



Archdiocese of Newark Catholic Schools

Curriculum Mapping

Curriculum mapping is a process that helps schools and districts/dioceses determine the “agreed-upon” learning for all students. Curriculum mapping was undertaken in the Archdiocese of Newark in order to ensure that a consistent, clearly articulated curriculum infused with Gospel values is being provided to all students in our schools. The curriculum maps for the Catholic schools of the Archdiocese of Newark identify the content to be taught and skills to be mastered at each grade level.

The expertise and experience of the educators within our schools is the main source for determining the content and skills students will be expected to master. The Archdiocesan curriculum maps are developed through a collaborative process which involves individual teacher contributions, small group sessions and larger group meetings. Relevant educational standards, including those proposed by content area experts, the New Jersey Core Curriculum Content Standards, and the Common Core State Standards, are used as a resource in the curriculum mapping process. The resulting consensus maps reflect the collective thinking of classroom teachers based on their observation of student learning and their knowledge of educational practice and research. The Archdiocesan curriculum maps include teacher generated ideas for the infusion of Gospel values and faith connection activities.

While the curriculum maps clearly articulate the expected learning for all students, individual teachers have the flexibility to teach the content and skills in their own manner by:

- ◆ utilizing their own particular strengths and teaching style
- ◆ addressing the varying learning needs of their students
- ◆ determining the order in which the content and skills are presented within a marking period
- ◆ including additional content and skills once students have met the learning expectations identified in the curriculum map

Administrators at all levels will maintain the responsibility to ensure that teachers are following the curriculum maps and that appropriate teaching is being conducted. This will be done through a combination of classroom observations, faculty meetings, professional development opportunities and teacher evaluations, as well as by using various measurement tools, including but not limited to in-class and standardized testing. The Archdiocesan curriculum maps will help ensure the academic excellence that is integral to the mission of our Catholic schools and will provide educators and parents with a clear understanding of the learning expectations at each grade level.

**Archdiocese of Newark Catholic Schools
Curriculum Map for Mathematics
Grade 2**

First Trimester: September-November

Standards	Content	Skills	Assessment	Gospel Values & Faith Connections
<p>2.OA.2 Fluently add and subtract within 20 using mental strategies. <i>By end of Grade 2, know from memory all sums of two one-digit numbers.</i></p> <p>2.MD.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.</p>	<p>Math Vocabulary</p> <p>Addition and Subtraction Facts/Strategies to 20</p>	<p>Demonstrate appropriate usage of math vocabulary.</p> <p>Apply mental strategies to add and subtract within 20.</p> <p>Select the best among the following strategies to add and subtract 0-20.</p> <ul style="list-style-type: none"> a) Use and construct a number line b) Use manipulatives c) Use double and doubles +1 d) Fact families e) Making tens f) Use the inverse relationship between addition and subtraction <p>Apply the Commutative and Associative Properties of addition.</p> <p>Utilize fact families to demonstrate the inverse relationship between addition and subtraction.</p>	<p>Student learning will be assessed on a continual basis using various types of formal and informal assessments. A list of possible assessment methods is provided below:</p> <ul style="list-style-type: none"> Teacher observation and interaction Exit card Teacher-created quizzes and tests Publisher-created assessments Oral presentation Class participation Homework Flash cards Timed fact drills Math games Individual response boards Learning center activities 	<p>Gospel values should be evident in the classroom environment and referenced and reinforced throughout the curriculum.</p> <p>Gospel Values</p> <ul style="list-style-type: none"> Community Compassion Faith in God Forgiveness Hope Justice Love Peace Respect For Life Service Simplicity Truth <p>Included in this column are suggestions for making faith connections within the Math classroom. These suggestions were submitted by teachers.</p>

**Archdiocese of Newark Catholic Schools
Curriculum Map for Mathematics
Grade 2**

First Trimester: September-November

Standards	Content	Skills	Assessment	Gospel Values & Faith Connections
<p>2.OA.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).</p> <p>2.MD.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems using information presented in a bar graph.</p>	<p>Problem Solving</p> <p>Data & Graphing</p>	<p>Identify key words and phrasing in math problems.</p> <p>Determine the operation and strategy to be used to solve a math problem.</p> <p>Visualize and represent the process used to solve a math problem.</p> <p>Distinguish among different types of graphs.</p> <p>Gather and record data from a variety of graphs.</p> <p>Construct questions for a survey.</p> <p>Design and construct various types of graph.</p> <p>Interpret data presented on various types of graphs.</p>		<p>Create word problems based on Bible stories or real life situations that reinforce Gospel values. <i>Examples: a) Noah built an ark. If Noah is using 17 feet of wood for one section of the ark, 8 feet for another section, and 24 feet of wood for a third section of the ark, how many feet of wood will he use in all? b) "Our class would like to donate a total of \$2 a day to our mission box. If we have \$1.50 this morning, how much more do we need by the end of day?"</i></p> <p>Students collaboratively tally the types of foods or packages donated by the class for a food pantry. They will generate a bar graph from the tally chart and interpret and explain the data.</p>

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<p>2.NBT.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.</p> <p>2.NBT.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.</p>	<p>Estimation</p> <p>Compare and Order Numbers</p>	<p>Estimate and round a number to the nearest 10s or 100s.</p> <p>Estimate to check the validity of an answer to solve problems.</p> <p>Distinguish between correct and incorrect estimation.</p> <p>List numbers in order from least to greatest or greatest to least.</p> <p>Distinguish numbers that come before, between, or after a given number or numbers.</p>		

**Archdiocese of Newark Catholic Schools
Curriculum Map for Mathematics
Grade 2**

Second Trimester: December-February

Standards	Content	Skills	Assessment	Gospel Values & Faith Connections
<p>2.OA.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem).</p> <p>2.NBT.9 Explain why addition and subtraction strategies work, using place value and the properties of operations. <i>(Explanations may be supported by visual representations.)</i></p> <p>2.NBT.7 Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.</p>	<p>Math Vocabulary</p> <p>Multistep Problem Solving and Logical Reasoning</p> <p>Two and Three Digit Addition and Subtraction with Regrouping</p>	<p>Demonstrate appropriate usage of math vocabulary.</p> <p>Determine the strategy to solve the problem and eliminate unnecessary information.</p> <p>Construct and evaluate concrete models (straws/counters) to demonstrate addition and subtraction of the ones, tens and hundreds columns.</p>	<p>Student learning will be assessed on a continual basis using various types of formal and informal assessments. A list of possible assessment methods is provided below:</p> <ul style="list-style-type: none"> Teacher observation and interaction Exit card Teacher-created quizzes and tests Publisher-created assessments Oral presentation Class participation Homework Flash cards Timed fact drills Math games Individual response boards Learning center activities 	<p>Gospel values should be evident in the classroom environment and referenced and reinforced throughout the curriculum.</p> <p>Gospel Values</p> <ul style="list-style-type: none"> Community Compassion Faith in God Forgiveness Hope Justice Love Peace Respect For Life Service Simplicity Truth <p>Included in this column are suggestions for making faith connections within the Math classroom. These suggestions were submitted by teachers.</p>

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Second Trimester: December-February

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<p>2.G.1 Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.</p> <p>2.G.S1 Identify and draw congruent figures.</p> <p>2.G.S2 Identify and draw one or more lines of symmetry in a plane figure.</p> <p>2.MD.S1 Find the perimeter of a figure.</p>	<p>Geometry</p>	<p>Identify and construct two dimensional objects.</p> <p>Determine lines of symmetry.</p> <p>Identify congruent figures.</p> <p>Distinguish between solid and plane figures.</p> <p>Recognize and construct three dimensional objects.</p> <p>Sort figures according to attributes.</p> <p>Determine how many square units cover an area.</p> <p>Apply addition skills for perimeter and area.</p> <p>Demonstrate and define geometric terms.</p>	<p>Student-created word problems</p> <p>Survey</p> <p>Web Quests</p> <p>Graphing</p> <p>Student clocks</p> <p>Technology-based assessment</p> <p>Group projects</p> <p>Math journals</p> <p>Spiral reviews</p> <p>Problem of the day</p> <p>Performance Tasks</p>	<p>Celebrate the 100th day of school, by having students bring in canned goods. The goal is collect 100 cans. The students can sort the cans by size, skip count by stacking them by 2, 3, 4, 5, and 10, and create arrays. The cans are then donated to a local food pantry.</p> <p>Explore the use of geometric shapes and concepts in design of famous cathedrals and stained glass windows.</p> <p>Look for and discuss examples of symmetry found in God’s creation.</p>

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<p>2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.</p> <p>2.MD.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.</p> <p>2.MD.3 Estimate lengths using units of inches, feet, centimeters, and meters.</p> <p>2.MD.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.</p> <p>2.MD.5 Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units (e.g., by using drawings, such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.</p>	<p>Measurement</p>	<p>Estimate and measure using standard and non-standard units, i.e. inches and centimeters.</p> <p>Compare and order length.</p> <p>Explain how the measurement of an object's length relates to the size of the measurement unit chosen to measure the object.</p> <p>Classify and choose appropriate units of measurement.</p> <p>Identify and use the appropriate tool (ruler, yard stick, scale, thermometer, measuring cup, etc.) to measure a specific attribute.</p>		

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<p>2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:</p> <ul style="list-style-type: none"> a) 100 can be thought of as a bundle of ten tens — called a “hundred.” b) The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones). <p>2.NBT.2 Count within 1000; skip-count by 5s, 10s, and 100s.</p>	<p>Place value to 1000</p>	<p>Identify the value of a given digit up to a thousand.</p> <p>Model place value of a three digit number, using manipulatives.</p> <p>Compare the value of three digit numbers by using $>$, $<$, and $=$.</p> <p>Recall addition and skip counting.</p>		

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Third Trimester: March-June

Standards	Content	Skills	Assessment	Gospel Values & Faith Connections
<p>2.MD.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. <i>Example: If you have 2 dimes and 3 pennies, how many cents do you have?</i></p>	<p>Money</p>	<p>Identify dollar and cents.</p> <p>Classify coins by value.</p> <p>Find the value of a mixed collection of dollars and cents.</p> <p>Show amounts of money in various ways.</p> <p>Find the fewest number of coins to equal any given amount.</p> <p>Calculate change.</p> <p>Compare an amount of money to the cost of an item.</p> <p>Recognize and write money symbols.</p>	<p>Student-created word problems</p> <p>Survey</p> <p>Web Quests</p> <p>Graphing</p> <p>Student clocks</p> <p>Technology-based assessment</p> <p>Group projects</p> <p>Math journals</p> <p>Spiral reviews</p> <p>Problem of the day</p> <p>Performance Tasks</p>	<p>Use bar graphs to track money collected for the poor on a weekly basis. Ask questions to help students analyze the data presented in the graph</p> <p>Have students keep a journal to track money saved by giving up an item for Lent.</p>

