

Northpoint Horizons

Math Elevations™ (Comprehensive Intervention System) Correlated to Grade 3 of The North Carolina Mathematics Standard Course of Study

This document provides a sampling of the extensive math directives offered throughout the *Math Elevations* program that meet **The North Carolina Mathematics Standard Course of Study**.

Grade 3

| Math Content Standard | Math Elevations Level C (Grade 3) Teacher's Guide Examples/Lessons |
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| COMPETENCY GOAL 1: The learner will demonstrate an understanding of fractions and whole number operations. | |
| 1.01 Develop number sense for rational numbers to at least 10,000. | |
| a) Demonstrate multiple ways to represent numbers using models, words and symbolic representations. | Unit 1 – Lesson 1: <i>Four-Digit Numbers</i> pp. 18-19 Lesson 2: <i>Comparing and Ordering Numbers</i> pp. 20-21 Lesson 3: <i>Rounding</i> pp. 22-23 Lesson 8: <i>Reading and Writing Numbers Through 999,999</i> pp. 32-33 |
| b) Identify the place and the value of a given digit in order to determine the magnitude of the number. | Unit 1 – Lesson 1: <i>Four-Digit Numbers</i> pp. 18-19 Lesson 2: <i>Comparing and Ordering Numbers</i> pp. 20-21 Lesson 3: <i>Rounding</i> pp. 22-23 Lesson 8: <i>Reading and Writing Numbers Through 999,999</i> pp. 32-33 |
| c) Compare and order (including the use of symbolic notation). | Unit 1 – Lesson 2: <i>Comparing and Ordering Numbers</i> pp. 20-21 |
| 1.02 Develop understanding of the part-whole meaning of fractions as sharing equally with area, set, region, and length models. | |
| a) Use models and benchmarks (0, $\frac{1}{2}$, 1) to compare and order fractions including common equivalents. | Unit 1 – Lesson 7: <i>Comparing Fractions</i> pp. 30-31 |
| b) Model and describe common equivalents among: - halves, fourths, and eighths; - thirds and sixths. | Unit 1 – Lesson 7: <i>Comparing Fractions</i> pp. 30-31 |
| 1.03 Develop fluency and flexibility with multi-digit addition and subtraction. | |

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| a) Use strategies for adding and subtracting numbers (including, but not limited to, standard algorithms). | Unit 2 – Lesson 1: <i>Addition and Subtraction Families</i> pp. 36-37 Lesson 2: <i>Adding Two-Digit Numbers</i> pp. 38-39 Lesson 3: <i>Using Estimation in Addition</i> pp. 40-40 Lesson 4: <i>Adding Three- and Four-Digit Numbers</i> pp. 42-43 Lesson 5: <i>Regrouping Two-Digit Numbers for Subtraction</i> pp. 44-45 Lesson 6: <i>Subtraction of Three- and Four-Digit Numbers</i> pp. 46-47 Lesson 7: <i>Subtraction with Zeros</i> pp. 48-49 Lesson 8: <i>Addition and Subtraction Word Problems</i> pp. 50-51 |
| b) Estimate sums and differences and justify the reasonableness of solutions in meaningful contexts. | Unit 2 – Lesson 3: <i>Using Estimation in Addition</i> pp. 40-40 |
| c) Analyze the relationships between operations. | Unit 2 – Lesson 1: <i>Addition and Subtraction Families</i> pp. 36-37 Unit 3 – Lesson 1: <i>Meaning of Multiplication</i> pp. 54-55 Lesson 6: <i>Division as Equal Grouping and Sharing Equally</i> pp. 64-65 Lesson 7: <i>Dividing Using Inverse Operations</i> pp. 66-67 |
| 1.04 Demonstrate conceptual understanding of the meaning of multiplication and division through multiple models. | |
| a) Make connections about the multiples and factors of a given number. | Unit 1 – Lesson 7: <i>Comparing Fractions</i> pp. 30-31 |
| b) Analyze the relationship between multiplication and division. | Unit 3 – Lesson 1: <i>Meaning of Multiplication</i> pp. 54-55 Lesson 6: <i>Division as Equal Grouping and Sharing Equally</i> pp. 64-65 Lesson 7: <i>Dividing Using Inverse Operations</i> pp. 66-67 |
| 1.05 Develop fluency with multiplication facts for 1's, 2's, 5's, 10's, 0's and strategies for 3's, 4's, 6's, 7's, 8's, 9's; and related division facts. | Unit 3 – Lesson 2: <i>Multiplication Facts of 2, 5, and 10</i> pp. 56-57 Lesson 3: <i>Multiplication Facts of 3 and 6</i> pp. 58-59 Lesson 4: <i>Multiplication Facts of 4 and 8</i> pp. 60-61 Lesson 5: <i>Multiplication Facts of 7 and 9</i> pp. 62-63 Lesson 6: <i>Division as Equal Grouping and Sharing Equally</i> pp. |

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| | 64-65 Lesson 7: <i>Dividing Using Inverse Operations</i> pp. 66-67 Lesson 8: <i>Multiplication and Division Word Problems</i> pp. 68-69 |
| COMPETENCY GOAL 2: The learner will apply the processes and components of measuring using customary measurement units. | |
| 2.01 Develop an understanding of and use the processes for measuring with customary units of measurement (length, weight, capacity, and temperature) recognizing that: | |
| a) the type of unit used to measure depends on the attribute being measured, | Unit 7 – Lesson 8: <i>Appropriate Units</i> pp. 140-141 |
| b) larger units can be subdivided into equivalent units (partitioning), | Unit 7 – Lesson 2: <i>Length (Customary Units)</i> pp. 128-129 Lesson 3: <i>Length (Metric)</i> pp. 130-131 |
| c) two objects can be compared in terms of a measurable quality using a third object (transitivity), | Unit 7 – Lesson 2: <i>Length (Customary Units)</i> pp. 128-129 Lesson 3: <i>Length (Metric)</i> pp. 130-131 |
| d) the same unit can be repeated to determine the measure (iteration), and | Unit 7 – Lesson 2: <i>Length (Customary Units)</i> pp. 128-129 Lesson 3: <i>Length (Metric)</i> pp. 130-131 |
| e) the relationship between the size of the unit and the number of units needed (compensatory principle). | Unit 7 – Lesson 2: <i>Length (Customary Units)</i> pp. 128-129 Lesson 3: <i>Length (Metric)</i> pp. 130-131 |
| 2.02 Develop and use personal benchmarks (referents) for customary measurements to estimate length, weight, capacity, time, and temperature. | Unit 7 – Lesson 2: <i>Length (Customary Units)</i> pp. 128-129 |
| 2.03 Select attributes and appropriate standard units and tools (customary) to estimate and measure length, weight, capacity, temperature, and time to the minute. | Unit 7 – Lesson 2: <i>Length (Customary Units)</i> pp. 128-129 Lesson 8: <i>Appropriate Units</i> pp. 140-141 |
| 2.04 Determine the amount of money needed to make change (up to a dollar) using various strategies. | Unit 4 – Lesson 6: <i>Making Change</i> pp. 82-83 |
| COMPETENCY GOAL 3: The learner will use the rectangular coordinate system and the basic geometric properties of two-dimensional shapes. | |
| 3.01 Describe, analyze, compare and classify two-dimensional shapes by properties including sides and angles (acute, obtuse, right). | Unit 6 – Lesson 1: <i>Lines and Angles</i> pp. 108-109 Lesson 2: <i>Types of Lines</i> pp. 110-111 |

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| | Lesson 3: <i>Plane Figures</i> pp. 112-113 |
| 3.02 Use rectangular coordinate system to: | |
| c) identify parallel and perpendicular lines, and | Unit 6 – Lesson 2: <i>Types of Lines</i> pp. 110-111 |
| COMPETENCY GOAL 4: The learner will use and understand the statistical process and simple probability concepts. | |
| 4.01 Use the process of statistical investigation. | |
| a) Pose questions that involve collecting categorical and numerical data. | Unit 8 – Lesson 3: <i>Pictographs</i> pp. 148-149 Lesson 4: <i>Simple Bar Graphs</i> pp. 150-151 Lesson 5: <i>Bar Graphs with a Scale</i> pp. 152-153 |
| b) Design investigations to answer questions using observations, surveys and experiments. | Unit 8 – Lesson 1: <i>Tally Charts</i> pp. 144-145 |
| c) Collect, organize, represent and analyze data using various representations including tables and bar graphs. | Unit 8 – Lesson 1: <i>Tally Charts</i> pp. 144-145 Lesson 2: <i>Reading Charts and Tables</i> pp. 146-147 Lesson 3: <i>Pictographs</i> pp. 148-149 Lesson 4: <i>Simple Bar Graphs</i> pp. 150-151 Lesson 5: <i>Bar Graphs with a Scale</i> pp. 152-153 |
| 4.02 Understand situations involving simple probability. | |
| a) Judge the probability of events as being (certain, likely, equally likely, unlikely, possible, or impossible) to occur. | Unit 8 – Lesson 6: <i>Likelihood</i> pp. 154-155 |
| b) Conduct simple probability experiments. | Unit 8 – Lesson 7: <i>Probability</i> pp. 156- 157 Lesson 8: <i>Fair and Unfair Games</i> pp. 158-159 |
| c) Describe results using pictures and words, and make predictions. | Unit 8 – Lesson 7: <i>Probability</i> pp. 156- 157 Lesson 8: <i>Fair and Unfair Games</i> pp. 158-159 |
| COMPETENCY GOAL 5: The learner will explore functional relationships and use variables. | |
| 5.01 Analyze numeric and nonnumeric growing patterns to explore functional relationships. | Unit 5 – Lesson 3: <i>Skip Counting</i> pp. 94-95 Lesson 4: <i>Number Patterns</i> pp. 96-97 Lesson 5: <i>Number Machines</i> pp. 98-99 |
| 5.02 Model, write and evaluate simple multiplication and division equations. | |
| a) Represent a problem including using variables to represent unknown | Unit 5 – |

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| quantities. | Lesson 8: <i>Word Problem Patterns</i> pp. 104-105 |
| b) Demonstrate an understanding of equality. | Unit 5 – Lesson 8: <i>Word Problem Patterns</i> pp. 104-105 |
| c) Find the value of variables. | Unit 5 – Lesson 8: <i>Word Problem Patterns</i> pp. 104-105 |
| COMPETENCY GOAL 6: The learner will make connections, solve problems and reason mathematically. | |
| 6.01 Recognize and apply connections among mathematical ideas. | |
| a) Connect concepts and skills from previous years to current objectives. | Unit 1 – Lesson 1: <i>Four-Digit Numbers</i> pp. 18-19 |
| b) Connect concepts and skills from multiple strands to solve problems. | Unit 6 – Lesson 7: <i>Solid Figures and Their Nets</i> pp. 120-121 |
| 6.02 Develop fluency in solving single and multi-step problems that arise in mathematics and in other contexts, building mathematical knowledge through problem solving. | |
| 6.03 Use reasoning to solve problems. | |
| a) Understand situations and communicate mathematical problem solving. | Unit 5 – Lesson 8: <i>Word Problem Patterns</i> pp. 104-105 |
| b) Make estimates with appropriate ranges. | Unit 1 – Lesson 3: <i>Rounding</i> pp.22-23 |
| c) Reflect, extend and refine thinking. | Unit 5 – Lesson 8: <i>Word Problem Patterns</i> pp. 104-105 |
| 6.04 Use the language and symbols of mathematics and appropriate technology to: | |
| a) solve problems; | Unit 5 – Lesson 8: <i>Word Problem Patterns</i> pp. 104-105 |
| b) communicate mathematical ideas; | Unit 8 – Lesson 3: <i>Pictographs</i> pp. 148-149 |
| c) demonstrate understanding of problems and solutions through oral, pictorial, and written explanations. | Unit 8 – Lesson 3: <i>Pictographs</i> pp. 148-149 |
| 6.05 Create and use representations to organize, record and communicate mathematical ideas | |
| Unit 8 – Lesson 1: <i>Tally Charts</i> pp. 144-145 Lesson 2: <i>Reading Charts and Tables</i> pp. 146-147 | |