Catholic Identity Standards

3.1 **Catholic identity standards.** The student understands and integrates the content of what is learned into their faith and daily life.*

Ways to Grow

3.1A	recognize that every human life is sacred because each person is created and loved by God*
3.1B	describe ways to take part in/be responsible to the community by discerning and using our God-given gifts*
3.1C	recognize and oppose unjust social structures and work toward justice for all*
3.1D	see God at work in all things and as expressed in the sacraments*
3.1E	connect scripture, tradition, and the models of Mary and the saints to guide, grow, and deepen faith*

Learning Process Standards

3.2 **Learning process standards.** The student uses mathematical processes to acquire and demonstrate mathematical understanding, demonstrating the mental habits of precise, determined, careful, and accurate questioning, inquiry, and reasoning.*

Tools to Know		Ways to Show	
3.2A	apply mathematics to problems arising in everyday life, society, and the workplace	3.2D	create and use representations to organize, record, and communicate mathematical ideas
3.2B	use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution	3.2E	analyze mathematical relationships to connect and communicate mathematical ideas
		3.2F	develop lines of inquiry to understand why things are true and why they are false*
3.2C	exhibit joy at solving difficult mathematical problems and operations*		

Place Value

3.3 **Place value.** The student represents and compares whole numbers and understands relationships related to place value.

Applied Standards		Supporting Standards	
3.3A	compose and decompose numbers up to 100,000 as a sum of so many ten thousands, so many thousands, so many hundreds, so many tens, and so many ones using objects, pictorial models, and numbers, including expanded notation as appropriate	3.3A.1	describe the mathematical relationships found in the base-10 place value system through the hundred thousands place
		3.3A.2	compare and order whole numbers up to 100,000 and represent comparisons using the symbols >, <, or =
		3.3A.3	represent a number on a number line as being between two consecutive multiples of 10; 100; 1,000; or 10,000 and use words to describe relative size of numbers in order to round whole numbers

Fractions

3.4 **Number and operations.** The student represents and explains fractional units.

3.4A	solve problems involving partitioning an object or a set of objects among two or more recipients using pictorial representations of fractions with denominators of 2, 3, 4, 6, and 8	3.4A.1	represent fractions with denominators of 2, 3, 4, 6, and 8 using concrete objects and pictorial models, including strip diagrams and number lines
		3.4A.2	determine the corresponding fraction with denominators of 2, 3, 4, 6, and 8 given a specified point on a number line
3.4B	explain that the unit fraction $1/b$ represents the quantity formed by one part of a whole that has been partitioned into b equal parts where b is a non-zero whole number	3.4B.1	compose and decompose a fraction a/b with a numerator greater than zero and less than or equal to b as a sum of parts $1/b$
		3.4B.2	decompose two congruent two-dimensional figures into parts with equal areas, express the area of each part as a unit fraction of the whole, and recognize that equal shares of identical wholes need not have the same shape
3.4C	compare two fractions having the same numerator or denominator in problems by reasoning about their sizes and justifying the conclusion using symbols, words, objects, and pictorial models	3.4C.1	represent equivalent fractions with denominators of 2, 3, 4, 6, and 8 using a variety of objects and pictorial models, including number lines

Addition and Subtraction of Whole Numbers

3.4	**Number and operations.** The student develops and uses strategies and methods for whole number computations in order to solve problems with efficiency and accuracy.		
3.4D	solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction	3.4D.1	represent one- and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations
		3.4D.2	round to the nearest 10 or 100 or use compatible numbers to estimate solutions
		3.4D.3	represent real-world relationships using number pairs in a table and verbal descriptions
3.4E	determine the value of a collection of coins and bills		

Multiplication and Division of Whole Numbers

3.4	**Number and operations.** The student develops and uses strategies and methods for whole number computations in order to solve problems with efficiency and accuracy.		
3.4F	solve one-step and two-step problems involving multiplication within 100 using a variety of strategies	3.4F.1	represent multiplication facts by using a variety of approaches such as repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line, and skip counting
		3.4F.2	recall facts to multiply up to 10 by 10 with automaticity and recall the corresponding division facts
		3.4F.3	use strategies and algorithms to multiply a two-digit number by a one-digit number
3.4G	solve one-step and two-step problems involving division within 100 using a variety of strategies	3.4G.1	determine the number of objects in each group when a set of objects is partitioned into equal shares or a set of objects is shared equally
		3.4G.2	determine if a number is even or odd using divisibility rules
		3.4G.3	determine a quotient using the relationship between multiplication and division
3.4H	represent and solve one- and two-step multiplication and division problems within 100 using arrays, strip diagrams, and equations	3.4H.1	determine the unknown whole number in a multiplication or division equation relating three whole numbers when the unknown is either a missing factor or product
		3.4H.2	represent real-world relationships using number pairs in a table and verbal descriptions

Geometry

3.6	**Geometry and measurement.** The student analyzes attributes of two-dimensional figures and three-dimensional solids to develop generalizations about their properties.		
3.6A	classify and sort three-dimensional solids, including cones, cylinders, spheres, triangular and rectangular prisms, pyramids, and cubes, based on attributes using formal geometric language	3.6A.1	use attributes to recognize rhombuses, parallelograms, trapezoids, rectangles, and squares as examples of quadrilaterals and draw examples of quadrilaterals that do not belong to any of these subcategories

Measurement

3.6	**Geometry and measurement.** The student selects appropriate units, strategies, and tools to solve problems involving customary and metric measurement.		
3.6B	determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems		
3.6C	determine the area of rectangles with whole number side lengths in problems using multiplication	3.6C.1	decompose composite figures formed by rectangles into non-overlapping rectangles to determine the area of the original figure using the additive property of area
3.6D	determine the solutions to problems involving addition and subtraction of time intervals in minutes using pictorial models or tools		
3.6E	determine liquid volume (capacity) or weight using appropriate units and tools	3.6E.1	determine when it is appropriate to use measurements of liquid volume (capacity) or weight

Data Analysis

3.7	**Data analysis.** The student solves problems by collecting, organizing, displaying, and interpreting data.		
3.7A	solve one- and two-step problems using categorical data represented with a frequency table, dot plot, pictograph, or bar graph with scaled intervals	3.7A.1	summarize a data set with multiple categories using a frequency table, dot plot, pictograph, or bar graph with scaled intervals