

# Curriculum Alignment of Skinner Elementary Montessori and Washington State EALRs

## Math:Grade 3 – Age 8

**Using manipulatives/ equipment, your child will be introduced to:**

EALRs	Skinner Elementary Montessori
<p><b>EALR 1. The student understands and applies the concepts and operations/ procedures of mathematics</b>  <b>Component 1.1: Understand and apply concepts and procedures from number sense</b>            1.1.1 Understand the concept and symbolic representation of whole numbers to at least 10,000. <b>W</b>            1.1.2 Understand the relative values of whole numbers to at least 10,000. <b>W</b>            1.1.3 Understand and use the commutative and identity properties of addition on whole numbers. <b>W</b>            1.1.5 Understand the meaning of multiplication and division of whole numbers. <b>W</b>            1.1.6 Use computational procedures for addition and subtraction of whole numbers. <b>W</b>            1.1.7 Applies strategies and use tools appropriate to tasks involving addition and subtraction of whole numbers.            1.1.8 Understand and apply estimation strategies involving addition and subtraction of whole numbers to predict or determine the reasonableness of answers in situations. <b>W</b></p> <p><b>Component 1.2: Understand and apply concepts and procedures from measurement.</b>            1.2.1 Understand how attributes of length, perimeter, time, money value, weight/mass, capacity, and temperature are used to describe objects or events. <b>W</b>            1.2.2 Understand differences between non-standard and standard units of measurement for length and weight/mass in either the U.S. system or metric system. <b>W</b>            1.2.3 Understand how measurement units of money value, length, and capacity are organized in the U.S. system. <b>W</b>            Understand how time and weight are organized in the U.S. system. <b>W</b>            1.2.4 Use a procedure to measure length, perimeter, time, money value, weight/mass, capacity, and temperature. <b>W</b>            1.2.6 Understand and apply strategies to obtain reasonable estimates of length, perimeter, time, money, weight/mass, capacity, and temperature measurements. <b>W</b></p> <p><b>Component 1.3: Understand and apply concepts and procedures from geometric sense.</b>            1.3.1 Understand the concept of congruence. <b>W</b>            1.3.2 Use the properties of 2-dimensional figures including polygons. <b>W</b>            1.3.3 Determine relative locations, including intervals, of points on a positive number line. <b>W</b>            1.3.4 Understand the movement of points on a number line.</p>	<p><b>Placement Value and Operations</b></p> <ul style="list-style-type: none"> <li>• Up to units of billions*</li> <li>• Roman Numerals 20 thru 100*</li> </ul> <p><b>Multiplication</b></p> <ul style="list-style-type: none"> <li>• Multiplication tables</li> <li>• Long multiplication with 3/4 digit multipliers</li> <li>• Geometrical form of multiplication by category</li> <li>• Distributive law</li> <li>• Factors</li> <li>• Prime factors</li> <li>• Highest common factors</li> <li>• Multiplying by powers of 10</li> <li>• Estimating terms in a multiplication problem</li> <li>• Decimal multiplication</li> </ul> <p><b>Division</b></p> <ul style="list-style-type: none"> <li>• Long division</li> <li>• Divisibility by 2, 5, 25, 4, 8, 3, 9</li> <li>• Estimating terms in a division problem</li> <li>• Dividing by the powers of 10</li> <li>• Dividing a decimal fraction by a decimal fraction</li> </ul> <p><b>Fractions</b></p> <ul style="list-style-type: none"> <li>• Operations with unlike denominators</li> <li>• Reducing fractions</li> <li>• Operations with mixed denominators</li> <li>• Operations with proper and improper fractions</li> <li>• Decimal fractions</li> <li>• Quantity</li> <li>• Association of symbol and quantity</li> <li>• Formation and reading of quantities</li> <li>• Operations with decimal fractions</li> <li>• Conversion of fractions to decimal fractions</li> </ul> <p><b>Measurement</b></p> <ul style="list-style-type: none"> <li>• Measurement conversions</li> <li>• Length– meters/ yard</li> <li>• Liquids– ounces/ liters</li> <li>• Weight lbs/ kilos</li> <li>• Temperature– Fahrenheit/ Celsius</li> <li>• Time– hours, minute, seconds, months, years</li> <li>• Money</li> <li>• Area of plane figures</li> </ul>

\*Skinner Montessori/ Scott, Foresman and Co.

\*\*W= WASL

\*\*\*Barron's Painless Algebra

\*\*\*\*Barron's Painless Geometry

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<p><b>Component 1.4: Understand and apply concepts and procedures from probability and statistics.</b>  1.4.3 Understand how to ask questions to collect data about a specific topic. <b>W</b>  1.4.4 Understand, determine, and use mode to describe a set of data. <b>W</b>  1.4.5 Read and understand data from tables, charts, pictographs, and bar graphs. <b>W</b></p> <p><b>Component 1.5: Understand and apply concepts and procedures from algebraic sense.</b>  1.5.1 Recognize, understand, and extend a pattern of shapes and objects or a pattern of numbers with a single addition or subtraction between terms. <b>W</b>  1.5.3 Understand the concept of mathematical equality and uses the symbol = in equations. <b>W</b>  1.5.4 Use a single variable to write simple expressions and equations that represent situations involving addition and subtraction of whole numbers. <b>W</b>  1.5.6 Apply algebraic properties to solve an equation using addition and subtraction. <b>W</b></p> <p><b>EALR 2: The student uses mathematics to define and solve problems</b>  <b>Component 2.1: Define problems.</b>  2.1.1 Identify questions to be answered to solve a problem in familiar situations.  2.1.2 Determine what information is missing or extraneous in familiar situations.  2.1.3 Identify what is known and unknown in familiar situations.</p> <p><b>Component 2.2: Construct solutions.</b>  2.2.1 Select and use relevant information to construct solutions. <b>W</b>  2.2.2 Select and use appropriate concepts and procedures from number sense, measurement, and geometric sense, or statistics to construct solutions. <b>W</b>  2.2.3 Apply a variety of strategies to construct solutions. <b>W</b>  2.2.4 Determine whether a solution is viable, is mathematically correct, and answers the question. <b>W</b></p> <p><b>EALR 3: The student uses mathematical reasoning.</b>  <b>Component 3.1: Analyze information.</b>  3.1.1 Analyze and compare numerical, measurement, geometric, and statistical information in familiar situations. <b>W</b></p> <p><b>Component 3.2: Conclude.</b>  3.2.1 Draw and support conclusions.  3.2.2 Evaluate procedures and conclusions in familiar situations.</p>	<p><b>Geometry</b></p> <ul style="list-style-type: none"> <li>• Measuring angles</li> <li>• Addition and subtraction of angles</li> <li>• Equivalence of area when working with polygons</li> <li>• Intersecting lines</li> <li>• Using a protractor</li> <li>• Bisecting angles</li> <li>• Language of a circle,</li> <li>• Deriving different formulas for area of plane figures</li> <li>• A sensorial understanding of the Pythagoras Theorem</li> <li>• Sensorial concept of volume</li> </ul> <p><b>Tables, Charts and Graphs</b></p> <ul style="list-style-type: none"> <li>• Economic geography</li> <li>• Graphing integers (Positive and negative numbers)**</li> </ul> <p><b>Algebra</b></p> <ul style="list-style-type: none"> <li>• Passing from one square to another</li> <li>• Squaring a sum</li> <li>• Squaring with hierarchical values</li> <li>• Cubing a binomial</li> <li>• Cubing a trinomial</li> <li>• Square roots with 1 digit</li> <li>• Every number contains a square</li> <li>• Order of Operations***</li> <li>• Properties of numbers***</li> </ul> <p><b>Story Problems</b></p> <ul style="list-style-type: none"> <li>• Using multiple functions</li> <li>• Finding area</li> <li>• Concept of volume</li> <li>• Distance, time, velocity (arithmetical)</li> <li>• Principal, interest, rate and time</li> <li>• With fractions</li> <li>• Measurement</li> <li>• Ratio and proportion</li> <li>• Changing answers to the simplest form</li> </ul> <p><b>Negative Numbers/ Integers</b></p> <ul style="list-style-type: none"> <li>• Operations with negative numbers/ integers</li> </ul> <p><b>Power of Numbers</b></p> <ul style="list-style-type: none"> <li>• Powers of 2, 3, 4, 5</li> <li>• Operations</li> </ul>

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<p><b>Component 3.3: Verify results.</b>  3.3.1 Justify results using evidence.  3.3.2 Evaluate reasonableness of results  3.3.3 Understand how to validate thinking about numerical, measurement, geometric and statistical ideas.</p> <p><b>EALR 4: The student communicates knowledge and understanding in both everyday and mathematical language</b></p> <p><b>Component 4.1: Gather information.</b>  4.1.1 Understand how to follow a simple plan for collecting numerical, measurement, geometric and statistical information.  4.1.2 Extract numerical, measurement, geometric, and statistical information from one or two different sources for a given purpose. <b>W</b></p> <p><b>Component 4.2: Organize, represent, and share information.</b>  4.2.1 Understand how to organize numerical, measurement, geometric, and statistical information to communicate for a given purpose. <b>W</b>  4.2.2 Understand how to represent numerical, measurement, geometric, and statistical information in graphs or other appropriate forms. <b>W</b>  4.2.3 Use mathematical language to explain or describe numerical, measurement, geometric, and statistical ideas and information in ways appropriate for audience or purpose. <b>W</b></p> <p><b>EALR 5: The student understands how mathematical ideas connect within mathematics, to other subject areas, and to real-world situations.</b></p> <p><b>Component 5.1: Relate concepts and procedures within mathematics.</b>  5.1.1 Apply concepts and procedures from any two of the content strands, including number sense, measurement, geometric sense, statistics, and algebraic sense, in a given problem or situation.  5.1.2 Use equivalent mathematical models to represent a mathematical idea. <b>W</b></p> <p><b>Component 5.2: Relate mathematical concepts and procedures to other disciplines.</b>  5.2.1 Use mathematical thinking, modeling, patterns, and ideas in other disciplines.  5.2.2 Recognize the contributions of individuals and cultures to the development of mathematics</p> <p><b>Component 5.3: Relate mathematical concepts and procedures to real-world situations.</b>  5.3.1 Understand how mathematics is used extensively in daily life outside the classroom.  5.3.2 Identify how mathematics is used in career settings.</p>	