Vermont Grade Level Expectations & Essential Skills Math Software

This document outlines the correlations between the Grade 3 Vermont Grade Level Expectations and the Essential Skills math programs. The specific curriculum outcomes are noted on the left and are matched with the relevant Essential Skills program on the right. Where correlations are not exact, the difference is noted in brackets. **Essential Skills programs correlate with 97% of the Grade 3 Vermont Grade Level Expectations.**

Vermont Grade Level Expectations	Essential Skills Software CORRELATING PROGRAMS
Standard 7.6: Arithmetic, Number, and Operation Concepts	
M3: 1 - Demonstrates conceptual understanding of rational numbers with respect to: whole numbers from 0 to 999 through equivalency, composition, decomposition, or place value using models, explanations, or other representations; and positive fractional numbers (benchmark fractions: a/2, a/3, a/4, a/6, or a/8, where a is a whole number greater than 0 and less than or equal to the denominator) as a part to whole relationship in area and set models where the number of parts in the whole is equal to the denominator; and decimals (within a context of money) as a part of 100 using models, explanations, or other representations.	**Mastering Numeration 3**
M3: 2 - Demonstrates understanding of the relative magnitude of numbers from 0 to 999 by ordering whole numbers; by comparing whole numbers to benchmark whole numbers (100, 250, 500, 750); or by comparing whole numbers to each other; and comparing or identifying equivalent positive fractional numbers (a/2, a/3, a/4 where a is a whole number greater than 0 and less than or equal to the denominator) using models, number lines, or explanations.	
M3: 3 - Demonstrates conceptual understanding of mathematical operations by describing or illustrating the inverse relationship between addition and subtraction of whole numbers; and the relationship between repeated addition and multiplication using models, number lines, or explanations.	**Mastering Numeration 3** **Problem Solving 2-3** **Problem Solving 3-4**

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M3: 4 - Accurately solves problems involving addition and subtraction with and without regrouping; the concept of multiplication; and addition or subtraction of decimals (in the context of money).	**Mastering Numeration 3** **Problem Solving 2-3** **Problem Solving 3-4**
M3: 6 - Mentally adds and subtracts whole-numbers facts through twenty with accuracy.	
M3: 7 - Estimates and evaluates the reasonableness of solutions appropriate to grade level.	
M3: 8 - Applies properties of numbers (odd, even) and applies the commutative and associative properties of addition to solve problems and to simplify computations.	**Mastering Numeration 1**
Standard 7.7: Geometry and Measurement Concepts	
M3: 9 - Uses properties or attributes of angles (number of angles) or sides (number of sides or length of sides) or composition or decomposition of shapes to identify, describe, or distinguish among triangles, squares, rectangles, rhombi, trapezoids, hexagons, or circles.	**Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
M3: 11 - Uses properties or attributes (shape of bases or number of lateral faces) to identify, compare, or describe three-dimensional shapes (rectangular prisms, triangular prisms, cylinders, or spheres).	
M3: 12 - Demonstrates conceptual understanding of congruency using transformations (flips and slides and turns), and shape and size of polygons.	
M3: 14 - Demonstrates conceptual understanding of perimeter of polygons, and the area of rectangles on grids using a variety of models or manipulatives. Expresses all measures using appropriate units.	**Measurement 3** **Problem Solving 2-3** **Problem Solving 3-4**
M3: 15 - Measures and uses units of measures appropriately and consistently, and makes conversions within systems when solving problems across the content strands.	
M3: 16 - Determines elapsed and accrued time to the ¼ hour.	

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M3: 18 - Solves problems using the Cartesian coordinate system (Quadrant I) to locate coordinates and to represent data from tables.	**Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
Standard 7.8: Functions and Algebra Concepts	
M3: 19 - Identifies and extends to specific cases a variety of patterns (linear and non-numeric) represented in models, tables, or sequences by extending the pattern to the next one, two, or three elements, or finding missing elements.	**Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
M3: 20 - Demonstrates a conceptual understanding of linear relationships (y = kx) as a constant rate of change by identifying, describing, or comparing situations that represent constant rates of change.	
M3: 22 - Demonstrates conceptual understanding of equality by showing equivalence between two expressions using models or different representations of the expressions; or by finding the value that will make an open sentence true (e.g., 2 + □ = 7) (limited to one operation and limited to use addition, subtraction, or multiplication).	**Mastering Numeration 3** **Problem Solving 2-3** **Problem Solving 3-4**
Standard 7.9: Data, Statistics, and Probability Concepts	
M3: 23 - Interprets a given representation (line plots, tally charts, tables, or bar graphs) to answer questions related to the data, to analyze the data to formulate conclusions, or to make predictions.	**Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
M3: 24 - Analyzes patterns, trends, or distributions in data in a variety of contexts by determining or using “most frequent” (mode), “least frequent,” “largest,” or “smallest.”	
M3: 25 - Identifies or describes representations or elements of representations that best display a given set of data or situation, consistent with the representations required in M3: 23. Organizes and displays data using bar graphs or tables to answer question related to the data, to analyze the data to formulate or justify conclusions, or to make predictions.	

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M3: 26 - Uses counting techniques to solve problems in context to determine possibilities using a variety of strategies (e.g., student diagrams, organized lists, tables, tree diagrams, orsc others); (e.g., "How many ways can you make 50 cents using nickels, dimes, and quarters?" Given a map—"How many different ways can you go from point A to B?")	**Problem Solving 2-3** **Problem Solving 3-4**
M3: 27 - For a probability event in which the sample space may or may not contain equally likely outcomes, determines the likelihood of the occurrence of an event (using "more likely," "less likely," or "equally likely").	**Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
M3: 28 - In response to a teacher - or student-generated question or hypothesis, collects appropriate data, organizes the data, displays/ represents the data, and makes observations about the data to draw conclusions about the question or hypothesis being tested.	**Patterning, Geometry & Data Management 3**
M3: 29 - Uses experimental probability to describe the likelihood or chance of an event using "more likely," "less likely," "equally likely," "certain," or "impossible."	**Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
Standard 2.5: Mathematical Dimensions, Standard 7.10: Mathematical Problem Solving and Reasoning—Applications	
Theoretical Problem Solving and Reasoning techniques are addressed throughout ESS programs.	