-10	MA.3.C.1	Add 3-digits addends and money amounts, regrouping once and twice.	Base ten blocks, play money, place-value frames		Practice Problems
2-11	MA.3.C.1	Use addition properties to mentally find sums	Base ten blocks		Practice Problems

2-12	**MA.3.C.1**	**Use models to explore regrouping hundreds as thousands**	**Base ten blocks, base ten stamps**		**Practice Problems**
2-13& 2-14	**MA.3.NS.9 MA.3.C.1 MA.3.C.5**	**Add three or more 3-digit addends, and two 4-digit addends including money amounts, with multiple regroupings.**	**Base ten blocks, base ten stamps, Money, place-value frames, social studies texts or newspapers**	**Addend**	**Practice Problems**
2-15		**Solve problems by substituting simpler numbers**		**Simpler numbers**	**Practice Problems**
2-16 Real Life Skills Application	**MA.3.C.1**	**Solve addition problems using various strategies.**			**Practice Problems Cumulative Review, Chapter 2 Post Test**

Chapter 3		**Subtraction**			
3-1	**MA.3.AT.3 MA.3.C.1**	**Learn four meanings of subtraction**	**Subtraction facts flash cards, two-color counters**	**Take away, part of a whole set, compare, how many more are needed**	**Diagnostic Pretest Practice Problems**
3-2& 3-3	**MA.3.C.1**	**Subtract 3-digit numbers with no regrouping; estimate differences to the nearest ten, hundred, ten cents, or dollar using front-end estimation or rounding.**	**Base ten blocks, Money, place-value mat**	**Estimate, front digits**	**Practice Problems**
3-4	**MA.3.NS.9 MA.3.C.1**	**Subtract 2-digit numbers or money amounts less than $1.00, regrouping tens.**	**Base ten blocks, Money, place-value frames, construction**	**Regroup**	**Practice Problems**

			paper, envelopes, box		
3-5	MA.3.NS.9 MA.3.C.1	Use models to regroup hundreds and dollars	Base ten blocks, Money, place-value frames		Practice Problems
3-6& 3-7	MA.3.NS.9 MA.3.C.1	Subtract 2- and 3-dgit numbers and money amounts from 3-digit numbers and money amounts, regrouping tens and hundreds.	Base ten blocks, Money, place-value frames		Practice Problems
3-8	MA.3.C.1	Use place-value models to regroup across zeros to subtract.	Base ten blocks, place-value frames, money		Practice Problems
3-9	MA.3.C.1	Use place-value models to regroup thousands as hundreds	Base ten blocks, base ten rubber stamps		Practice Problems
3-10	MA.3.NS.9 MA.3.C.1	Subtract 4-digit numbers or money amounts with regrouping	Base ten blocks, Money, place-value frames.		Practice Problems
3-11	MA.3.C.1	Identify criteria for choosing a method of computation.		Computation method	Practice Problems
3-12	MA.3.C.1	Solve problems by choosing the operation.	Two-color counters, connecting cubes, base ten blocks	Addition, subtraction	Practice Problems
3-13 Real Life Skills Application	MA.3.C.1	Solve problems involving addition and subtraction using various strategies.	Counters, Money, books or magazines		Practice Problems Cumulative Review, Chapter 3 Post Test

Chapter 4		Multiplication Concepts and Facts			
4-1	MA.3.C.2 MA.3.AT.2	Explore the meaning of multiplication as repeated addition and the joining of equal groups.	Number line, supermarket circulars, counters	Multiplication sentence, multiplication, times	Diagnostic Pretest Daily multiplication fact and division tests Practice Problems
4-2	MA.3.C.2	Use the identity and zero properties of multiplication.	Shoe boxes, strips of paper, envelopes, counters, paper clips	Factor, product, identity property of multiplication, zero property of multiplication	Practice Problems
4-3& 4-4	MA.3.C.6 MA.4.C.4 MA.3.C.2 MA.3.AT.2 MA.3.AT.5	Use number lines, pictorial models, and symbolic representation to multiply basic facts with 2 or 3 as the multiplier.	Counters, rulers		Practice Problems
4-5 & 4-6	MA.3.C.6 MA.4.C.4 MA.3.AT.2 MA.3.AT.5	Use number lines, pictorial models, and symbolic representation to multiply basic facts with 4 or 5 as the multiplier.	Multiplication facts flash cards, index cards, paper squares, pennies, counters, connecting cubes, pictures of bicycles, tricycles, and wagons, pentagon		Practice Problems
4-7	MA.4.C.4 MA.3.AT.5	Multiply money amounts up to 5 cents by single-digit	Money, base ten blocks, index cards		Practice Problems

		multipliers.			
4-8	**MA.3.C.1 MA.4.C.4 MA.3.C.1 MA.3.AT.5**	**Maintain addition, subtraction, and multiplication skills.**	**Basic addition, subtraction, and multiplication facts flash cards, base ten blocks, Money**		**Practice Problems**
4-9	**MA.4.C.4 MA.3.AT.5**	**Apply the commutative property of multiplication.**	**Multiplication facts flash cards, connecting cubes, grid paper**	**Commutative property of multiplication, order, missing factor**	**Practice Problems**
4-10	**MA.4.C.4 MA.3.AT.5**	**Find a missing factor in basic facts**	**Counters**	**Missing factor**	**Practice Problems**
4-11	**MA.3.AT.3**	**Use more than one step to solve problems**	**Money, base ten blocks**		**Practice Problems**
4-12 Real Life Skills Application	**MA.3.AT.3**	**Solve problems using various strategies**	**Four cutouts of balloons, music (tape, radio, or CD player)**		**Practice Problems Cumulative Review, Chapter 4 Post Test**

Additional Curriculum for the 1st nine weeks.

- **Kendal Hunt Publications: PROJECT M3: LEVEL 3: UNRAVELING THE MYSTERY OF THE MOLI STONE: PLACE VALUE AND NUMERATION**
- **Remedia Publications: Real Life Math Series: Menu Math; The Hamburger Hut / Addition – Subtraction**
- **First Bank Richmond – Student Savings Accounts**

Centerville – Abington Elementary Curriculum Mapping
Math – Grade 3 EXCEL
2nd Nine Weeks
Sadlier–Oxford; Progress in Mathematics
Chapter 5-8 (60 lessons)

Lesson	Indiana College and Career Ready Standard(s)	Key Concepts	Resources / Activities	Vocabulary	Assessments
Chapter 5		**Division Concepts and Facts**			
5-1	**MA.3.C.3 MA.3.C.4**	**Explore the concept of division: sharing and separating**	**Number line, counters**	**Division sentence, separate, share**	**Diagnostic Pretest Daily multiplication and division fact tests Practice Problems**
5-2	**MA.3.C.5 MA.4.C.4**	**Divide with 1 and 0 using 1-digit numbers**	**Straws, paper cups, counters**	**Dividend, divisor, quotient**	**Practice Problems**
5-3 & 5-4	**MA.3.C.4 MA.4.C.4**	**Explore division facts for 2 and 3**	**Counters, number line, paper cups**		**Practice Problems**
5-5 & 5-6	**MA.3.C.5 MA.4.C.4**	**Explore division facts for 4 and 5**	**Counters, number lines, construction paper, Money, division facts flash cards, coins**		**Practice Problems**
5-7	**MA.3.C.5 MA.4.C.4**	**Relate multiplication facts and division facts.**	**Multiplication facts flash cards, counters, index cards**	**Related facts**	**Practice Problems**
5-8	**MA.4.C.4**	**Divide money amounts to 50 cents by 2 through 5.**	**Pennies, number lines, index cards**		**Practice Problems**

5-9	**MA.3.AT.5 MA4.C.4**	**Use multiplication and division function tables to determine the next term in a linear pattern**	**Shoebox, digit cards, counters**	**Function machine; input, output**	**Practice Problems**
5-10	**MA.3.AT.2 MA.4.C.4**	**Write a number sentence to solve problems**	**Number and operations cards, blank cards, paper cups, counters**	**Number sentence, sum, difference, product, quotient, addend, factor, dividend**	**Practice Problems**
5-11 Real Life Skills Application	**MA.3.AT.2 MA.4.C.4**	**Use various strategies to solve problems**	**Grid paper, play coins, boxes**		**Practice Problems Cumulative Review Chapter 5 Post Test**

Chapter 6		**More Multiplication and Division Facts**			
6-1	**MA.3.C.2 MA.3.AT.2 MA.4.C.4**	**Practice multiplying twos, threes, fours, and fives to complete tables**	**Counters**	**Factor, product**	**Diagnostic Pretest Daily multiplication fact tests Daily division fact tests Practice Problems**
6-2, 6-3, 6-4, 6-5	**MA.3.AT.5 MA.4.C.4**	**Multiply sixes, sevens, eights, and nines using concrete and pictorial models.**	**Counters, paper, centimeter grid paper, number lines, Money, connecting cubes, egg cartons**	**Array, multiplication table**	**Practice Problems**
6-6	**MA.3.AT.6 MA.4.C.4**	**Multiply three 1-digit factors and apply the associative**	**Multiplication facts flash cards,**	**Parentheses, grouping of the**	**Practice Problems**

		property of multiplication	**counters**	**factors, missing factors, associative property of multiplication**	
6-7	**MA.3.AT.5 MA.4.C.3**	**Review dividing by 2, 3, 4, and 5 and review the meaning of and vocabulary of division**	**Division facts flash cards, counters**	**division, dividend, divisor, quotient, related facts**	**Practice Problems**
6-8, 6-9 6-10, 6-11	**MA.3.AT.5 MA.4.C.3**	**Use counters and the counting back strategy to divide by 6, 7, 8, and 9**	**Division facts flash cards, counters, paper, number lines**	**Separating, sharing**	**Practice Problems**
6-12	**MA.3.AT.5 MA.3.C.5 MA.4.C.3 MA.4.C.4**	**Identify rules to complete number patterns**	**Division fact cards, tiles or cubes, blank calendar pages**	**Pattern, rule**	**Practice Problems**
6-13	**MA.3.C.5**	**Identify multiplication and division fact families**	**Index cards, counters, centimeter grid paper**	**Fact family**	**Practice Problems**
6-14	**MA.4.C.3 MA.4.C.4**	**Apply facts in order to solve multiplication and division problems**	**Counters, plastic bags**		**Practice Problems**
6-15	**MA.3.AT.3 MA.3.C.3 MA.4.C.3 MA.4.C.4**	**Use *Guess and Test* to solve problems**	**Counters, coins**		**Practice Problems**
6-16	**MA.3.C.1 MA.3.C.3 MA.4.C.3 MA.4.C.4**	**Use various strategies to solve problems involving multiplication and division.**	**Counters, coins**		**Practice Problems Cumulative Review Chapter 6 Post Test**

Chapter 7		Statistics and Probability			
7-1 & 7-2	MA.3.DA.1 MA.4.DA.2	Read, interpret, and make pictographs and bar graphs from data on a tally chart	10X10 grid, connection cubes, two-inch squares, number lines	Data, graph, pictograph, symbol, key, label, title, survey, bar graph, scale, halfway	Diagnostic Pretest Practice Problems
7-3	MA.4.DA.2	Conduct a survey to collect data and display it on a tally chart.	Straightedge	Survey, mode	Practice Problems
7-4	MA.3.NS.3	Read and interpret circle graphs.	Cutouts of circles, counters	Circle graph	Practice Problems
7-5	MA.4.DA.2	Read, interpret, and make line plots from data on a tally chart. Identify *mode* and *range*.	Straightedge, number cube, centimeter grid paper	Line plot, range	Practice Problems
7-6	MA.3.DA.2 MA.4.DA.2	Make and interpret line graphs.	Clippings of line graphs from newspapers or magazines.	Line graph, vertical axis, horizontal axis	Practice Problems
7-7		Find the median and mean of a set of data	Number cards (1-9), connecting cubes	Median, mean	Practice Problems
7-8	MA.3.DA.1 MA.4.DA.2	Analyze and compare a set of data displayed on line plots, tables, and graphs.			Practice Problems
7-9		Make organized lists, including tree diagrams, to solve problems.	Dot paper, straightedges, counters	Organized list, arrangements, tree diagram, combinations	Practice Problems
7-10		Find the probability of an event and predict outcomes and likelihood.	Spinners	Probability, event, out-come, equally likely, more	Practice Problems

				likely, less likely, impossible, possible, certain	
7-11	MA.3.DA.3	Use graphs to show the results of probability experiments.	Construction paper, paper clips, centimeter grid paper, number cube		Practice Problems
7-12	MA.3.DA.2	Analyze data to make a prediction.	Color tiles, bags, number cube, clipping of graphs	prediction	PracticeProblems
7-13		Use a graph to solve problems.	Index cards, ruler		
7-14	MA.3.C.1	Solve problems using various strategies.	Construction paper		Practice Problems Cumulative Review Chapter 7 Post Test

Chapter 8		Measurement and Time			
8-1& 8-2	MA.3.M.2 MA.3.DA.2	Estimate measure and chose the appropriate unit of length to the nearest yard, foot, inch, half inch, and quarter inch.	1-inch long paper strips, rulers, grid paper, small paper clips, rulers, yardsticks, or tape measures, football, baseball bat, string, cardboard strips, newspapers, magazines	Inch, half inch, quarter inch, foot, yard	Diagnostic Pretest Practice Problems
8-3 Real Life Skills Application		Identify the mile as a customary unit for measuring distance and use a map to find and estimate distances	Yardsticks, timer, map of the US, atlases, tracing paper	Mile, distance, map distance, scale, actual distance	Practice Problems

8-4 & 8-5	**MA.3.M.1 MA.3.M.3**	**Explore and compare customary units of capacity and weight.**	**Containers; quart, pint, half-gallon, gallon, crayons, small glass, large vase, small juice container, counters, newspapers, catalogs, advertising circulars, index cards, paper bags, book, lunch box, shoe, sock, 1-pound weight, 1ounce weight, connecting cubes**	**Half gallon, gallon, ounce, pound**	**Practice Problems**
8-6, 8-7, 8-8, 8-9, 8-10 Real Life Skill Application	**MA.3.M.1**	**Measure, compare, and choose, the appropriate metric unit of length (cm, dm, m, km), capacity (ml, L), and mass (g, kg).**	**Metric ruler, unit cubes, tens rods, textbooks, cassette tapes, calculators, straightedges, string, metersticks, timer, containers of various size, index cards, graduated cylinders of various capacities, various size beakers, 1-gram mass, small paper clip, dollar bill, balance, 1-**	**Centimeter (cm) decimeter (dm), meter (m), kilometer (km), map distance, actual distance, milliliter (ml), liter (L), gram, kilogram (kg)**	**Practice Problems**

			kilogram mass, feather, textbook.		
8-11	**MA.3.M.1**	**Explore renaming units of measure to solve problems and compare measurements.**	**Inch rulers, centimeter rulers, yard sticks, meter sticks**		**Practice Problems**
8-12	**MA.3.M.1 MA.3.M.2**	**Choose the appropriate tool for measuring length, capacity, weight, or mass.**	**Index cards, meter sticks, yardsticks, rulers, tape measures (customary and metric) balance, scale, 1-liter, 1-quart, 1-cup, and 1-gallon containers.**	**Measuring tool**	**Practice Problems**
8-13	**MA.3.M.2**	**Explore temperature, using F and C thermometers.**	**Number lines, Fahrenheit and Celsius thermometers**	**Thermometer, degree Fahrenheit (F), degree Celsius (C)**	**Practice Problems**
8-14 & 8-15	**MA.3.M.3**	**Tell and write times to the hour, half hour, quarter hour, and minute. Estimate time to the nearest half hour and hour.**	**Analog-clock model, rulers**	**Hour (h), minute (min) quarter to, quarter after, A.M. P.M., nearest hour, nearest half-hour**	**Practice Problems**
8-16	**MA.3.M.3**	**Find the elapsed time between two given times.**	**Analog clock**	**Elapsed time**	**Practice Problems**
8-17	**MA.3.M.3**	**Read and interpret a calendar.**	**12-month calendar**	**Calendar, day (d), week (wk), month (mo),**	**Practice Problems**

				year (y), leap year, date	
8-18	**MA.3.C.1**	**Solve problems by making a table**	**Hundred chart, counters, color tiles, centimeter grid paper**		**Practice Problems**
8-19	**MA.3.DA.2**	**Use various strategies to solve problems involving measurement and time.**	**Rulers**		**Practice Problems Cumulative Review Chapter 8 Post Test**

Additional Curriculum for the 1st nine weeks.

- **Kendal Hunt Publications: PROJECT M3: LEVEL 3: UNRAVELING THE MYSTERY OF THE MOLI STONE: PLACE VALUE AND NUMERATION**
- **Remedia Publications: Real Life Math Series: Menu Math; The Hamburger Hut / Addition – Subtraction**
- **First Bank Richmond – Student Savings Accounts**

Math – Grade 3 EXCEL

3rd Nine Weeks

Sadlier–Oxford; Progress in Mathematics

Chapter 9-12 (45 lessons)

Lesson	Indiana College and Career Ready Standard(s)	Key Concepts	Resources / Activities	Vocabulary	Assessments
Chapter 9		**Geometry**			
9-1	**MA.3.G.3**	**Identify and draw lines, line segments, and rays, as well as parallel, perpendicular, and intersecting lines**	**Masking tape, counters, dot paper, rulers**	**Line, line segment, endpoint, ray, parallel lines, intersecting lines, perpendicular lines**	**Diagnostic Pretest Practice Problems**
9-2	**MA.3.G.3 MA.3.M.5 MA.4.G.3**	**Identify angles and tell whether they are greater than or less than a right angle**	**Pattern blocks, dot paper, index cards, centimeter grid paper, rulers**	**Angle, right angle, acute angle, obtuse angle**	**Practice Problems**
9-3	**MA.3.G.2 MA.3.G.3**	**Identify and classify polygons and distinguish them from curved and open figures.**	**Dot paper, coins, rulers, square sheets of paper, polygon cutouts or pattern blocks**	**Closed flat figure, open figure, polygon, triangle, square, rectangle, rhombus, pentagon, hexagon,**	**Practice Problems**

				octagon, circle, quadrilateral, parallelogram trapezoid	
9-4	**MA.4.G.5**	**Draw and identify triangles by their sides and angles.**	**Dot paper, rulers, centimeter grid paper, construction paper**	**Triangle, right triangle, isosceles triangle, equilateral triangle, scalene triangle**	**Practice Problems**
9-5		**Recognize, identify, and draw congruent and similar figures.**	**Different size squares, pattern blocks, counters, dot paper, rulers, envelopes, box**	**Congruent figures, similar figures, size shape**	**Practice Problems**
9-6		**Locate points and name ordered pairs on one quadrant of a coordinate grid.**	**10X10 grid, pattern blocks**	**Ordered pair, first number, second number**	**Practice Problems**
9-7	**MA.4.G.2**	**Recognize lines of symmetry and draw the matching half of a symmetrical figure.**	**Models of solid figures, nets, pictures of real-world three-dimensional objects, centimeter grid paper.**	**Line of symmetry**	**Practice Problems**
9-8		**Identify transformations-slides, flips, and turns-of objects.**	**Pattern blocks, paper rectangles and right triangles**	**Slide (translation), fli0 (reflection), turn (rotation)**	**Practice Problems**
9-9	**MA.3.G.1 MA.3.G.2**	**Identify solid figures, their attributes, and their nets.**	**Models of solid figures, nets, pictures of real-world tree-**	**Solid figures, face, edge, vertex, plane figures, net**	**Practice Problems**

			dimensional objects, centimeter grid paper		
9-10	**MA.3.M.7**	**Estimate and measure to find perimeter; given perimeter, draw a polygon.**	**Yardsticks, customary and metric rulers, centimeter grid paper, variety of plane polygon figures**	**Perimeter distance**	**Practice Problems**
9-11	**MA.3.M.5**	**Use centimeter squares to find the area of a given figure.**	**8 1/2 –inch paper square, paper rectangle, outlines of a figure, counters, square pattern blocks, centimeter grid paper, index cards**	**Area, square units,surface**	**Practice Problems**
9-12		**Use cubes to find the volume of a solid figure.**	**Connecting and unit cube, centimeter grid paper**	**Volume, solid figure, cubic units**	**Practice Problems**
9-13	**MA.3.M.5**	**Construct and solve a simpler, related problem to help solve a difficult problem.**	**Centimeter squares, centimeter grid paper**	**Simpler problem**	**Practice Problems**
9-14	**MA.3.G.1 MA.3.G.2**	**Solve problems involving geometric concepts, using a variety of strategies.**	**Index cards, pictures of plane figures and solid figures, centimeter gird paper**		**Practice Problems Cumulative Review Chapter 9 Post Test**

Chapter 10		Multiply by One Digit			
10-1	MA.3.C.5 MA.3.AT.6	Use basic facts and patterns of zero to multiply tens, hundreds, and thousands.	Base ten blocks		Diagnostic Pretest Practice Problems
10-2	MA.3.AT.3	Estimate products of 2-and 3-digit numbers and money amounts by 1-digit numbers by rounding and front-end estimation.	Base ten blocks	Estimate, rounding, front-end estimation	Practice Problems
10-3	MA4.C.2	Multiply a 2-digit number by a 1-digit number, with no regrouping.	Base ten clocks, place-value frames		Practice Problems
10-4	MA.4.C.2	Use place-value and area models to multiply 2-digit numbers by 1-digit numbers with regrouping.	Base ten blocks, centimeter grid paper	Regroup, area model of multiplication	Practice Problems
10-5	MA.4.C.2	Multiply a 2-digit number or money amount by a 1-digit number, with regrouping in the ones place.	Base ten blocks, place-value frames, money		Practice Problems
10-6	MA.4.C.2	Multiply a 2-digit number by a 1-digit number, with regrouping in the tens and ones place.	Multiplication flash cards, place-value frames, base ten blocks		Practice Problems
10-7	MA.4.C.2	Multiply a 3- or 4-digit number by a 1-digit number, with no regrouping.	Place-value frame, base ten blocks		Practice Problems
10-8 & 10-9	MA.4.C.2	Multiply a 3- or 4-digit number or money amount by a 1-digit number, with regrouping in the tens and/or the ones place.	Base ten blocks		Practice Problems
10-10	MA.4.AT.3	Solve problems using work backward as a strategy	Counters, analog clock	Work backward	Practice Problems

10-11	**MA.4.AT.3**	**Solve multiplication problems using various strategies.**	**Supermarket circulars, coins**		**Practice Problems Cumulative Review Chapter 10 Post Test**

Chapter 11		**Divide by One Digit**			
11-1		**Use basic facts to estimate quotients and recognize division patterns**	**Base ten blocks, counters**	**Estimate, dividend, divisor, quotient**	**Diagnostic Pretest Practice Problems**
11-2 & 11-3	**MA.4.C.3**	**With and without models, divide 2-digit dividends by 1-digit divisors, resulting in 1-digit quotients with and without remainders.**	**Counters**	**Remainder**	**Practice Problems**
11-4	**MA.4.C.3**	**Divide w- and 3-digit dividends by 1-digit divisors, resulting in 2-digit quotients with not remainders.**	**Base ten blocks, counters**		**Practice Problems**
11-5	**MA.4.C.3**	**Divide 2-digit dividends by 1-digit divisors, resulting in 2-digit quotients with remainders.**	**Base ten blocks**		**Practice Problems**
11-6		**Use rounding and compatible numbers to estimate quotients.**	**Number lines, number cubes, advertising flyers, construction paper**	**Compatible numbers**	**Practice Problems**
11-7	**MA.3.AT.3**	**Solve problems using the *Interpret the Remainder* strategy.**	**Index cards, counters, money**		**Practice Problems**
11-8	**MA.3.AT.3**	**Use various strategies to solve problems involving division.**			**Practice Problems Cumulative Review Chapter 11 Post Test**

Chapter 12		Factions			
12-1 Real life Skill Application	MA.3.NS.3 MA.3.NS.7	Use fraction strips and models to identify fractions as equal parts of a whole or of a set; write the word name for a fraction and a fraction for the word name.	Counters, tiles, fraction cubes, books, magazine, newspapers.	Fraction equal parts, numerator, denominator	Diagnostic Pretest Practice Problems
12-2	MA.3.NS.6	Use fraction strips and drawings to model and write equivalent fractions.	Counters, fraction cubes, rulers	Equivalent fractions	Practice Problems
12-3	MA.3.NS.3	Use pictures to estimate fractional parts.	Pictures showing fractions, clock, cutouts of a circle, fraction circles, string, centimeter grid paper	About ¼, about ½, about ¾	Practice Problems
12-4	MA.3.NS.8 MA.3.NS.4 MA.4.NS.5	Use fraction strips and numbers lines to compare fractions with like and unlike denominators.	Classroom objects, fraction cubes, fraction strips, index cards.	Compare	Practice Problems
12-5	MA.3.NS.8	Use fraction strips to order fractions from least to greatest and greatest to least.	Fraction cubes		Practice Problems
12-6	MA.4.NS.3	Use pictorial models and symbolic notation to find a fractional part of a number or set.	Division facts flash cards, inch grid paper, counters	Part of a number or set	Practice Problems
12-7	MA.4.NS.3 MA.4.C.6	Use pictorial models and number lines to name mixed numbers.	Rulers, dot paper, number lines, fraction circles, newspapers and magazines	Mixed number	Practice Problems

12-8 & 12-9	**MA.4.NS.3**	**Use fraction strips and number lines to add and subtract fractions with like denominators.**	**Fraction cubes, rulers, number lines, centimeter grid paper,**	**Same denominator, simplest form**	**Practice Problems**
12-10		**Find the unit cost of an item and a fractional part of a money amount.**	**Money, small paper plates**	**Unit cost**	**Practice Problems**
12-11	**MA.3.NS.3**	**Solve problems using a drawing or a model.**	**Fraction cubes, centimeter grid paper**		**Practice Problems**
12-12	**MA.4.M.3**	**Solve problems involving fractions using various strategies.**	**Fraction cubes, number lines, rulers**		**Practice Problems Cumulative Review Chapter 12 Post Test**

Additional Curriculum for the 1st nine weeks.

- **Remedia Publications: Real Life Math Series: Menu Math; The Hamburger Hut / Multiplication and Division**

- **First Bank Richmond – Student Savings Accounts**

Math – Grade 3 EXCEL

4th Nine Weeks

Sadlier–Oxford; Progress in Mathematics

Chapter 13-14 (27 lessons)

Lesson	Indiana College and Career Ready Standard(s)	Key Concepts	Resources / Activities	Vocabulary	Assessments
Chapter 13		**Decimals**			
13-1	**MA.4.NS.6**	**Read and write fractions and decimals expressed as tenths, with and without models.**	**Centimeter grid paper, rulers, tenths decimal squares, number lines, decimal place-value charts**	**Decimal, tenths, decimal point**	**Diagnostic Pretest Practice Problems**
13-2	**MA.4.NS.6**	**Read and write decimals expressed as hundredths, with and without models.**	**Hundredths decimal squares, 10X10 grids, decimal place-value charts**	**hundredths**	**Practice Problems**
13-3	**MA.4.NS.6 MA.4.NS.7**	**Read and write decimals greater than one, with and without models and numbers lines.**	**Fraction strips, number lines, decimal place-value charts.**	**Mixed number**	**Practice Problems**
13-4	**MA.4.NS.7**	**Compare and order decimals through hundredths, with and without models and number lines.**	**Decimal squares, index cards**		**Practice Problems**
13-5	**MA.3.C.1**	**Add and subtract decimals through hundredths, with and without regrouping.**	**Base ten blocks, decimal squares, decimal place-**		**Practice Problems**

			value frames, index cards		
13-6	MA.4.C.2	Multiply money amounts to $9.99 by 1 digit.	Money, place-value frames	Estimate, decimal point, dollar sign, product	Practice Problems
13-7	MA.4.C.3	Divide money amounts to $9.99 by 1 digit.	Money	dividend	Practice Problems
13-8	MA.3.AT.3 MA.3.AT.6	Solve problems by finding a pattern.	Number lines, counters	pattern	Practice Problems
13-9	MA.3.AT.3	Solve problems involving decimals using various strategies.	Number lines, decimal squares, money		Practice Problems Cumulative Review Chapter 13 Post Test

Chapter 14		Get Ready for Algebra			
14-1	MA.3.C.5	Use divisibility rules for 2, 5, and 10.	Number lines, 10X10 grids, spinners	Divisible, remainder	Diagnostic Pretest Practice Problems
14-2	MA.3.AT.4 MA.3.AT.5	Translate word phrases into mathematical expressions, with and without variables.	Base ten blocks, flash cards	Expression, variable	Practice Problems
14-3	MA.3.C.5	Use the order of operations to simplify expressions.	Base ten blocks	Order of operations	Practice Problems
14-4	MA.3.C.5	Determine the missing operation sign that correctly completes a number sentence.	Base ten clocks, counters, index cards	Missing operation	Practice Problems
14-5	MA.3.C.2 MA.4.AT.3	List the factors of a number and find the common factors of two numbers.	Connecting cubes, index cards, grid paper	Factors, project, multiplication sentence, common factors	Practice Problems
14-6	MA.3.AT.2 MA.4.AT.1	Use operation signs to make two expressions equal in value	Double pan balance, connecting		Practice Problems

			cubes, index cards		
14-7	**MA.3.AT.3**	**Solve problems that involve more than one step.**	**Centimeter grid paper**		**Practice Problems**
14-8	**MA.3.AT.3**	**Solve problems using various strategies. Practice Problems**			**Practice Problems Cumulative Review Chapter 14 Post Test**

Additional Curriculum for the 1st nine weeks.

- **Remedia Publications: Real Life Math Series: Menu Math; The Hamburger Hut / Multiplication and Division**

- **First Bank Richmond – Student Savings Accounts**

PROCESS STANDARDS FOR MATHEMATICS

The Process Standards demonstrate the ways in which students should develop conceptual understanding of mathematical content, and the ways in which students should synthesize and apply mathematical skills.

PROCESS STANDARDS FOR MATHEMATICS	
PS.1: Make sense of problems and persevere in solving them.	Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway, rather than simply jumping into a solution attempt. They consider analogous problems and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" and "Is my answer reasonable?" They understand the approaches of others to solving complex problems and identify correspondences between different approaches. Mathematically proficient students understand how mathematical ideas interconnect and build on one another to produce a coherent whole.
PS.2: Reason abstractly and quantitatively.	Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.
PS.3: Construct viable arguments and critique the reasoning of others.	Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They analyze situations by breaking them into cases and recognize and use counterexamples. They organize their mathematical thinking, justify their conclusions and communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. They justify whether a given statement is true always, sometimes, or never. Mathematically proficient students participate and collaborate in a mathematics community. They listen to or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

PS.4: Model with mathematics.	Mathematically proficient students apply the mathematics they know to solve problems arising in everyday life, society, and the workplace using a variety of appropriate strategies. They create and use a variety of representations to solve problems and to organize and communicate mathematical ideas. Mathematically proficient students apply what they know and are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.
PS.5: Use appropriate tools strategically.	Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Mathematically proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. Mathematically proficient students identify relevant external mathematical resources, such as digital content, and use them to pose or solve problems. They use technological tools to explore and deepen their understanding of concepts and to support the development of learning mathematics. They use technology to contribute to concept development, simulation, representation, reasoning, communication and problem solving.
PS.6: Attend to precision.	Mathematically proficient students communicate precisely to others. They use clear definitions, including correct mathematical language, in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They express solutions clearly and logically by using the appropriate mathematical terms and notation. They specify units of measure and label axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently and check the validity of their results in the context of the problem. They express numerical answers with a degree of precision appropriate for the problem context.
PS.7: Look for and make use of structure.	Mathematically proficient students look closely to discern a pattern or structure. They step back for an overview and shift perspective. They recognize and use properties of operations and equality. They organize and classify geometric shapes based on their attributes. They see expressions, equations, and geometric figures as single objects or as being composed of several objects.
PS.8: Look for and express regularity in repeated reasoning.	Mathematically proficient students notice if calculations are repeated and look for general methods and shortcuts. They notice regularity in mathematical problems and their work to create a rule or formula. Mathematically proficient students maintain oversight of the process, while attending to the details as they solve a problem. They continually evaluate the reasonableness of their intermediate results.

MATHEMATICS: GRADE 3

The Mathematics standards for grade 3 are supplemented by the Process Standards for Mathematics.

The Mathematics standards for grade 3 are made up of 5 strands: Number Sense; Computation; Algebraic Thinking; Geometry; Measurement; and Data Analysis. The skills listed in each strand indicate what students in grade 3 should know and be able to do in Mathematics.

NUMBER SENSE

GRADE 3
3.NS.1: Read and write whole numbers up to 10,000. Use words, models, standard form and expanded form to represent and show equivalent forms of whole numbers up to 10,000.
3.NS.2: Compare two whole numbers up to 10,000 using >, =, and < symbols.
3.NS.3: Understand a fraction, 1/b, as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction, a/b, as the quantity formed by *a* parts of size 1/b. [*In grade 3, limit denominators of fractions to 2, 3, 4, 6, 8.*]
3.NS.4: Represent a fraction, 1/b, on a number line by defining the interval from 0 to 1 as the whole, and partitioning it into b equal parts. Recognize that each part has size 1/b and that the endpoint of the part based at 0 locates the number 1/b on the number line.
3.NS.5: Represent a fraction, a/b, on a number line by marking off lengths 1/b from 0. Recognize that the resulting interval has size a/b, and that its endpoint locates the number a/b on the number line.
3.NS.6: Understand two fractions as equivalent (equal) if they are the same size, based on the same whole or the same point on a number line.
3.NS.7: Recognize and generate simple equivalent fractions (e.g., 1/2 = 2/4, 4/6 = 2/3). Explain why the fractions are equivalent (e.g., by using a visual fraction model).
3.NS.8: Compare two fractions with the same numerator or the same denominator by reasoning about their size based on the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions (e.g., by using a visual fraction model).
3.NS.9: Use place value understanding to round 2- and 3-digit whole numbers to the nearest 10 or 100.

COMPUTATION

GRADE 3
3.C.1: Add and subtract whole numbers fluently within 1000.
3.C.2: Represent the concept of multiplication of whole numbers with the following models: equal-sized groups, arrays, area models, and equal "jumps" on a number line. Understand the properties of 0 and 1 in multiplication.
3.C.3: Represent the concept of division of whole numbers with the following models: partitioning, sharing, and an inverse of multiplication. Understand the properties of 0 and 1 in division.
3.C.4: Interpret whole-number quotients of whole numbers (e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each).
3.C.5: Multiply and divide within 100 using strategies, such as the relationship between multiplication and division (e.g., knowing that 8 x 5 = 40, one knows 40 ÷ 5 = 8), or properties of operations.
3.C.6: Demonstrate fluency with multiplication facts and corresponding division facts of 0 to 10.

ALGEBRAIC THINKING

GRADE 3
3.AT.1: Solve real-world problems involving addition and subtraction of whole numbers within 1000 (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).
3.AT.2: Solve real-world problems involving whole number multiplication and division within 100 in situations involving equal groups, arrays, and measurement quantities (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).
3.AT.3: Solve two-step real-world problems using the four operations of addition, subtraction, multiplication and division (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).
3.AT.4: Interpret a multiplication equation as equal groups (e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each). Represent verbal statements of equal groups as multiplication equations.
3.AT.5: Determine the unknown whole number in a multiplication or division equation relating three whole numbers.
3.AT.6: Create, extend, and give an appropriate rule for number patterns using multiplication within 100.

GEOMETRY

GRADE 3
3.G.1: Identify and describe the following: cube, sphere, prism, pyramid, cone, and cylinder.
3.G.2: Understand that shapes (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize and draw rhombuses, rectangles, and squares as examples of quadrilaterals. Recognize and draw examples of quadrilaterals that do not belong to any of these subcategories.
3.G.3: Identify, describe and draw points, lines and line segments using appropriate tools (e.g., ruler, straightedge, and technology), and use these terms when describing two-dimensional shapes.
3.G.4: Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole (1/2, 1/3, 1/4, 1/6, 1/8).

MEASUREMENT

GRADE 3
3.M.1: Estimate and measure the mass of objects in grams (g) and kilograms (kg) and the volume of objects in quarts (qt), gallons (gal), and liters (l). Add, subtract, multiply, or divide to solve one-step real-world problems involving masses or volumes that are given in the same units (e.g., by using drawings, such as a beaker with a measurement scale, to represent the problem).
3.M.2: Choose and use appropriate units and tools to estimate and measure length, weight, and temperature. Estimate and measure length to a quarter-inch, weight in pounds, and temperature in degrees Celsius and Fahrenheit.
3.M.3: Tell and write time to the nearest minute from analog clocks, using a.m. and p.m., and measure time intervals in minutes. Solve real-world problems involving addition and subtraction of time intervals in minutes.
3.M.4: Find the value of any collection of coins and bills. Write amounts less than a dollar using the ¢ symbol and write larger amounts using the $ symbol in the form of dollars and cents (e.g., $4.59). Solve real-world problems to determine whether there is enough money to make a purchase.
3.M.5: Find the area of a rectangle with whole-number side lengths by modeling with unit squares, and show that the area is the same as would be found by multiplying the side lengths. Identify and draw rectangles with the same perimeter and different areas or with the same area and different perimeters.
3.M.6: Multiply side lengths to find areas of rectangles with whole-number side lengths to solve real-world problems and other mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.
3.M.7: Find perimeters of polygons given the side lengths or by finding an unknown side length.

DATA ANALYSIS

GRADE 3
3.DA.1: Create scaled picture graphs, scaled bar graphs, and frequency tables to represent a data set—including data collected through observations, surveys, and experiments—with several categories. Solve one- and two-step "how many more" and "how many less" problems regarding the data and make predictions based on the data.
3.DA.2: Generate measurement data by measuring lengths with rulers to the nearest quarter of an inch. Display the data by making a line plot, where the horizontal scale is marked off in appropriate units, such as whole numbers, halves, or quarters.