ADVENTIST EDUCATION STANDARDS

Standards, what learners should know (content) and be able to do (skills), serve as the framework for curriculum development. Standards in NAD Seventh-day Adventist schools reflect the Adventist worldview across the K-12 curricula as well as the integration of national and provincial/state standards. The Adventist worldview accepts the Bible as the standard by which everything else is measured. Four key concepts emerge from a biblical worldview that can be used as a lens for curriculum development, as well as informing the essential questions and big ideas of any content area: Creation (What is God's intention?), Fall (How has God's purpose been distorted?), Redemption (How does God help us to respond?), and Re-creation (How can we be restored in the image of God?).

— THE CORE OF ADVENTIST EDUCATION CURRICULUM

COMMON CORE STATE STANDARDS FOR MATHEMATICAL PRACTICE

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

STANDARDS CODING

The standards have been coded so that educators can easily refer to them in their curriculum, instruction, and assessment practices. The coding system that precedes each standard begins with the content area abbreviation in letters; all are identified with M—Math (**M**.K.NO.1). The second part of the code refers to the grade level (M.**K**.NO.1). The third part of the code refers to the particular math domain (M.K.**NO**.1), with NO standing for Numbers and Operations. The fourth part of the code refers to a particular skill within the math domain (M.K.NO.**1**). The coding system that follows each standard is the Common Core State Standards for Mathematics (CCSSM) that aligns with the NAD standard. Where no CCSSM is noted, there is no corresponding CCSSM.

CREDITS

The following resources were referenced in developing *Elementary Mathematics Standards for Seventh-day Adventist Schools*: a sampling of state standards, the National Council of Teachers of Mathematics (NCTM), NAD Curriculum Guide for Mathematics, Common Core State Standards for Mathematics (CCSSM), and The Core of Adventist Education Curriculum.

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OPERATIONS AND ALGEBRAIC THINKING

GRADE	CONTENT	SKILLS	GO MATH!/BIG IDEAS MATH LESSON CORRELATION
Essential Question: How can objects be represented to help us understand the variety of God's creation?		**Big Idea:** A single collection of objects can always be represented in more than one way to help us understand the variety of God's creation.	
K	Addition	**K.OAT.1** Understand addition as putting together and adding to (K.OA.1,2) **K.OAT.2** Represent and solve addition word problems within 10; fluently add within 5 (K.OA.3,4,5)	
	Subtraction	**K.OAT.3** Understand subtraction as taking apart and taking from (K.OA.1,2) **K.OAT.4** Represent and solve subtraction word problems within 10; fluently subtract within 5 (K.OA.3,4,5)	
1	Addition/ Subtraction	**1.OAT.1** Understand, represent, compare, and apply addition and subtraction properties to word problems within 20; fluently add and subtract within 10 (1.OA.1,2,3,4,5,6); add up to three whole numbers within 20 (1.OA.2); add two-digit and one-digit numbers with regrouping within 100 using models or drawings (1.NBT.4) **1.OAT.2** Work with addition and subtraction equations including unknowns (1.OA.7,8)	**Chapter** 1.1, 1.2, 1.3, 1.4, 1.5, 1.7, 1.8, 2.1, 2.2, 2.3, 2.4, 2.6, 2.8, 2.9, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 3.11, 3.12, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 5.1, 5.2, 5.3, 5.4, 5.7, 5.8, 5.10, 8.1, 8.2, 8.4, 8.5, 8.6, 8.7, 8.8, 8.9 **Chapter** 5.5, 5.6, 5.9
2	Addition/ Subtraction	**2.OAT.1** Understand, represent, compare, and apply addition and subtraction properties within 100 to solve one- and two- step word problems (2.OA.1) (2.NBT.5); add up to four 2-digit numbers (2.NBT.6) **2.OAT.2** Memorize and fluently add and subtract within 20 (2.OA.2)	**Chapter** 3.8, 3.9, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10, 4.11, 4.12, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 5.11 **Chapter** 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7
	Multiplication	**2.OAT.3** Determine if a group of objects within 20 represents an odd or even number (2.OA.3) **2.OAT.4** Write an equation to represent the total as a sum of equal addends with up to 5 groups of 5 objects (2.OA.3,4)	**Chapter** 1.1, 1.2 **Chapter** 1.1, 1.2 , 3.10, 3.11
Assessments		Math Interviews; Checklists; Models and Drawings; Written Assessments	
Essential Question: How do numerical patterns link us to an infinite God?		**Big Idea:** Exploring numerical patterns through problem solving links us to an infinite God by demonstrating His order and constancy.	
3	Multiplication/ Division	**3.OAT.1** Understand the meaning and relationship of multiplication and division (3.OA.1,2,6) **3.OAT.2** Memorize and fluently multiply and divide using the multiplication facts through 10 (3.OA.3,7); mentally multiply by 10 and 100 (3.NBT.3) **3.OAT.3** Represent and determine the unknown whole number in an equation (3.OA.4) **3.OAT.4** Apply properties of operations (commutative, associative, distributive) to multiply and divide (3.OA.5)	**Chapter** 3.1, 3.2, 6.2, 6.3, 6.4, 6.7 **Chapter** 3.3, 3.5, 4.1, 4.2, 4.3, 4.5, 4.8, 4.9, 6.1, 6.5, 6.6, 6.8, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.9; 5.3, 5.4, 5.5 **Chapter** 5.2, 7.8 **Chapter** 3.6, 3.7, 4.4, 4.6, 6.9
	Problem Solving	**3.OAT.5** Solve two-step word problems using the four basic operations and estimate to check (3.OA.8) **3.OAT.6** Begin to understand and apply the standard order of operations (3.OA.8)	**Chapter** 1.12, 3.4, 4.10, 7.10, 7.11 **Chapter** 1.12, 3.4, 4.10, 7.10, 7.11
	Patterns	**3.OAT.7** Identify arithmetic patterns using properties of operations (3.OA.9)	**Chapter** 1.1, 4.7, 5.1
4	Multiplication	**4.OAT.1** Memorize and fluently multiply using the multiplication facts through 12	
	Problem Solving	**4.OAT.2** Solve multi-step word problems including remainder interpretation and estimate to check; create equations with a letter for the unknown (4.OA.1,2,3)	**Chapter** 2.1, 2.2, 2.9, 2.12, 3.7, 4.3, 4.12
	Factors	**4.OAT.3** Find all factor pairs for a whole number within 100; identify whole numbers as prime or composite (4.OA.4) **4.OAT.4** Understand the basic concepts of least common multiple (LCM) and greatest common factor (GCF)	**Chapter** 5.1, 5.2, 5.3, 5.4, 5.5
	Patterns	**4.OAT.5** Generate and analyze number and shape patterns (4.OA.5)	**Chapter** 5.6, 10.7
5	Numerical Expressions	**5.OAT.1** Write and interpret simple numerical expressions using parentheses, brackets, and braces (5.OA.1,2)	**Chapter** 1.10, 1.11, 1.12
	Factors	**5.OAT.2** Determine the least common multiple (LCM) and greatest common factor (GCF) of two numbers	
	Patterns	**5.OAT.3** Generate, identify the relationship, and graph ordered pairs using numerical patterns with two given rules (5.OA.3)	**Chapter** 9.5, 9.6, 9.7
Assessments		Written Assessments; Journal Entries; Class Discussions; Oral Reports; Visual and Virtual Models	

OPERATIONS AND ALGEBRAIC THINKING

GRADE	CONTENT	SKILLS	GO MATH!/BIG IDEAS MATH LESSON CORRELATION
Essential Question: What do mathematical principles demonstrate about God?		**Big Idea:** The consistency of mathematical principles continues to demonstrate the orderliness and precision of God.	
6	**Expressions and Equations**	**6.OAT.1** Apply basic operations to algebraic expressions; solve and explain one-variable equations and inequalities; identify parts of an expression using mathematical terms (6.EE.1,2,3,4,5,6,7,8) **6.OAT.2** Represent, graph, and analyze quantitative relationships between dependent and independent variables (6.EE.9)	**Chapter** 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8, 8.9, 8.10, 10.1, 10.3, 10.5, 10.6, 10.7, 11.3, 11.4, 11.6/**Section** 1.1, 1.2, 1.3, 1.4, 1.5, 6.1, 6.2, 6.3, 6.4, 7.1, 7.2, 7.3, 7.4, 8.1, 8.2, 8.3, 8.4 **Chapter** 9.1, 9.2, 9.3, 9.4, 9.5/ **Section** 9.1, 9.2, 9.3, 9.4, 9.5
7	**Expressions/ Equations/ Inequalities**	**7.OAT.1** Use properties of operations to generate equivalent expressions (7.EE.1,2) **7.OAT.2** Solve real-life and mathematical problems using numerical and algebraic expressions and equations (7.EE.3,4) **7.OAT.3** Represent, graph, analyze, and generalize patterns, ratios, and inequalities using symbolic rules	**Section** 2.5b, 4.3 **Section** 1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.6b, 4.1, 4.2, 4.3, 4.4
8	**Expressions/ Equations/ Inequalities**	**8.OAT.1** Work with radicals and integer exponents (8.E.E.1,2,3,4) **28.OAT.2** Understand and graph the connections between proportional relationships, lines, slope, and linear equations (8.EE.5,6) **8.OAT.3** Analyze and solve linear equations and pairs of simultaneous linear equations (8.EE.7,8)	**Section** 6.1, 6.2, 6.3, 6.3b, 6.5, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.6b **Section** 1.5, 2.2, 2.2b, 2.3, 2.4, 3.1, 3.2, 3.4, 4.4b **Section** 1.1, 1.2, 1.3, 1.3b, 1.4, 2.1, 2.5, 2.6, 2.7, 3.5, 8.1, 8.2, 8.3, 8.4
	Functions	**8.OAT.4** Define, evaluate, compare, and use functions to model relationships between quantities (8.F.1,2,3,4,5)	**Section** 3.2, 3.3, 3.4, 4.1, 4.2, 4.3, 4.4, 4.4b
Assessments		Open-ended Projects and Problems; Written Assessments; Journal Entries; Class Discussions; Oral Reports; Visual and Virtual Models	