



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 1

First Trimester: September-November

Standards	Content	Skills	Assessment	Gospel Values & Faith Connections
<p>1.NBT.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.</p> <p>1.NBT.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:</p> <p style="padding-left: 20px;">a) 10 can be thought of as a bundle of ten ones — called a “ten.”</p> <p style="padding-left: 20px;">b) The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.</p> <p style="padding-left: 20px;">c) The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).</p> <p>1.OA.S1 Identify odd and even numbers and determine whether a set of objects has an odd or even number of elements.</p>	<p>Number Sense</p>	<p>Identify the value of digits in two-digit numbers.</p> <p>Estimate the quantity in a set of up to 60 objects.</p> <p>Determine whether a set contains an odd or even number of objects.</p>	<p>Homework</p> <p>Timed Drills/Fast Facts</p> <p>Classroom Observations</p> <p>Portfolio</p> <p>Student hands-on demonstrations</p>	<p>Counting: Use religious articles such as rosary beads, prayer cards, and medals to count and sort.</p> <p>Use the 100-chart or counters with the story “The Lost Sheep”. Count to 100 and subtract 1 for 99.</p> <p>Ordinal Numbers: Listen to the Story of Creation in Genesis and identify what God made on each day.</p> <p>Identify the weeks in the liturgical calendar. (Example: Sixth week in Ordinary Time)</p>

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<p>1.OA.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions (e.g., by using objects, drawings, number lines, and equations with a symbol for the unknown number to represent the problem).</p> <p>1.OA.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20 (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem).</p> <p>1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10, using strategies such as:</p> <ul style="list-style-type: none"> ○ counting on ○ making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$) ○ decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$) ○ using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$) 	<p>Basic addition and subtraction (0-12)</p>	<p>Use counters and pictorial models to show addition stories.</p> <p>Model addition by joining two groups.</p> <p>Write addition equations using plus and equal signs.</p> <p>Utilize manipulatives to make sums of 4 through 12.</p> <p>Calculate sums ten through twenty using a ten-frame.</p> <p>Apply various strategies (fact families, doubles, doubles plus one, counting on, etc.) to fluently add and subtract with sums to 20.</p> <p>Solve addition equations written in horizontal or vertical form.</p> <p>Compute sums for addition sentences with zero as an addend.</p>		<p>Skills Practice: Bible word games encourage students to think about God's word while practicing math skills. For example, present students with a secret code that uses numbers but translates into a Bible verse or Bible lesson.</p>

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<p>○ creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$).</p> <p>1.OA.3 Apply properties of operations as strategies to add and subtract. <i>Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known (Commutative property of addition). To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$ (Associative property of addition).</i></p> <p>1.OA.4 Understand subtraction as an unknown-addend problem. <i>Example: Subtract $10 - 8$ by finding the number that makes 10 when added to 8.</i></p> <p>1.OA.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. <i>Example: Which of the following equations are true and which are false? $6 = 6$, $7 = 8 - 1$, $5 + 2 = 2 + 5$, $4 + 1 = 5 + 2$.</i></p>		<p>Apply the Commutative Property by changing the position of addends.</p> <p>Recognize and differentiate between the Commutative Property and the Associative Property.</p> <p>Utilize the properties of addition to add three addends.</p> <p>Demonstrate the relationship between addition and subtraction.</p> <p>Use counters and pictorial models to show subtraction stories.</p> <p>Model subtraction by removing one part from the whole.</p> <p>Write subtraction sentences using minus and equal signs.</p>		

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First Trimester: September-November

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		<p>Utilize manipulatives to subtract from 4 through 12.</p> <p>Solve subtraction equations presented in horizontal or vertical form.</p> <p>Apply different strategies to solve subtraction problems.</p> <p>Determine sums and differences using a number line.</p> <p>Differentiate between subtraction and addition by using a number line.</p> <p>Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.</p>		

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<p>1.OA.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. <i>Example: Determine the unknown number that makes the equation true in each of the equations $8 + ? = 11$, $5 = \square - 3$, $6 + 6 = \square$.</i></p> <p>1.MD.S1 Identify parts of the day (e.g., morning, afternoon, evening) week, month, and calendar.</p>	<p>Problem Solving</p> <p>Math Vocabulary</p> <p>Calendar Skills</p>	<p>Apply various strategies to solve word problems involving addition and subtraction within twelve.</p> <p>Develop a number sentence to mathematically represent the situation described in a word problem.</p> <p>Assess the reasonableness of answers by checking and reviewing work.</p> <p>Explain the meaning of math terms and use math terms properly and consistently.</p> <p>Demonstrate calendar skills by verbal or written identification of the days of the week, months of the year and seasons.</p> <p>Articulate the date.</p>		<p>Create word problems linked to Bible stories.</p>

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First Trimester: September-November

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<p>1.MD.4 Organize, represent, and interpret data with up to three categories using tallies, charts, tables, bar graphs, pictographs, and Venn diagrams; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.</p>	<p>Data & Graphing</p>	<p>Describe methods for collecting data.</p> <p>Record data using tally charts.</p> <p>Organize and present data with up to three categories using tallies, tables, bar graphs, and Venn diagrams.</p> <p>Compare and interpret data presented in Venn diagrams, bar graphs, pictographs, and tally charts.</p>		<p>Students work together to tally the foods donated to the food pantry. They will generate a bar graph from the tally chart and interpret and explain the data.</p>

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Second Trimester: December-February

Standards	Content	Skills	Assessment	Gospel Values & Faith Connections
<p>1.MD.3 Tell and write time in hours and half-hours using analog and digital clocks.</p> <p>1.MD.S1 Identify parts of the day (e.g., morning, afternoon, evening) week, month, and calendar.</p>	<p>Time to the half hour and hour</p>	<p>Determine the correct amount of change by comparing the cost of an item and the value of a group of coins up to 20¢.</p> <p>Identify the number of each coin (pennies, nickels and dimes) equivalent to \$1.00.</p> <p>Recognize and distinguish between hour and half hour using analog and digital clocks.</p> <p>Tell, illustrate, and identify time to the hour and half hour on digital and analog clocks.</p> <p>Draw and number a clock face and place hands in proper positions for a given time.</p>		

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<p>1.NBT.1 Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.</p> <p>1.NBT.2 Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:</p> <ul style="list-style-type: none"> ○ 10 can be thought of as a bundle of ten ones — called a “ten.” ○ The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones. 	<p>Number order to 120</p>	<p>Determine elapsed time in a word problem.</p> <p>Identify parts of the day (morning, afternoon, evening).</p> <p>Demonstrate knowledge of calendar skills using models in the classroom.</p> <p>Identify and express number order to 120.</p> <p>Locate numbers on a number line.</p> <p>Compare one digit numbers using $>$, $<$, $=$ symbols (2 digits numbers in 3rd trimester).</p> <p>Demonstrate greater than, less than, and equal to using a number line, hundreds chart, and manipulatives.</p>		

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Second Trimester: December-February

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<ul style="list-style-type: none"> ○ The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones). <p>1.NBT.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.</p> <p>1.NBT.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.</p> <p>1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10, using strategies such as:</p> <ul style="list-style-type: none"> ○ counting on ○ making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$) ○ decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$) 	<p>Basic facts up to 20</p>	<p>Orally count to 120.</p> <p>Recognize number words to 20.</p> <p>Establish patterns of skip counting using number lines and hundreds charts.</p> <p>Identify and create fact families using three given numbers.</p> <p>Solve problems using fact families.</p> <p>Find the sum of three single-digit addends.</p>		

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Second Trimester: December-February

Standards	Content	Skills	Assessment	Gospel Values & Faith Connections
<ul style="list-style-type: none"> ○ using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); ○ creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$). <p>1.OA.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20 (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem).</p> <p>1.OA.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).</p> <p>1.G.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.</p>	<p>Geometric Shapes and Attributes</p>	<p>Apply previously learned strategies of using doubles and counting on.</p> <p>Model doubles and doubles plus one using cubes.</p> <p>Use counting on and counting back strategies on a number line to add and subtract.</p> <p>Use appropriate Math vocabulary correctly and consistently: addend, sum, and difference, etc.</p> <p>Classify shapes by sides and angles.</p> <p>Identify geometric shapes in classroom and real life objects.</p>		

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Second Trimester: December-February

Standards	Content	Skills	Assessment	Gospel Values & Faith Connections
<p>1.G.S2 Identify and draw one or more lines of symmetry in a plane figure.</p> <p>1.G.S1 Identify and draw congruent figures.</p> <p>1.MD.S3 Determine how many congruent shapes cover a region.</p> <p>1.OA.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions (e.g., by using objects, drawings, number lines, and equations with a symbol for the unknown number to represent the problem).</p> <p>1.OA.3 Apply properties of operations as strategies to add and subtract. <i>Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known (Commutative property of addition). To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$ (Associative property of addition).</i></p>	<p>Addition & subtraction facts (1-20)</p>	<p>Demonstrate symmetry using geometric shapes.</p> <p>Determine how many congruent shapes cover a region (area).</p> <p>Demonstrate fluency of addition & subtraction facts for 1-20.</p> <p>Apply math strategies and properties to facilitate adding and subtracting.</p> <p>Model addition and subtraction using manipulatives.</p> <p>Translate pictures into number sentences.</p> <p>Illustrate word problems using a double ten frame for adding and subtracting.</p>		<p>Identify and discuss shapes and patterns in God's creation. Talk about the patterns in the snowflakes and honeycombs of a beehive. This shows the intricacy and magnificence of God's work.</p> <p>Have children go on a nature walk to find and identify examples of symmetry in nature</p>

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<p>1.OA.4 Understand subtraction as an unknown-addend problem. <i>Example: Subtract $10 - 8$ by finding the number that makes 10 when added to 8.</i></p> <p>1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10, using strategies such as:</p> <ul style="list-style-type: none"> ○ counting on ○ making ten (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4 = 14$) ○ decomposing a number leading to a ten (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 = 9$) ○ using the relationship between addition and subtraction (e.g., knowing that $8 + 4 = 12$, one knows $12 - 8 = 4$); ○ creating equivalent but easier or known sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 = 12 + 1 = 13$). 		<p>Use a graphic organizer to explore a numerical equation.</p>		

Archdiocese of Newark Catholic Schools
Curriculum Map for Mathematics
Grade 1

Third Trimester: March-June

Standards	Content	Skills	Assessment	Gospel Values & Faith Connections
<p>1.OA.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions (e.g., by using objects, drawings, number lines, and equations with a symbol for the unknown number to represent the problem).</p> <p>1.OA.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20 (e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem).</p> <p>1.OA.3 Apply properties of operations as strategies to add and subtract. <i>Examples: If $8 + 3 = 11$ is known, then $3 + 8 = 11$ is also known (Commutative property of addition). To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$ (Associative property of addition).</i></p>	<p>Problem solving</p>	<p>Read and extract pertinent information from word problems using learned strategies.</p> <p>Choose the correct strategy to solve math problems.</p> <p>Examine and justify the process used to solve math problems.</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> <p>Exit Tickets</p> <p>Math Journals</p> <p>Modeling with manipulatives</p> <p>Drawing/Illustrating</p> <p>Tests and Quizzes</p> <p>Projects</p> <p>Oral Assessment</p> <p>Dry erase response system</p> <p>Math games</p> <p>Group work</p> <p>Center Activities</p> <p>Student created problems</p> <p>Online games and programs</p>	<p>Gospel values should be evident in the classroom environment and referenced and reinforced throughout the curriculum.</p> <p>Gospel Values</p> <p>Community</p> <p>Compassion</p> <p>Faith in God</p> <p>Forgiveness</p> <p>Hope</p> <p>Justice</p> <p>Love</p> <p>Peace</p> <p>Respect For Life</p> <p>Service</p> <p>Simplicity</p> <p>Truth</p> <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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Third Trimester: March-June

Standards	Content	Skills	Assessment	Gospel Values & Faith Connections
<p>1.G.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.</p> <p>1.G.2 Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from a composite shape.</p>	<p>Geometry: Shapes and Attributes</p>	<p>Identify and draw basic two dimensional shapes: triangles, squares, trapezoids, rectangles, squares, circle, half-circle quarter circle, oval.</p> <p>Classify and sort shapes according to attributes.</p> <p>Distinguish between defining & non-defining attributes of shapes.</p> <p>Differentiate between two dimensional and three dimensional shapes and solids.</p> <p>Identify faces, sides, and vertices.</p> <p>Draw and build shapes with given attributes.</p> <p>Combine shapes to form composite shapes.</p>		<p>Triangles: Use an equilateral triangle to illustrate the concept of the Trinity.</p> <p>Explore samples of Catholic symbols. After identifying and reviewing these symbols, visit the church and ask students to observe their surroundings. Have students complete a worksheet with various shapes and connect the shape to the different objects they locate in the church with the same shape</p>

