Northpoint Horizons

Math Elevations™ (Comprehensive Intervention System)
Correlated to
Georgia Mathematics Performance Standards

This document provides a sampling of the extensive math directives offered throughout the *Math Elevations* program that meet **Georgia Mathematics Performance Standards.**

Georgia Mathematics Performance Standards Grade 3	***Math Elevations* Level C Teacher's Guide Examples/Lessons**
NUMBER AND OPERATIONS	
M3N1. Students will further develop their understanding of whole numbers and ways of representing them.	
a. Identify place values from tenths through ten thousands.	Unit 1 – Lesson 1: *Four-Digit Numbers* pp. 18–19 Lesson 2: *Comparing and Ordering Numbers* pp. 20–21 Lesson 3: *Rounding* pp. 22–23 Lesson 8: *Reading and Writing Numbers Through 999,999* pp. 32–33
b. Understand the relative sizes of digits in place value notation (10 times, 100 times, 1/10 of a single digit whole number) and ways to represent them.	Unit 1 – Lesson 1: *Four-Digit Numbers* pp. 18–19 Lesson 2: *Comparing and Ordering Numbers* pp. 20–21 Lesson 3: *Rounding* pp. 22–23 Lesson 8: *Reading and Writing Numbers Through 999,999* pp. 32–33
M3N2. Students will further develop their skills of addition and subtraction and apply them in problem solving.	
a. Use the properties of addition and subtraction to compute and verify the results of computation.	Unit 2 – Lesson 1: *Addition and Subtraction Families* pp. 36–37
b. Use mental math and estimation strategies to add and subtract.	Unit 2 – Lesson 3: *Using Estimation in Addition* pp. 40–41
c. Solve problems requiring addition and subtraction.	Unit 2 – Lesson 1: *Addition and Subtraction Families* pp. 36–37 Lesson 2: *Adding Two-Digit Numbers* pp. 38–39 Lesson 3: *Using Estimation in Addition* pp. 40–41 Lesson 4: *Adding Three- and Four-Digit Numbers* pp. 42–43 Lesson 5: *Regrouping Two-Digit Numbers for Subtraction* pp. 44–

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	45 Lesson 6: *Subtraction of Three- and Four-Digit Numbers* pp. 46–47 Lesson 7: *Subtraction with Zeros* pp. 48–49 Lesson 8: *Addition and Subtraction Word Problems* pp. 50–51
M3N3. Students will further develop their understanding of multiplication of whole numbers and develop the ability to apply it in problem solving.	
a. Describe the relationship between addition and multiplication, i.e., multiplication is defined as repeated addition.	Unit 3 – Lesson 1: *Meaning of Multiplication* pp. 54–55
b. Know the multiplication facts with understanding and fluency to 10 x 10.	Unit 3 – Lesson 2: *Multiplication Facts of 2, 5, and 10* pp. 56–57 Lesson 3: *Multiplication Facts of 3 and 6* pp. 58–59 Lesson 4: *Multiplication Facts of 4 and 8* pp. 60–61 Lesson 5: *Multiplication Facts of 7 and 9* pp. 62–63
c. Use arrays and area models to develop understanding of the distributive property and to determine partial products for multiplication of 2- or 3-digit numbers by a 1-digit number.	Unit 3 – Lesson 1: *Meaning of Multiplication* pp. 54–55
d. Understand the effect on the problem-solving situations in which division may be applied and write corresponding mathematical expressions.	Unit 3 – Lesson 6: *Division as Equal Grouping and Sharing Equally* pp. 64–65 Lesson 7: *Dividing Using Inverse Operations* pp. 66–67
e. Apply the identity, commutative and associative properties of multiplication and verify the results.	Unit 3 – Lesson 1: *Meaning of Multiplication* pp. 54–55
f. Use mental math and estimation strategies to multiply.	
g. Solve problems requiring multiplication.	Unit 3 – Lesson 1: *Meaning of Multiplication* pp. 54–55
M3N4. Students will understand the meaning of division and develop the ability to apply it in problem solving.	
a. Understand the relationship between division and multiplication and between division and subtraction.	Unit 3 – Lesson 7: *Dividing Using Inverse Operations* pp. 66–67
b. Recognize that division may be two many equal parts of a given size or amount may be taken away from the who as in repeated subtraction, and the second is determining the size of the parts when the whole is separated into a given number of equal parts as in a sharing model.	Unit 3 – Lesson 6: *Division as Equal Grouping and Sharing Equally* pp. 64–65
c. Recognize that division may be two situations.	Unit 3 – Lesson 6: *Division as Equal Grouping and Sharing Equally* pp. 64–

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	65 Lesson 7: *Dividing Using Inverse Operations* pp. 66–67
d. Explain the meaning of a remainder in division.	Unit 3 – Lesson 6: *Division as Equal Grouping and Sharing Equally* pp. 64–65
e. Divide a 2- and 3-digit number by a 1-digit divisor.	Unit 3 – Lesson 6: *Division as Equal Grouping and Sharing Equally* pp. 64–65 Lesson 7: *Dividing Using Inverse Operations* pp. 66–67 Lesson 8: *Multiplication and Division Word Problems* pp. 68–69
f. Solve problems requiring division.	Unit 3 – Lesson 6: *Division as Equal Grouping and Sharing Equally* pp. 64–65 Lesson 7: *Dividing Using Inverse Operations* pp. 66–67 Lesson 8: *Multiplication and Division Word Problems* pp. 68–69
M3N5. Students will understand the meaning of decimal fractions and common fractions in simple cases and apply them in problem–solving situations.	
a. Understand a decimal fraction (i.e., 0.1) and a common fraction (i.e., 1/10 represent parts of a whole.	Unit 1 – Lesson 5*: Fractions as Part of a Whole* pp. 26–27 Lesson 6: *Fractions as Part of a Set* pp. 28–29 Lesson 7: *Comparing Fractions* pp. 30–31 Unit 4 – Lesson 1: *Tenths* pp. 72–73 Lesson 2: *Hundredths* pp. 74–75
b. Understand the fraction *a/b* divided into *b* equal sized parts.	Unit 1 – Lesson 5*: Fractions as Part of a Whole* pp. 26–27 Lesson 6: *Fractions as Part of a Set* pp. 28–29 Lesson 7: *Comparing Fractions* pp. 30–31
c. Understand a one place decimal fraction represents tenths.	Unit 4 – Lesson 1: *Tenths* pp. 72–73
d. Know and use decimal fractions and common fractions to represent the size parts created by equal divisions of a whole.	Unit 1 – Lesson 5*: Fractions as Part of a Whole* pp. 26–27 Lesson 6: *Fractions as Part of a Set* pp. 28–29
e. Understand the concept of addition and subtract common fractions with like denominators.	

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f. Model addition and subtraction of decimal fractions.	
g. Solve problems involving fractions.	Unit 1 – Lesson 5*: Fractions as Part of a Whole* pp. 26–27 Lesson 6: *Fractions as Part of a Set* pp. 28–29 Lesson 7: *Comparing Fractions* pp. 30–31
GEOMETRY	
M3G1. Students will further develop their understanding of geometric figures by drawing them. They will also state and explain their properties.	
a. Draw and classify previously learned fundamental geometric figures and scalene, isosceles and equilateral triangles.	Unit 6 – Lesson 1: *Lines and Angles* pp. 108–109 Lesson 2: *Types of Lines* pp. 110–111 Lesson 3: *Plane Figures* pp. 112–113 Lesson 4: *Congruent Figures* pp. 114–115 Lesson 5: *Lines of Symmetry* pp. 116–117 Lesson 6: *Solid Figures* pp. 118–119 Lesson 7: *Solid Figures and Their Nets* pp. 120–121
b. Identify and explain the properties of fundamental geometric figures.	Unit 6 – Lesson 1: *Lines and Angles* pp. 108–109 Lesson 2: *Types of Lines* pp. 110–111 Lesson 3: *Plane Figures* pp. 112–113 Lesson 4: *Congruent Figures* pp. 114–115 Lesson 5: *Lines of Symmetry* pp. 116–117 Lesson 6: *Solid Figures* pp. 118–119 Lesson 7: *Solid Figures and Their Nets* pp. 120–121
c. Examine and compare angles of fundamental geometric figures.	Unit 6 – Lesson 1: *Lines and Angles* pp. 108–109
d. Identify the center, diameter, and radius of a circle.	
ALGEBRA	
M3A1. Students will use mathematical expressions to represent relationships between quantities and interpret given expressions.	
a. Describe and extend numeric and geometric patterns.	Unit 5 – Lesson 2: *Missing Factors* pp. 92–93 Lesson 3: *Skip Counting* pp. 94–95 Lesson 4: *Number Patterns* pp. 96–97
b. Describe and explain a quantitative relationship represented by a formula	Unit 7 –

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(such as the perimeter of a geometric figure).	Lesson 4: *Perimeter* pp. 132–133 Lesson 5: *Area* pp. 134–135
c. Use a symbol, such as □ and Δ, to represent an unknown and find the value of the unknown in a number sentence.	Unit 5 – Lesson 1: *Missing Addends and Subtrahends* pp. 90–91 Lesson 2: *Missing Factors* pp. 92–93
DATA ANALYSIS	
M3D1. Students will create and interpret simple tables and graphs.	
a. Solve problems by organizing and displaying data in bar graphs and tables.	Unit 8 – Lesson 1: *Tally Charts* pp. 144–145 Lesson 2: *Reading Charts and Tables* pp. 146–147 Lesson 3: *Pictographs* pp. 148–149 Lesson 4: *Simple Bar Graphs* pp. 150–151 Lesson 5: *Bar Graphs with a Scale* pp. 152–153
b. Construct and interpret bar graphs using scale increments of 1, 2, 5, and 10.	Unit 8 – Lesson 4: *Simple Bar Graphs* pp. 150–151 Lesson 5: *Bar Graphs with a Scale* pp. 152–153
c. Develop and evaluate mathematical arguments and proofs.	Unit 8 – Lesson 6: *Likelihood* pp. 154–155 Lesson 7: *Probability* pp. 156– 157 Lesson 8: *Fair and Unfair Games* pp. 158–159
d. Select and use various types of reasoning and methods of proof.	Unit 8 – Lesson 6: *Likelihood* pp. 154–155 Lesson 7: *Probability* pp. 156–157 Lesson 8: *Fair and Unfair Games* pp. 158–159
Process Skills	
M3P1. Students will solve problems (using appropriate technology).	
a. Build new mathematical knowledge through problem solving.	Unit 2 – Lesson 8: *Addition and Subtraction Word Problems* pp. 50–51 Unit 3 – Lesson 8: *Multiplication and Division Word Problems* pp. 68–69 Unit 4 – Lesson 8: *Money Word Problems* pp. 86–87
b. Solve problems that arise in mathematics and in other contexts.	Unit 2 – Lesson 8: *Addition and Subtraction Word Problems* pp. 50–51

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	Unit 3 – Lesson 8: *Multiplication and Division Word Problems* pp. 68–69 Unit 4 – Lesson 8: *Money Word Problems* pp. 86–87
c. Apply and adapt a variety of appropriate strategies to solve problems.	Unit 2 – Lesson 8: *Addition and Subtraction Word Problems* pp. 50–51 Unit 3 – Lesson 8: *Multiplication and Division Word Problems* pp. 68–69 Unit 4 – Lesson 8: *Money Word Problems* pp. 86–87
d. Monitor and reflect on the process of mathematical problem solving.	Unit 4 – Lesson 8: *Money Word Problems* pp. 86–87
M3P2. Students will reason and evaluate mathematical arguments.	
a. Recognize reasoning and proof as fundamental aspects of mathematics.	Unit 8 – Lesson 6: *Likelihood* pp. 154–155 Lesson 7: *Probability* pp. 156–157 Lesson 8: *Fair and Unfair Games* pp. 158–159
b. Make and investigate mathematical conjectures.	Unit 8 – Lesson 6: *Likelihood* pp. 154–155 Lesson 7: *Probability* pp. 156–157 Lesson 8: *Fair and Unfair Games* pp. 158–159
c. Develop and evaluate mathematical arguments and proofs.	Unit 8 – Lesson 6: *Likelihood* pp. 154–155 Lesson 7: *Probability* pp. 156–157 Lesson 8: *Fair and Unfair Games* pp. 158–159
d. Select and use various types of reasoning and methods of proof.	Unit 8 – Lesson 6: *Likelihood* pp. 154–155 Lesson 7: *Probability* pp. 156– 157 Lesson 8: *Fair and Unfair Games* pp. 158–159
M3P3. Students will communicate mathematically.	
a. Organize and consolidate their mathematical thinking through communication.	Unit 8 – Lesson 1: *Tally Charts* pp. 144–145 Lesson 2: *Reading Charts and Tables* pp. 146–147 Lesson 3: *Pictographs* pp. 148–149 Lesson 4: *Simple Bar Graphs* pp. 150–151

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	Lesson 5: *Bar Graphs with a Scale* pp. 152–153
b. Communicate their mathematical thinking coherently and clearly to peers, teachers, and others.	Unit 8 – Lesson 1: *Tally Charts* pp. 144–145 Lesson 2: *Reading Charts and Tables* pp. 146–147 Lesson 3: *Pictographs* pp. 148–149 Lesson 4: *Simple Bar Graphs* pp. 150–151 Lesson 5: *Bar Graphs with a Scale* pp. 152–153
c. Analyze and evaluate the mathematical thinking and strategies of others.	Unit 8 – Lesson 8: *Fair and Unfair Games* pp. 158–159
d. Use the language of mathematics to express mathematical ideas precisely.	Unit 6 – Lesson 1: *Lines and Angles* pp. 108–109 Lesson 2: *Types of Lines* pp. 110–111 Lesson 3: *Plane Figures* pp. 112–113
M3P4. Students will make connections among mathematical ideas and to other disciplines.	
a. Recognize and use connections among mathematical ideas.	Unit 5 – Lesson 3: *Skip Counting* pp. 94–95
b. Understand how mathematical ideas interconnect and build on one another to produce a coherent whole.	Unit 8 – Lesson 8: *Fair and Unfair Games* pp. 158–159
c. Recognize and apply mathematics in contexts outside of mathematics.	Unit 6 – Lesson 7: *Solid Figures and Their Nets* pp. 120–121
M3P5. Students will represent mathematics in multiple ways.	
a. Create and use representations to organize, record, and communicate mathematical ideas.	Unit 8 – Lesson 1: *Tally Charts* pp. 144–145 Lesson 2: *Reading Charts and Tables* pp. 146–147 Lesson 3: *Pictographs* pp. 148–149 Lesson 4: *Simple Bar Graphs* pp. 150–151 Lesson 5: *Bar Graphs with a Scale* pp. 152–153
b. Select, apply, and translate among mathematical representations to solve problems.	Unit 2 – Lesson 1: *Addition and Subtraction Families* pp. 36–37
c. Use representations to model and interpret physical, social, and mathematical phenomena.	Unit 8 – Lesson 1: *Tally Charts* pp. 144–145 Lesson 2: *Reading Charts and Tables* pp. 146–147 Lesson 3: *Pictographs* pp. 148–149 Lesson 4: *Simple Bar Graphs* pp. 150–151

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	Lesson 5: *Bar Graphs with a Scale* pp. 152–153