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.

First Trimester: September-November						
Standards	Content	Skills	Assessment	Gospel Values & Faith Connections		
 6.NS.S2 Demonstrate an understanding of positive integer exponents, in particular, when used in powers of ten (e.g., 10², 10⁵). 6.NS.S3 Demonstrate an understanding of place value to billions and thousandths. 	Place Value (6.NS.S2, 6.NS.S3)	Compare and order whole numbers and decimals using place value or a number line. Read and write numbers in standard, expanded, and word form.	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:	Gospel values should be evident in the classroom environment and referenced and reinforced throughout the curriculum. Gospel Values Community		
 6.EE.2 Write, read, and evaluate expressions in which letters stand for numbers. a) Write expressions that record operations with numbers and with letters standing for numbers. b) Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single 	Mathematical and Algebraic Expressions (6.EE.2, 6.EE.5, 6.EE.6)	Write expressions in exponential form and write numbers in expanded form using exponents. Round whole numbers and decimals to a particular place value or greatest place value. Translate words to mathematical and algebraic expressions and equations. Read mathematical and algebraic expressions and equations using the correct	Teacher created quizzes Review of homework Class participation Games for concept review Web-based Math programs Spiral review Teacher observation Peer collaboration Exit tickets Projects Chapter tests Pre/Post assessment of skills Final exam (3 rd trimester)	Compassion Faith in God Forgiveness Hope Justice Love Peace Respect For Life Service Simplicity Truth Included in this column are some suggestions for making faith connections within the Math classroom. These suggestions were submitted by teachers.		

First Trimester: September-November

Standards	Content	Skills	Assessment	Gospel Values & Faith
				Connections
6.EE.6 Use variables to represent			Use of manipulative	In trying to bring in the
numbers and write expressions when solving a real-world or mathematical			Review of notebooks	concept of social justice, we discuss the Parish Lunch
problem; understand that a variable can represent an unknown number, or,			Cross-curriculum activities	Program for the homeless. The students are asked to
depending on the purpose at hand, any number in a specified set.			Journals	create a monthly budget for
number in a specified set.			Oral quizzes	a food pantry that serves
			orur quizzes	about 30 to 40 people a day. In creating a budget, they
6.NS.2 Fluently divide multi-digit				must use store circulars to
numbers using the standard algorithm.	Whole numbers and decimals	Perform computations with whole numbers and		find the better buy for the groceries and other
6.NS.3 Fluently add, subtract, multiply,	(6.NS.2, 6.NS.3,	decimals using the four		necessities. Once the budget
and divide multi-digit decimals using the	6.EE.1, 6.EE.2)	operations and order of		is established and weekly
standard algorithm for each operation.		operations.		grocery list is created, the students are to present their
6.EE.1 Write and evaluate numerical		Identify, interpret, and		information as a circle
expressions involving whole-number exponents.		extend patterns.		graph using percentages.
6.EE.2 Write, read, and evaluate		Write and evaluate		Sequence
expressions in which letters stand for		expressions involving		Fibonacci sequence - Use
numbers.		whole number exponents		the sequence to study the occurrence of patterns in
				nature
6.NS.S2 Demonstrate an understanding	Scientific	Represent numbers by using scientific notation.		
of positive integer exponents, in particular, when used in powers of ten $(e.g., 10^2, 10^5)$.	notation (6.NS.S2)	Convert numbers expressed in scientific notation to		
		standard form.		

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First Trimester: September-November

First Trimester: September-November						
Standards	Content	Skills	Assessment	Gospel Values & Faith		
				Connections		
6.EE.2c Evaluate expressions at specific	Algebraic	Simplify and evaluate				
values of their variables. Include	expressions	algebraic expressions.				
expressions that arise from formulas used	(6.EE.2)					
in real-world problems. Perform						
arithmetic operations, including those						
involving whole number exponents, in						
the conventional order when there are no						
parentheses to specify a particular order (Order of Operations).						
(Order of Operations).						
		Recognize and apply the				
6.EE.3 Apply the properties of operations	Vocabulary/	properties of operations.				
to generate equivalent expressions.	Properties	F F F F F F F F F F F F F F F F F F F				
	(6.NS.4, 6.EE.3)					
6.NS.4 Find the greatest common factor						
of two whole numbers less than or equal						
to 100 and the least common multiple of						
two whole numbers less than or equal to						
12. Use the distributive property to						
express a sum of two whole numbers 1–						
100 with a common factor as a multiple						
of a sum of two whole numbers with no						
common factor.						
6 FF 6 Use veriables to represent	Problem Solving	Develop strategies to solve				
6.EE.6 Use variables to represent numbers and write expressions when	(6.EE.6, 6.EE.7)	word problems related to				
solving a real-world or mathematical		various math topics.				
problem; understand that a variable can						
represent an unknown number, or,						
depending on the purpose at hand, any						
number in a specified set.						
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First Trimester: September-November

Standards	Content	Skills	Assessment	Gospel Values & Faith Connections
6.EE.7 Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p , q and x are all nonnegative rational numbers.				
6.NS.S1 Apply number theory concepts (including prime and composite numbers, prime factorization, greatest common factor, least common multiple, and divisibility rules for 2, 3, 4, 5, 6, 9, and 10) to the solution of problems.	Divisibility rules (6.NS.S1)	Apply the rules for determining divisibility by 2, 3, 4, 5, 6, 9, and 10.		

Second Trimester: December-Febru Standards	Content	Skills	Assessment	Gospel Values & Faith Connections
6.NS.S1 Apply number theory concepts (including prime and composite numbers,	Number Theory (6.NS.S1,6.NS.4)	Distinguish between prime	Student learning will be assessed on a continual	Gospel values should be evident in the classroom
prime factorization, greatest common	(0.18.51,0.18.4)	and composite numbers.	basis using various types of	environment and referenced
factor, least common multiple, and divisibility rules for 2, 3, 4, 5, 6, 9, and		Represent a number using	formal and informal	and reinforced throughout
10) to the solution of problems.		prime factorization.	assessments. A list of possible assessment	the curriculum.
6.NS.4 Find the greatest common factor		Identify the Least Common	methods is provided below:	Gospel Values
of two whole numbers less than or equal		Multiple (LCM) and	Teacher created quizzes	Community
to 100 and the least common multiple of		Greatest Common Factor (GCF) of two or more	Review of homework	Compassion
two whole numbers less than or equal to 12. Use the distributive property to		numbers.	Class participation	Faith in God Forgiveness
express a sum of two whole numbers 1–100 with a common factor as a multiple		Relate mixed numbers and	Games for concept review	Норе
of a sum of two whole numbers with no		improper fractions.	Web-based Math	Justice
common factor. Example: Express 36 + 8 as 4 (9 + 2).		Simplify, compare, and	programs	Love
		order fractions.	Spiral review	Peace
			Teacher observation	Respect For Life
			Peer collaboration	Service
			Exit tickets	Simplicity
6.NS.1 Interpret and compute quotients	F 4:	B 6	Projects	Truth
of fractions, and solve word problems involving division of fractions by	Fraction Operations	Perform computations with fractions using the four	Chapter tests	Included in this column are
fractions (e.g., by using visual fraction models and equations to represent the	(6.NS.1)	operations.	Pre/Post assessment of skills	some suggestions for making faith connections
problem).			Final exam (3 rd trimester)	within the Math classroom. These suggestions were
			Standardized test	submitted by teachers.

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Second Trimester: December-February

Standards	Content	Skills	Assessment	Gospel Values & Faith Connections
	Fraction/Decimal	Relate fractions and	Use of manipulative	
	equivalence	decimals.	Review of notebooks	
		Compare and convert fractions and decimals.	Cross-curriculum activities	
			Journals	
			Oral quizzes	
	Terminating & Repeating decimals	Distinguish between terminating and repeating decimals.		
 6.RP.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities. 6.RP.2 Understand the concept of a unit rate a/b associated with a ratio a:b with b ≠ 0, and use rate language in the context of a ratio relationship. 	Ratio/Proportion (6.RP.1, 6.RP.2, 6.RP.3)	Describe the relationship between ratio, proportion, and percent Apply ratio, rates, and percent to real world problems i.e. sales tax, mark		Connecting to Church and Parish When doing problems involving percents, or measurement use places and things that are part of the parish or connected to the
 6.RP.3 Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations. a) Make tables of equivalent ratios relating quantities with whole 		ups, and interest. Apply the percent formula to find the unknown rate, the unknown base, or the unknown amount (part of a given number) in percent problems		Catholic faith. Scale Drawings –Make models of the church or parish center.

Grade 6

Second Trimester: December-February

	Standards	Content	Skills	Assessment	Gospel Values & Faith Connections
	number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.		Express quantities as ratios and rates. Solve problems involving proportional relationships.		
b)	Solve unit rate problems including those involving unit pricing and constant speed.		Convert among percents, decimals and fractions.		
c)	Find a percent of a quantity as a rate per 100 (e.g., 30% of a quantity means 30/100 times the quantity); solve problems involving finding the whole when given a part and the percent.				
d)	Use ratio reasoning to convert measurement units; manipulate and transform units appropriately when multiplying or dividing quantities; solve problems involving proportional relationships (e.g. scale models, maps, speed).	Measurement (6.RP.3a & 3d)	Identify and convert units of length, capacity, and weight. Convert measurement units. Apply knowledge of units of measure to real world situations.		

Second Trimester: December-February

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Standards	Content	Skills	Assessment	Gospel Values & Faith
6 CD 1 December a statistical areat.	D 4 A 1 :	Callest and int		Connections
6.SP.1 Recognize a statistical question as one that anticipates variability in the data	Data Analysis	Collect and interpret		Data, Statistics, & Graphs
related to the question and accounts for it	(6.SP.1, 6.SP.2,	statistical data.		Have students do research
in the answers.	6.SP.3, 6.SP.4)			to gather statistics about
in the unswers.		Identify and utilize the		homelessness, poverty rates,
6.SP.2 Understand that a set of data		various forms of graphs to		etc. Create graphs to
collected to answer a statistical question		display and interpret data.		present the statistics. Find
has a distribution which can be described				out about programs that
by its center, spread, and overall shape.				address these needs in your
6.SP.3 Recognize that a measure of				local community and ways
center for a numerical data set				students can support these
summarizes all of its values with a single				programs.
number, while a measure of variation				
describes how its values vary with a	Mean, Median,	Determine the mean,		Graphs
single number.	Range, and	median, mode, and range of		Create bar graphs showing
6.SP.4 Display numerical data in plots on	Mode	a set of data.		the average monthly
a number line, including dot plots,	(6.SP.5)			precipitation and line graphs showing the average
histograms, and box-and- whisker plots.	(0.51.0)	Apply measures of central		monthly temperature in
6.SP.5 Summarize numerical data sets in		tendencies to real life		various biomes. Discuss
relation to their context:		situations.		diversity in God's creation.
a) Reporting the number of				diversity in God's creation.
observations.				
b) Describing the nature of the				
attribute under investigation,				
including how it was measured and				
its units of measurement.				
c) Giving quantitative measures of				
center (median and/or mean) and				
variability (interquartile range				

Second Trimester: December-February

Standards	Content	Skills	Assessment	Gospel Values & Faith Connections
and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered.				
d) Relating the choice of measures of center and variability to the shape of the data distribution and the context in which the data were gathered.				
6.EE.6 Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set. 6.EE.7 Solve real-world and mathematical problems by writing and solving equations of the form $x + p = q$ and $px = q$ for cases in which p , q and x are all nonnegative rational numbers.	Problem Solving (6.EE.6)	Identify and classify geometric shapes based on attributes. Apply various strategies to solve word problems relating to each topic.		Problem Solving Calculate fundraising contributions or parish collections. Example if 10% of a group of 545 people each gave \$5.00 and 5% each gave \$10.00 how much would be collected? Is this more or less than the amount collected if 12% of the 545 people gave \$7.00?

Third Semester: March-June					
Standards	Content	Skills	Assessment	Gospel Values & Faith Connections	
 6.EE.2c Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). 6.G.4 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems. 6.G.S1 Identify, measure, and describe circles and the relationship between the radius, and the diameter (e.g., d = 2r, π = C/d), and use these concepts to solve problems involving circumference and area. 	Geometry (6.EE.2c, 6.G.4, 6.G.S1)	Identify and apply formulas to determine area, perimeter, volume, and surface area of two- and three-dimensional figures. Perform transformations, reflections, and rotations on a 2D plane. Analyze relationships of angles. Identify parts of a circle. Classify solid figures.	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: Teacher created quizzes Review of homework Class participation Games for concept review Web-based Math programs Spiral review Teacher observation Peer collaboration Exit tickets Projects Chapter tests Pre/Post assessment of skills Final exam (3 rd trimester) Standardized test	Gospel values should be evident in the classroom environment and referenced and reinforced throughout the curriculum. Gospel Values Community Compassion Faith in God Forgiveness Hope Justice Love Peace Respect For Life Service Simplicity Truth Included in this column are some suggestions for making faith connections within the Math classroom. These suggestions were submitted by teachers.	

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Third Semester: March-June				
Standards	Content	Skills	Assessment	Gospel Values & Faith Connections
6.SP.S1 Use tree diagrams and other models (e.g., lists and tables) to represent possible or actual outcomes of trials. Analyze the outcomes. 6.SP.S2. Predict the probability of outcomes of simple experiments (e.g., tossing a coin, rolling a die) and test the predictions. Use appropriate ratios between 0 and 1 to represent the probability of the outcome and associate the probability with the likelihood of the event.	Probability (6.SP.S1, 6.SP. S2)	Determine and apply basic concepts of probability using tree diagrams permutations and combinations. Find the probability of independent or dependent events.	Use of manipulative Review of notebooks Cross-curriculum activities Journals Oral quizzes	
6.NS.5 Understand that positive and negative numbers are used together to describe quantities having opposite directions or values; use positive and negative numbers to represent quantities in real-world contexts, explaining the meaning of 0 in each situation.	Integers (6.NS.5, 6.NS.6, 6.NS.7 6.NS.8, 6.G.3)	Locate integers and their opposite on a number line. Identify and graph integers, find opposites, and absolute value.		
6.NS.6 Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates. a) Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself, e.g., -(-3) = 3, and		Compare and order integers. Construct a coordinate grid and plot the points in all four quadrants. Add, subtract, multiply, and divide integers.		

Third Semester: March-June				
Standards	Content	Skills	Assessment	Gospel Values & Faith
				Connections
that 0 is its own opposite.				
b) Understand signs of numbers in				
ordered pairs as indicating				
locations in quadrants of the				
coordinate plane; recognize that				
when two ordered pairs				

c) Find and position integers and other rational numbers on a horizontal or vertical number line diagram; find and position pairs of integers and other rational numbers on a coordinate plane.

differ only by signs, the locations of the points are related by

reflections across one or both axes.

6.NS.7 Understand ordering and absolute value of rational numbers.

- a) Interpret statements of inequality as statements about the relative position of two numbers on a number line diagram.
- b) Write, interpret, and explain statements of order for rational numbers in real-world contexts. Example: Write $-3 \,^{\circ}C > -7 \,^{\circ}C$ to express the fact that $-3 \,^{\circ}C$ is warmer than $-7 \,^{\circ}C$.
- c) Understand the absolute value of a rational number as its distance from 0 on the number line; interpret absolute value as magnitude for a

Third	Semester:	March	n-June
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Third Semester: March-June Standards	Contort	Skills	A ggogggggg4	Compl Volume 9- E-44
Standards	Content	SKIIIS	Assessment	Gospel Values & Faith Connections
positive or negative quantity in a real-world situation.				Connections
d) Distinguish comparisons of absolute value from statements about order. Example: Recognize that an account balance less than – 30 dollars represents a debt greater than 30 dollars.				
6.NS.8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.				
6.G.3 Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate. Apply these techniques in the context of solving real-world and mathematical problems.				

Third Semester:	Marc	h-June
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Third Semester: March-June				
Standards	Content	Skills	Assessment	Gospel Values & Faith
CEPAIL CO. 1	0.1.	11 (10 11 1		Connections
6.EE.4 Identify when two expressions are	Solving	Identify equivalent		
equivalent (i.e., when the two expressions name the same number	equations	expressions.		
regardless of which value is substituted	(6.EE.4, 6.EE.5, 6.EE.6, 6.EE.7)	Use the properties of		
into them).	0.LL.0, 0.LL.7)	equality to balance		
,		equations.		
6.EE.5 Understand solving an equation		equations.		
or inequality as a process of answering a		Use inverse operations to		
question: which values from a specified		isolate the variable.		
set, if any, make the equation or				
inequality true? Use substitution to determine whether a given number in a				
specified set makes an equation or				
inequality true.				
6.EE.6 Use variables to represent				
numbers and write expressions when solving a real-world or mathematical				
problem; understand that a variable can				
represent an unknown number, or,				
depending on the purpose at hand, any				
number in a specified set.				
6.EE.7 Solve real-world and				
mathematical problems by writing and				
solving equations of the form $x + p = q$				
and $px = q$ for cases in which p , q and x				
are all non-negative rational numbers.				

-	Third Semester: March-June				
Standards	Content	Skills	Assessment	Gospel Values & Faith Connections	
6.EE.8 Write an inequality of the form $x > c$ or $x < c$ to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form $x > c$ or $x < c$ have infinitely many solutions; represent solutions of such inequalities on number line diagrams.	Inequalities (6.EE.8)	Solve and graph inequalities.		Connections	
6.NS.8 Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane. Include use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	Problem Solving (6.NS.8, 6.EE.9)	Develop strategies to solve word problems relating to each topic.			
6.EE.9 Use variables to represent two quantities in a real-world problem that change in relationship to one another; write an equation to express one quantity, thought of as the dependent variable, in terms of the quantity, thought of as the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables, and relate these to the equation.					