Math Program and Essential Standards Grade 3-5

Program Standard #1: PROBLEM SOLVING

Essential Standard #1: Identify and demonstrate strategies to solve problems

Standard #2: COMMUNICATION

Essential Standard #2: Explain mathematical terminology and processes

Standard #3: REASONING

Essential Standard #3: Demonstrate and justify mathematical processes

Standard #4: CONNECTIONS

Essential Standard #4: Show how mathematics relates to real-world situations

Standard #5: REPRESENTATIONS

Essential Standard #5: Demonstrate mathematical understanding

Directions for Use of Content Checklist

The grade level Content Checklist is designed to accompany the Essential Standards. Faculty discussion will need to take place to ensure consistency in teaching. The administrator should reproduce the Content Checklist and distribute it to all teachers.

The format for the Content Section is as follows:

1. Blank box to record date of instruction of content or to use as a check-off to indicate that instruction of content occurred
2. Numeric system that identifies the specific content statement
3. Content Statement
4. Nebraska Math Standard Reference **(NE)**
5. Program Standard Reference **(PS)**
6. Level of Teacher Instruction:
   Introduce (**I**), Develop **(D**), Master (**M)**

Introduce **(I)**: To provide with a beginning knowledge or first experience of something. No assessment.

Develop **(D**): To progress from simple to more complex through practice. Check for understanding as needed.

Master **(M)**: To gain control over content; to understand and be able to retrieve the specified material for use as needed to maintain proficiency. Must be assessed.

Teachers will use this curriculum as the basis for planning their lessons for the year. Use of the curriculum will assist students in attaining the Standards for which all are accountable. Teachers are required to spend 80% of their time teaching strictly from the curriculum guide with the remaining 20% of their time teaching concepts that enhance the curriculum.

Archdiocese of Omaha Math Content Checklist
Intermediate Grades 3-5

			Grade	Grade	Grade
		Intermediate Grades	**3**	**4**	**5**
	1	**NUMERATION/NUMBER SENSE**			
		Reads and writes place value of: (NE 4.1.1, 5.1.1; PS #5)			
	1.1	-Whole numbers to 1,000,000	**I**	**D,M**	
	1.2	-Decimals to 100ths		**I**	**D,M**
	1.3	-Decimals to 1,000ths		**I**	**D,M**
		Communicates in written, expanded, and standard form using: (NE 3.1.1, 4.1.1; PS #5)			
	1.4	-Whole numbers	**D**	**M**	
	1.5	-Decimals	**I**	**D,M**	
		Orders and compares: (NE 3.1.1, 4.1.1, 5.1.1; PS #1, 5)			
	1.6	-Whole numbers greater than 1,000	**D**	**M**	
	1.7	-Decimals		**I**	**D,M**
	1.8	-Fractions	**I**	**D**	**D,M**
	1.9	-Skip count by 3's	**D,M**		
	1.10	Classifies odd and even numbers (NE 4.1.1; PS #2)	**M**		
		Rounds a given number: (NE 3.1.1, 4.1.1, 5.1.1; PS #1, 5)			
	1.11	-Whole numbers to tens, hundred, thousands	**D**	**M**	
	1.12	-Decimals to any place		**I**	**D,M**
		Identifies and classifies relationships among numbers: (NE 4.1.1, 5.1.1, 6.1.1; #1, 5)			
	1.13	-Divisibility Rule		**I**	**D,M**
	1.14	-Equivalent Fractions	**I**	**D**	**M**
	1.15	-Ratios/Proportions			**I**
	1.16	-Percents			**I**
	1.17	-Prime Numbers/Composite Numbers		**I**	**D,M**
	1.18	-Greatest Common Factor		**I**	**D**
	1.19	-Factors and Multiples		**I,D**	**M**
	1.20	-Least Common Multiple		**I,D**	**D**
	1.21	-Prime Factorization		**I**	**D**
	1.22	-Exponents			**I**
	1.23	Represents a fraction as part of a whole or part of a set (NE 4.1.1; PS #5)	**I,D**	**M**	
	1.24	Locates fractions on a number line (NE 4.1.1; PS #1, 5)	**I,D**	**M**	
	1.25	Writes decimals as fractions (NE 7.1.1; PS #5)		**I**	**D**

Archdiocese of Omaha Math Content Checklist
Intermediate Grades 3-5

			Grade	Grade	Grade
		Intermediate Grades	**3**	**4**	**5**
		NUMERATION/NUMBER SENSE continued			
	1.26	Demonstrates the meaning of multiplication with whole numbers from 0-10 (NE 3.1.3; PS # 1, 5)	**D,M**		
	1.27	Multiplies and divides positive rational numbers fluently (NE 6.1.3; PS #1, 3)	**I**	**D**	**M**
		Recognizes different properties in mathematics: (NE 5.1.2; PS #1, 5)			
	1.28	-Commutative	**D**	**D**	**M**
	1.29	-Distributive			**I,D,M**
	1.30	-Associative	**I**	**D**	**M**
	1.31	-Identity	**I**	**D**	**M**
	1.32	-Zero	**I**	**D**	**M**
	1.33	Orders and compares relationships between whole numbers, fractions and decimals through 1000ths (NE 5.1.1; PS #1, 5)		**I**	**D,M**
	1.34	Uses objects, diagrams and pictures to show mathematical concepts (NE 3.1.2, 4.1.2; PS # 1, 2, 4, 5)	**D**	**M**	
	1.35	Uses related facts to solve and check problems (PS #1)	**I,D**	**M**	
	1.36	Demonstrates simple concepts of integers using temperature (PS #5)	**I**	**D**	**M**
		Uses money to: (PS #4, 5)			
	1.37	-Add combinations with coins and bills	**D**	**M**	
	1.38	-Count back change using fewest coins possible	**I**	**D**	**M**
	1.39	-Calculate change using subtraction	**D**	**D**	**M**
	1.40	-Rounds money to nearest dollar	**I,D**	**M**	
	1.41	Recognizes and applies math ideas in everyday life. (PS #4)	**D**	**D**	**D**

Archdiocese of Omaha Math Content Checklist
Intermediate Grades 3-5

			Grade	Grade	Grade
		Intermediate Grades	**3**	**4**	**5**
	2	**COMPUTATION/ESTIMATION**			
	2.1	Makes estimations and comparisons to actual results (NE 3.1.4; PS #1, 3)	**D,M**		
	2.2	Recognizes symbols of <,>,×,÷ (NE 5.1.2; PS #2)	**D**	**D,M**	
		Develops fluency in estimation of whole numbers: (NE 4.1.3, 5.1.3; PS #1, 2)			
	2.3	-Adding	**D**	**D,M**	
	2.4	-Subtracting	**D**	**D,M**	
	2.5	-Multiplying	**I**	**D**	**M**
	2.6	-Dividing	**I**	**D**	**M**
	2.7	Adds and regroups multi-digit and whole numbers with or without technology (NE 3.1.3, 4.1.3, 5.1.3, 6.1.3; PS #1, 2, 5)	**D**	**M**	
		Subtracting:			
	2.8	-Three digit numbers	**D**	**M**	
	2.9	-Four digit numbers	**I,D**	**M**	
	2.10	-Five digit numbers	**I**	**D,M**	
	2.11	-Six digit numbers	**I**	**D,M**	
	2.12	-Seven digit numbers	**I**	**D**	**M**
		Multiplying:			
	2.13	-Basic facts	**D**	**M**	
	2.14	-Two digit by one digit	**I,D**	**M**	
	2.15	-Two digit numbers	**I**	**D**	**M**
	2.16	-Three digit by one digit	**I,D**	**M**	
	2.17	-Three digit by two digit		**I**	**D,M**
	2.18	-Three digit numbers		**I**	**D**
		Dividing:			
	2.19	-Basic facts	**I**	**D**	**M**
	2.20	-Two digit by one digit	**I**	**D**	**M**
	2.21	-Three digit by one digit		**I,D**	**M**
	2.22	-Four digit by one digit		**I,D**	**M**
	2.23	-Three digit by two digit		**I**	**D**
	2.24	-Four digit by two digit		**I**	**D**
	2.25	Chooses correct operations and solves problems involving one-step solutions (NE 3.1.3; PS #1, 3, 4, 5)	**M**		
	2.26	Chooses correct operations and solves multi-step word problems (NE 3.1.3; PS #1, 2, 3, 4, 5)	**D,M**		
	2.27	Demonstrates and communicates solutions to problems (NE 3.1.3; PS #1, 2, 3, 4, 5)	**M**		
	2.28	Adds, subtracts, and estimates decimals including money with or without technology to 100ths place (NE 4.1.3; PS #2, 5)	**I**	**D,M**	

Archdiocese of Omaha Math Content Checklist
Intermediate Grades 3-5

			Grade	Grade	Grade
		Intermediate Grades	**3**	**4**	**5**
		COMPUTATION/ESTIMATION continued			
	2.29	Multiplies decimals including money with or without technology (NE 5.1.3; PS #2, 5)		**I**	**D,M**
	2.30	Divides decimals by a whole number with or without technology (NE 5.1.3; PS #2, 5)		**I**	**D,M**
		Adds, subtracts, and estimates fractions with our without technology (NE 5.1.3, 6.1.3, 7.1.3; PS #2, 5)			
	2.31	-Proper fractions with common denominators		**I,D**	**M**
	2.32	-Proper fractions with uncommon denominators		**I**	**D**
	2.33	-Improper fractions with common denominators		**I**	**D**
	2.34	-Improper fractions with uncommon denominators		**I**	**D**
	2.35	-Mixed numbers with common denominators		**I**	**D**
	2.36	-Mixed numbers with uncommon denominators		**I**	**D**
	2.37	Multiplies fractions with or without technology (NE 7.1.3; PS #2, 5)			**I**
	2.38	Selects, applies and explains the appropriate method of computation when problem solving (NE 4.1.3, 5.1.3; NE #1, 3)	**I**	**D**	**M**
		Applies multiple strategies when problem solving (NE 4.1.4, 5.1.4, 6.1.4; PS #1, 5)			
	2.39	-Estimation	**D**	**D**	**D**
	2.40	-Rounding	**I**	**D**	**D**
	2.41	-Illustrations	**D**	**D**	**D**
	2.42	-Patterns	**D**	**D**	**D**
	2.43	-Tables	**D**	**D**	**D**
	2.44	-Logic		**I**	**D**
	2.45	-Work backwards	**I**	**D**	**D**
	2.46	-Trial and error	**I**	**D**	**D**
	2.47	Recognizes and applies math ideas in everyday life (PS #4)	**D**	**D**	**D**

Archdiocese of Omaha Math Content Checklist
Intermediate Grades 3-5

			Grade	Grade	Grade
		Intermediate Grades	**3**	**4**	**5**
	3	**MEASUREMENT**			
		Identifies and uses standard and metric units of measurement (NE 3.2.5, 4.2.5; PS #1, 4)			
	3.1	-inches, feet, yard, centimeter	**M**		
	3.2	-cups, pints, quarts, gallons, liters	**D**	**M**	
	3.3	-pounds, grams, kilograms	**D**	**M**	
	3.4	-cents, dollars	**M**		
	3.5	-Fahrenheit, Celsius	**D**	**M**	
		Uses tools to estimate and measure quantities using standard units: (NE 5.25; PS #1, 4, 5)			
	3.6	-Linear measure	**I**	**D**	**M**
	3.7	-Mass/weight	**I**	**D**	**M**
	3.8	-Capacity	**I**	**D**	**M**
	3.9	-Temperature	**I**	**D**	**M**
	3.10	-Angles	**I**	**D**	**M**
		Selects and uses tools to estimate, measure, and solve word problems using metric units: (NE 6.2.5; PS #1, 4, 5)			
	3.11	-Linear measure	**I**	**D**	**D**
	3.12	-Mass/weight	**I**	**D**	**D**
	3.13	-Capacity	**I**	**D**	**D**
	3.14	-Temperature	**I**	**D**	**D**
		Identifies and writes correct time using an analog clock (NE 4.2.5, 5.2.5; PS #1, 2, 4, 5)			
	3.15	-Seconds	**I**	**D**	**M**
	3.16	-Minutes	**D**	**M**	
	3.17	-Decades and centuries	**I**	**D**	**M**
	3.18	-A.M. and P.M.	**D**	**M**	
	3.19	-Elapsed time	**D**	**D**	**M**
	3.20	-Different ways (minutes until, minutes after)	**I**	**D**	**M**
		Converts from one unit to another within the same system: (NE 6.2.5; PS #1, 2, 5)			
	3.21	-Standard	**I**	**D**	**D**
	3.22	-Metric unit	**I**	**D**	**D**
	3.23	Recognizes and applies math ideas in everyday life (PS #4)	**D**	**D**	**D**

Archdiocese of Omaha Math Content Checklist
Intermediate Grades 3-5

			Grade	Grade	Grade
		Intermediate Grades	**3**	**4**	**5**
	4	**GEOMETRY AND SPATIAL CONCEPTS**			
		Identifies, creates, and describes two and three dimensional figures: (NE 5.2.1, 6.2.1, 7.2.1; PS #2, 3, 5)			
		Triangles			
	4.1	-Isosceles, Equilateral, Scalene		**I**	**D**
	4.2	-Acute, Right, Obtuse		**I**	**D**
		Quadrilaterals			
	4.3	-Parallelograms		**I**	**D**
	4.4	-Rectangle, Square	**D**	**D**	**M**
	4.5	-Rhombus		**I**	**D**
	4.6	-Trapezoid		**I**	**D**
		Identifies, creates, and describes geometrical terms: (NE 3.2.1, 4.2.1, 5.2.1, 7.2.5; PS #2, 3, 5)			
	4.7	-Point, Line, Line Segment, Ray	**I, D,M**		
	4.8	-Perpendicular lines. Parallel lines, Intersecting lines	**I**	**D,M**	
	4.9	-Vertex, Face, Edge	**D**	**D,M**	
	4.10	-Space Shapes: cubes, sphere, cone, cylinder, triangular and rectangular prisms and pyramids	**D**	**D**	**M**
	4.11	-Angles -Acute, Obtuse, Right	**I**	**D**	**M**
	4.12	-Straight			**I**
	4.13	-Plane			**I**
	4.14	-Diameter		**I**	**D**
	4.15	-Radius		**I**	**D**
	4.16	-Chord			**I**
	4.17	-Circumference			**I**
	4.18	Measures angles (NE 8.2.1; PS #2, 3)			**I**

Archdiocese of Omaha Math Content Checklist
Intermediate Grades 3-5

			Grade	Grade	Grade
		Intermediate Grades	**3**	**4**	**5**
		GEOMETRY AND SPATIAL CONCEPTS continued			
		Identifies and compares two-dimensional geometrical figures: (NE 3.2.3, 4.2.3, 5.2.3; PS #3, 4, 5)			
	4.19	-Congruence	**I,D**	**M**	
	4.20	-Symmetry	**D,M**		
	4.21	-Similarities	**D**	**D,M**	
	4.22	-Simple transformations	**I**	**D**	**M**
	4.23	Identifies an ordered pair of a plotted point in first quadrant by its location (NE 4.2.2; PS #1, 3)	**I,D**	**M**	
	4.24	Plots the location of an ordered pair in the first quadrant (NE 5.2.2; PS #1, 3)	**I**	**D**	**M**
		Finds perimeter: (NE 5.2.5, 6.2.5; PS #1, 5)			
	4.25	-Triangle, Square, Rectangle	**D**	**D**	**M**
	4.26	-Parallelogram	**I**	**D**	**D**
	4.27	-Trapezoid		**I**	**D**
		Finds area using a formula: (NE 5.2.5, 6.2.5; PS #1, 5)			
	4.28	-Square, Rectangle		**I**	**D,M**
	4.29	-Parallelogram, Trapezoid			**I,D**
		Finds volume using a formula: (NE 6.2.5; PS #1 5)			
	4.30	-Square prism, Rectangular prism		**I**	**D**
	4.31	Recognizes and applies math ideas in everyday life (PS #4)	**D**	**D**	**D**
	4.32	Applies geometric term representations to the real world (NE 4.2, 5.2; PS #4)	**I**	**D**	**D**

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Intermediate Grades 3-5

			Grade	Grade	Grade
		Intermediate Grades	**3**	**4**	**5**
	5	**DATA ANALYSIS, PROBABILITY, AND STATISTICAL CONCEPTS**			
		Collects, organizes, displays, compares and interprets data: (NE 3.4.1, 4.4.1, 5.4.1, 6.4.1, 8.4.1; PS #5)			
	5.1	-Tables	**I**	**D**	**M**
	5.2	-Charts	**D**	**D**	**M**
	5.3	-Pie graphs	**I**	**D**	**D**
	5.4	-Single bar graphs with more than four categories	**I**	**D**	**M**
	5.5	-Double bar graphs		**I**	**D**
	5.6	-Pictographs	**I**	**D**	**M**
	5.7	-Line graphs	**I**	**D**	**M**
	5.8	Makes predictions based on data to answer questions from tables, bar graphs, line graphs (NE 4.4.2, 5.4.2; PS #1)	**I**	**D**	**M**
		Computes and identifies the probability of outcomes and statistical methods: (NE 6.4.1; PS #1)			
	5.9	-Mean, Median, Mode		**I**	**D**
	5.10	-Range			**I**
	5.11	Performs and records results from a probability experiment (NE 4.4.3, 5.4.3; PS #1, 5)	**I**	**D**	**M**
	5.12	Describes the likelihood of an event (NE 3.4, 6.4.2; PS #1)	**D**	**D**	**D**
	5.13	Recognizes and applies math ideas in everyday life (PS #4)	**D**	**D**	**D**
	6	**ALGEBRAIC CONCEPTS**			
	6.1	Sorts and classifies objects according to more than one attribute (NE 3.3.1; PS #1, 3)	**D,M**		
	6.2	Identifies and creates patterns using words, tables and graphs (NE 3.3.1; PS #3, 5)	**M**		
	6.3	Solves simple one-step whole number equations using addition and subtraction (NE 3.3.3; PS #1, 5)	**I,D,M**		
	6.4	Represents the idea of a variable as an unknown quantity using a letter or symbol (NE 4.3.3; PS #1, 5)	**I**	**D,M**	
	6.5	Explains the procedure used in solving simple one-step whole number equations (NE 4.3.3; PS #1, 2)	**I**	**D,M**	
	6.6	Uses and interprets variables and mathematical symbols to write and solve one-step equations (NE 6.3; PS #2, 5)	**I**	**D**	**D**
	6.7	Uses symbols to understand orders of operation (NE 6.3; PS #2, 5)		**I**	**D**
	6.8	Uses input/output table to identify and extend patterns (PS #1, 3, 4, 5)	**D**	**D**	**D**
	6.9	Identifies and graphs ordered pairs using positive integers (PS #1, 2, 3, 4, 5)	**I**	**D**	**D**
	6.10	Recognizes and applies math ideas in everyday life (PS #4)	**D**	**D**	**D**