New Mexico Process Standards & Essential Skills Math Software

This document outlines the correlations between the Grade 3 New Mexico Process Standards 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 89% of the Grade 3 New Mexico Process Standards.**

New Mexico Process Standards	Essential Skills Software CORRELATING PROGRAMS
Number and Operations	
3.N.1.1 Exhibit an understanding of the place-value structure of the base-ten number system by: a. reading, modeling, writing, and interpreting whole numbers up to 10,000	**Mastering Numeration 3** (to 1000) **Problem Solving 3-4** (to 10000)
b. comparing and ordering numbers up to 1,000	**Mastering Numeration 3**
c. recognizing the position of a given number in the base-ten number system and its relationship to benchmark numbers such as 10, 50, 100, 500	
3.N.1.2 Use whole numbers by using a variety of contexts and models (e.g., exploring the size of 1,000 by skip-counting to 1,000 using hundred charts or strips 10 or 100 centimeters long).	
3.N.1.3 Identify some representations for some numbers and generate them by decomposing and recombining numbers (e.g., 853 = 8 x 100 + 5 x 10 + 3; 85 x 10 + 3 = 853; 853 = 900 – 50 + 3).	
3.N.1.4 Identify the relationship among commonly encountered factors and multiples (e.g., factor pairs of 12 are 1 x 12, 2 x 6, 3 x 4; multiples of 12 are 12, 24, 36).	**Mastering Numeration 3**
3.N.1.5 Use visual models and other strategies to recognize and generate equivalents of commonly used fractions and mixed numbers (e.g., halves, thirds, fourths, sixths, eighths, and tenths).	**Mastering Numeration 3**

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3.N.1.6 Demonstrate an understanding of fractions as parts of unit wholes, parts of a collection or set, and as locations on a number line.	**Mastering Numeration 3**
3.N.1.7 Use common fractions for measuring and money (e.g., using fractions and decimals as representations of the same concept, such as half of a dollar = 50 cents).	
3.N.2.1 Use a variety of models to show an understanding of multiplication and division of whole numbers (e.g., charts, arrays, diagrams, and physical models [i.e., modeling multiplication with a variety of pictures, diagrams, and concrete tools to help students learn what the factors and products represent in various contexts]).	**Mastering Numeration 2** **Mastering Numeration 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.N.2.2 Find the sum or difference of two whole numbers between 0 and 10,000.	**Mastering Numeration 3** **Problem Solving 2-3** **Problem Solving 3-4** (3 digit to 3 digit)
3.N.2.3 Solve simple multiplication and division problems (e.g., 135 ÷ 5 =).	**Mastering Numeration 3** **Problem Solving 2-3** (to 7 x 7) **Problem Solving 3-4** (to 9 x 9)
3.N.2.4 Identify how the number of groups and the number of items in each group equals a product.	**Mastering Numeration 2** **Mastering Numeration 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.N.2.5 Demonstrate the effects of multiplying and dividing on whole numbers (e.g., to find the total number of legs on 12 cats, 4 represents the number of each [cat] unit, so 12 x 4 = 48 [leg] units).	
3.N.2.6 Identify and use relationship between multiplication and division (e.g., division is the inverse of multiplication) to solve problems.	**Mastering Numeration 3**
3.N.2.7 Select and use operations (e.g., addition, multiplication, subtraction, division) to solve problems.	**Mastering Numeration 3** **Problem Solving 2-3** **Problem Solving 3-4**

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3.N.3.1 Choose computational methods based on understanding the base-ten number system, properties of multiplication and division, and number relationships.	**Mastering Numeration 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.N.3.2 Use strategies (e.g., 6 x 8 is double 3 x 8) to become fluent with the multiplication pairs up to 10 x 10.	**Mastering Numeration 3** **Problem Solving 2-3** (to 7 x 7) **Problem Solving 3-4** (to 9 x 9)
3.N.3.3 Compute with basic number combinations (e.g., multiplication pairs up to 10 x 10 and their division counterparts).	
3.N.3.4 Demonstrate reasonable estimation strategies for measurement, computation, and problem solving.	
Algebra	
3.A.1.1 Represent relationships of quantities in the form of mathematical expressions, equations, or inequalities.	**Mastering Numeration 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.A.1.2 Solve problems involving numeric equations.	**Problem Solving 2-3** **Problem Solving 3-4**
3.A.1.3 Select appropriate operational and relational symbols to make an expression true (e.g., "If 4 [] 3 = 12, what operational symbol goes in the box?").	
3.A.1.4 Use models of feet and inches to express simple unit conversions in symbolic form (e.g., 36 inches = feet x 12) that develop conceptual understanding versus procedural skills.	**Mastering Numeration 3** **Problem Solving 3-4**
3.A.1.5 Recognize and use the commutative property of multiplication (e.g., if 5 x 7 = 35, then what is 7 x 5?).	**Mastering Numeration 3**
3.A.1.6 Create, describe, and extend numeric and geometric patterns including multiplication patterns.	**Mastering Numeration 3** **Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**

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3.A.1.7 Represent simple functional relationships: a. solve simple problems involving a functional relationship between two quantities (e.g., find the total cost of multiple items given the cost per unit)	**Mastering Numeration 3** **Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
b. extend and recognize a linear pattern by its rules (e.g., the number of legs on a given number of horses may be calculated by counting by 4s, by multiplying the number of horses by 4, or through the use of tables)	**Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.A.2.1 Determine the value of variables in missing part problems (e.g., 139 + = 189).	**Mastering Numeration 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.A.2.2 Recognize and use the commutative and associative properties of addition and multiplication (e.g., "If 5 x 7 = 35, then what is 7 x 5? And if 5 x 7 x 3 = 105, then what is 7 x 3 x 5?").	**Mastering Numeration 3**
3.A.2.3 Explore the ways that commutative, distributive, identity, and zero properties are useful in computing with numbers.	
3.A.3.1 Model problem situations with objects and use representations such as pictures, graphs, tables, and equations to draw conclusions.	**Mastering Numeration 3** **Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.A.3.2 Solve problems involving proportional relationships including unit pricing (e.g., four apples cost 80 cents; therefore, one apple costs 20 cents).	**Measurement 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.A.3.3 Describe relationships of quantities in the form of mathematical expressions, equations, or inequalities.	**Mastering Numeration 3** **Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.A.3.4 Select appropriate operational and relational symbols to make an expression true (e.g.," If 4 [] 3 = 12, what operational symbol goes in the box?").	

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3.A.4.1 Demonstrate how change in one variable can relate to a change in a second variable (e.g., input-output machines, data tables).	**Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
Geometry	
3.G.1.1 Describe and compare the attributes of plane and solid geometric figures to show relationships and solve problems: a. identify, describe, and classify polygons (e.g., pentagons, hexagons, and octagons)	**Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
b. identify lines of symmetry in two-dimensional shapes	**Patterning, Geometry & Data Management 3**
c. explore attributes of quadrilaterals (e.g., parallel and perpendicular sides for the parallelogram, right angles for the rectangle, equal sides and right angles for the square)	
d. identify right angles	**Problem Solving 3-4**
e. identify, describe, and classify common three-dimensional geometric objects (e.g., cube, rectangular solid, sphere, prism, pyramid, cone, cylinder)	**Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.G.2.1 Describe location and movement using common language and geometric vocabulary (e.g., directions from classroom to gym).	
3.G.2.2 Use ordered pairs to graph, locate specific points, create paths, and measure distances within a coordinate grid system.	
3.G.2.3 Use a two-dimensional grid system (e.g., a map) to locate positions representing actual places.	
3.G.3.1 Predict and describe the results of sliding, flipping, and turning two-dimensional shapes.	
3.G.3.2 Identify and describe the line of symmetry in two- and three-dimensional shapes.	**Patterning, Geometry & Data Management 3**
3.G.4.1 Visualize, build, and draw geometric objects.	**Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.G.4.2 Create and describe mental images of objects, patterns, and paths.	

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3.G.4.3 Recognize geometric shapes and structures (e.g., in the environment).	
3.G.4.4 Use geometric models to solve problems in other areas of mathematics (e.g., using arrays as models of multiplication or area).	**Measurement 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.G.4.5 Identify and build three-dimensional objects from two-dimensional representations of that object.	**Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.G.4.6 Investigate two-dimensional representations of three-dimensional shapes.	
3.G.4.7 Explore geometric ideas and relationships as they apply to other disciplines and to problems that arise in the classroom or in everyday life.	
Measurement	
3.M.1.1 Demonstrate understanding of the need for measuring with standard units and become familiar with standard units in the U.S. customary system.	**Measurement 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.M.1.2 Choose and use the appropriate units and measurement tools to quantify the properties of objects (e.g., length [ruler], width [ruler], or mass [balance scale]).	**Measurement 3**
3.M.1.3 Identify time to the nearest minute (elapsed time) and relate time to everyday events.	**Measurement 3 (to five minutes)** **Problem Solving 2-3** **Problem Solving 3-4**
3.M.1.4 Identify and use time intervals (e.g., hours, days, weeks, months, years).	
3.M.1.5 Identify properties (e.g., length, area, weight, volume) and select the appropriate type of unit for measuring each property.	**Measurement 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.M.1.6 Demonstrate understanding that measurements are approximations, investigate differences in units and their effect on precision, and consider the degree of accuracy for different situations.	

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3.M.2.1 Find the area of rectangles using appropriate tools (e.g., grid paper, tiles).	**Measurement 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.M.2.2 Estimate measurements.	
3.M.2.3 Use appropriate standard units and tools to estimate, measure, and solve problems (e.g., length, area, weight).	**Measurement 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.M.2.4 Recognize a 90-degree angle and use it as a strategy to estimate the size of other angles.	**Problem Solving 3-4**
Data Analysis and Probability	
3.D.1.1 Collect and organize data using observations, measurements, surveys, or experiments.	**Patterning, Geometry & Data Management 3**
3.D.1.2 Represent data using tables and graphs (e.g., line plots, bar graphs, and line graphs).	
3.D.1.3 Conduct simple experiments by determining the number of possible outcomes and make simple predictions: a. identify whether events are certain, likely, unlikely, or impossible	**Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
b. record the outcomes for a simple event and keep track of repetitions	**Patterning, Geometry & Data Management 3**
c. summarize and record the results in a clear and organized way	
d. use the results to predict future events	**Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.D.2.1 Apply and explain the uses of sampling techniques (e.g., observations, polls, tally marks) for gathering data.	
3.D.3.1 Analyze data displayed in a variety of formats to make reasonable inferences and predictions, answer questions, and make decisions.	**Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**

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3.D.4.1 Discuss the degree of likelihood of events and use terminology such as "certain," "likely," "unlikely".	**Patterning, Geometry & Data Management 3** **Problem Solving 2-3** **Problem Solving 3-4**
3.D.4.2 Predict the outcomes of simple experiments (e.g., coin tossing) and test the predictions using concrete objects (e.g., coins, counters, number cubes, spinners).	
3.D.4.3 Record the probability of a specific outcome for a simple probability situation (e.g., probability is three out of seven for choosing a black ball; 3/7).	