

Istation[®] Math

Correlation of Standards

State of Georgia

Mathematics

Grades 2-5



Istation

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Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 2



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
K-12 Standards for Mathematical Practices (MP)				
As stated in the Common Core State Standards for Mathematics, "The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students." Each Mathematical Practice standard is listed as applicable to the right of each Istation Math resource with the corresponding code, MP1-8.				
MP1	Make sense of problems and persevere in solving them.			
MP2	Reason abstractly and quantitatively.			
MP3	Construct viable arguments and critique the reasoning of others.			
MP4	Model with mathematics.			
MP5	Use appropriate tools strategically.			
MP6	Attend to precision.			
MP7	Look for and make use of structure.			
MP8	Look for and express regularity in repeated reasoning.			
Operations and Algebraic Thinking (OA)				
Represent and solve problems involving addition and subtraction.				
2.OA.1	Use addition and subtraction within 100 to solve one- and two-step word problems by using drawings and equations with a symbol for the unknown number to represent the problem. Problems include contexts that involve adding to, taking from, putting together/taking apart (part/part/whole) and comparing with unknowns in all positions.	<p>Unit 32: Two-Step Problems – Addition and Subtraction – Unknowns at the End</p> <p>Unit 32: Two-Step Problems – Addition and Subtraction – Unknowns in the Middle</p>	<p>Unit 32: Build Multistep Equations (Darcy's Diner)</p> <p>Unit 32: Build Multistep Equations with Multiple Operations (Jewels by Jules)</p> <p>Unit 32: Solve Multistep Equations with Multiple Operations (Cason's Closet)</p> <p>ISIP Math: Working Backward to Problem-Solve</p> <p>ISIP Math: Ben's Aquatic Adventure</p> <p>ISIP Math: Problem Solving with Base 10 Models</p> <p>ISIP Math: Choosing the Operation</p>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Add and subtract within 20.				
2.OA.2	Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.	Unit 31: Fact Families – Addition and Subtraction	<p>Unit 31: Fact Families – Addition and Subtraction</p> <p>ISIP Math: Addition and Subtraction Fact Families</p> <p>ISIP Math: Fact Family Triangles</p> <p>ISIP Math: Math Mind Reader</p>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 2



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
Number and Operations in Base Ten (NBT)				
Understand place value.				
2.NBT.1	Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:		Unit 30: Building Numbers Using Base 10 Blocks Unit 30: Writing Expanded Form from Standard Unit 30: Writing Word Form from Expanded and Standard	
	a. 100 can be thought of as a bundle of ten tens – called a “hundred.”	Unit 30: Writing Standard Form from Expanded Form	ISIP Math: Same Number, Different Ways	MP1
	b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).	Unit 30: Writing Expanded Form from Standard Form Unit 30: Writing Word Form from Expanded and Standard Form	ISIP Math: Place Value Pair-Up ISIP Math: Race to the Cube ISIP Math: Partitioning ISIP Math: Creating Numbers with Base 10 Blocks ISIP Math: Place Value Cups ISIP Math: Writing Standard Form from Expanded Form	MP2 MP3 MP4 MP5 MP6 MP7 MP8
2.NBT.2	Count within 1000; skip-count by 5s, 10s, and 100s.		ISIP Math: Skip Counting	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
2.NBT.3	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	Unit 30: Writing Standard Form from Expanded Form Unit 30: Writing Expanded Form from Standard Form Unit 30: Writing Word Form from Expanded and Standard Form	Unit 30: Writing Expanded Form from Standard Unit 30: Writing Word Form from Expanded and Standard ISIP Math: Same Number, Different Ways ISIP Math: Place Value Pair-Up ISIP Math: Partitioning ISIP Math: Place Value Cups ISIP Math: Writing Standard Form from Expanded Form	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

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Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
2.NBT.4	Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of these comparisons.	<p>Unit 30: <i>Comparing Whole Numbers with Language and Symbols</i></p> <p>Unit 30: <i>Comparing Two Three-Digit Numbers</i></p> <p>Unit 30: <i>Comparing Two Three-Digit Numbers with Zeroes</i></p>	<p>Unit 30: <i>Comparison Symbols</i></p> <p>Unit 30: <i>Comparison – Three-Digit Numbers</i></p> <p>ISIP Math: <i>Steps for Comparing Three-Digit Numbers</i></p>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Use place value understanding and properties of operations to add and subtract.				
2.NBT.5	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	<p>Unit 31: <i>Adding with Regrouping Using Concrete Models</i></p> <p>Unit 31: <i>Subtracting with Regrouping Using Concrete Models</i></p> <p>Unit 31: <i>Adding with Regrouping – Partitioning</i></p> <p>Unit 31: <i>Subtracting with Regrouping – Partitioning</i></p> <p>Unit 31: <i>Adding on a Number Line</i></p> <p>Unit 31: <i>Subtracting on a Number Line</i></p> <p>Unit 31: <i>Fact Families – Addition and Subtraction</i></p>	<p>Unit 31: <i>Adding with Regrouping – Concrete</i></p> <p>Unit 31: <i>Subtracting with Regrouping – Concrete</i></p> <p>Unit 31: <i>Adding Using Partitioning</i></p> <p>Unit 31: <i>Subtracting Using Partitioning</i></p> <p>Unit 31: <i>Adding on a Number Line</i></p> <p>Unit 31: <i>Subtracting on a Number Line</i></p> <p>Unit 31: <i>Fact Families – Addition and Subtraction</i></p> <p>ISIP Math: <i>Addition and Subtraction Fact Families</i></p> <p>ISIP Math: <i>Fact Family Triangles</i></p> <p>ISIP Math: <i>Break Apart to Add</i></p> <p>ISIP Math: <i>Race to the Cube</i></p> <p>ISIP Math: <i>Using Arrow Paths to Add and Subtract</i></p> <p>ISIP Math: <i>Math Mind Reader</i></p> <p>ISIP Math: <i>Partitioning</i></p>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics
Grade 2



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
2.NBT.7	Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method.	<p>Unit 31: Adding with Regrouping Using Concrete Models</p> <p>Unit 31: Subtracting with Regrouping Using Concrete Models</p> <p>Unit 31: Adding with Regrouping – Partitioning</p> <p>Unit 31: Subtracting with Regrouping – Partitioning</p> <p>Unit 31: Adding on a Number Line</p> <p>Unit 31: Subtracting on a Number Line</p> <p>Unit 31: Fact Families – Addition and Subtraction</p>	<p>Unit 31: Adding with Regrouping – Concrete</p> <p>Unit 31: Subtracting with Regrouping – Concrete</p> <p>Unit 31: Adding Using Partitioning</p> <p>Unit 31: Subtracting Using Partitioning</p> <p>Unit 31: Adding on a Number Line</p> <p>Unit 31: Subtracting on a Number Line</p> <p>Unit 31: Fact Families – Addition and Subtraction</p> <p>ISIP Math: Break Apart to Add</p> <p>ISIP Math: Race to the Cube</p> <p>ISIP Math: Using Arrow Paths to Add and Subtract</p> <p>ISIP Math: Partitioning</p>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
2.NBT.9	Explain why addition and subtraction strategies work, using place value and the properties of operations.	<p>Unit 31: Adding with Regrouping Using Concrete Models</p> <p>Unit 31: Subtracting with Regrouping Using Concrete Models</p> <p>Unit 31: Adding with Regrouping – Partitioning</p> <p>Unit 31: Subtracting with Regrouping – Partitioning</p> <p>Unit 31: Adding on a Number Line</p> <p>Unit 31: Subtracting on a Number Line</p> <p>Unit 31: Fact Families – Addition and Subtraction</p>	<p>Unit 31: Adding with Regrouping – Concrete</p> <p>Unit 31: Subtracting with Regrouping – Concrete</p> <p>Unit 31: Adding using Partitioning</p> <p>Unit 31: Subtracting using Partitioning</p> <p>Unit 31: Adding on a Number Line</p> <p>Unit 31: Subtracting on a Number Line</p> <p>Unit 31: Fact Families – Addition and Subtraction</p> <p>ISIP Math: Addition and Subtraction Fact Families</p> <p>ISIP Math: Fact Family Triangles</p> <p>ISIP Math: Break Apart to Add</p> <p>ISIP Math: Race to the Cube</p> <p>ISIP Math: Using Arrow Paths to Add and Subtract</p> <p>ISIP Math: Math Mind Reader</p> <p>ISIP Math: Partitioning</p>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

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Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
Measurement and Data (MD)				
Measure and estimate lengths in standard units.				
2.MD.1	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.		ISIP Math: <i>Appropriate Tools for Linear Measurement</i> ISIP Math: <i>How to Use Linear Measurement Tools</i> ISIP Math: <i>Measuring Objects</i> ISIP Math: <i>Ruler Relay</i>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
2.MD.2	Measure the length of an object twice, using length units of different measurements; describe how the two measurements relate to the size of the unit chosen. Understand the relative size of units in different systems of measurement. <i>For example, an inch is longer than a centimeter.</i> (Students are not expected to convert between systems of measurement.)		ISIP Math: <i>Unit Relationships</i>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
2.MD.4	Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.		ISIP Math: <i>Ruler Relay</i>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Relate addition and subtraction to length.				
2.MD.5	Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.		ISIP Math: <i>The Benevolent Ruler</i>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
2.MD.6	Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.	Unit 31: <i>Adding on a Number Line</i> Unit 31: <i>Subtracting on a Number Line</i>	Unit 31: <i>Adding on a Number Line</i> Unit 31: <i>Subtracting on a Number Line</i> ISIP Math: <i>Skip Counting</i>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

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Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
Work with time and money.				
2.MD.7	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	Unit 34: Tell Time to the Nearest Five Minutes	Unit 34: Time to the Nearest Five Minutes Unit 34: Time – AM and PM Unit 34: Time to the Quarter Hour	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
2.MD.8	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. <i>Example: If you have 2 dimes and 3 pennies, how many cents do you have?</i>		Unit 32: Money Word Problems (Retail Riddles)	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Represent and interpret data.				
2.MD.10	Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.	Unit 33: Solving Problems Using Information Presented in Picture Graphs Unit 33: Solving Problems Using Information Presented in Bar Graphs	Unit 33: Solving Picture Graph Problems Unit 33: Solving Bar Graph Problems	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Geometry (G)				
Reason with shapes and their attributes.				
2.G.3	Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words <i>halves</i> , <i>thirds</i> , <i>half of</i> , <i>a third of</i> , etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	Unit 32: Partitioning to Identify Halves, Thirds, and Fourths Unit 32: Equal Shares of Identical Wholes	Unit 32: Identifying Halves, Thirds, Fourth Unit 32: Equal Shares of Identical Wholes	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
		* Includes content released during the 2017-2018 school year	* Includes content released during the 2017-2018 school year	
End of Grade 2				

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Grade 3



Standards	Objectives	Istation Application *	Istation Teacher Resources *	MP Standards
K-12 Standards for Mathematical Practices (MP)				
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MP4	Model with mathematics.			
MP5	Use appropriate tools strategically.			
MP6	Attend to precision.			
MP7	Look for and make use of structure.			
MP8	Look for and express regularity in repeated reasoning.			
Operations and Algebraic Thinking (OA)				
Represent and solve problems involving multiplication and division.				
3.OA.1	Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. <i>For example, describe a context in which a total number of objects can be expressed as 5×7.</i>	Unit 36: Multiply One-Digit Numbers Using Concrete Models	Unit 36: One-Digit by One-Digit Multiplication Unit 36: Multiplying Two One-Digit Numbers with Arrays ISIP Math: Relating Multiplication and Division Fact Practice: Multominoes; Tall Towers	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
3.OA.2	Interpret whole number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares (How many in each group?), or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each (How many groups can you make?). <i>For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.</i>		ISIP Math: Relating Multiplication and Division	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
3.OA.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	Unit 36: Two-Step Word Problems – All Operations	Unit 36: Two-Step Word Problems – All Operations ISIP Math: Multiplying with Three Factors ISIP Math: Strip Diagrams – Compare Problems ISIP Math: Doubling and Halving	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 3



Standards	Objectives	Istation Application *	Istation Teacher Resources *	MP Standards
3.OA.A.4	Determine the unknown whole number in a multiplication or division equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = _ \div 3$, $6 \times 6 = ?$</i>	Unit 36: Fact Families – Multiplication and Division	Unit 36: Fact Families – Multiplication and Division ISIP Math: Practicing Fact Families ISIP Math: Relating Multiplication and Division ISIP Math: Strip Diagrams – Compare Problems ISIP Math: Using the Commutative Property of Multiplication	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Understand properties of multiplication and the relationship between multiplication and division.				
3.OA.5	Apply properties of operations as strategies to multiply and divide. <i>Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)</i>	Unit 36: Properties of Multiplication	ISIP Math: Using the Commutative Property of Multiplication ISIP Math: Multiplying with Three Factors	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
3.OA.6	Understand division as an unknown-factor problem. <i>For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.</i>	Unit 36: Fact Families – Multiplication and Division	Unit 36: Fact Families – Multiplication and Division ISIP Math: Practicing Fact Families ISIP Math: Relating Multiplication and Division	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 3



Standards	Objectives	Istation Application *	Istation Teacher Resources *	MP Standards
Multiply and divide within 100.				
3.OA.7	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	<p>Unit 35: <i>Arithmetic Patterns in Multiplication</i></p> <p>Unit 36: <i>Multiply One-Digit Numbers Using Concrete Models</i></p> <p>Unit 36: <i>Fact Families – Multiplication and Division</i></p> <p>Unit 36: <i>Two-Step Word Problems – All Operations</i></p> <p>Unit 36: <i>Properties of Multiplication</i></p>	<p>Unit 35: <i>Arithmetic Patterns in Multiplication</i></p> <p>Unit 36: <i>One-Digit by One-Digit Multiplication</i></p> <p>Unit 36: <i>Multiplying Two One-Digit Numbers with Arrays</i></p> <p>Unit 36: <i>Two-Step Word Problems – All Operations</i></p> <p>Unit 36: <i>Fact Families – Multiplication and Division</i></p> <p>Fact Practice Activities: <i>Dice Blocks; Multominoes; Spider Queen’s Hidden Products; Spider Queen’s Spiders; Tall Towers; Wipe Out</i></p> <p>ISIP Math: <i>Practicing Fact Families</i></p> <p>ISIP Math: <i>Relating Multiplication and Division</i></p> <p>ISIP Math: <i>Strip Diagrams – Compare Problems</i></p> <p>ISIP Math: <i>Using the Commutative Property of Multiplication</i></p> <p>ISIP Math: <i>Doubling and Halving</i></p>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Solve problems involving the four operations, and identify and explain patterns in arithmetic.				
3.OA.8	Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	<p>Unit 36: <i>Two-Step Word Problems – All Operations</i></p>	<p>Unit 35: <i>Problem Solving without Numbers: Addition and Subtraction</i></p> <p>Unit 36: <i>Problem Solving without Numbers: Multiplication and Division</i></p> <p>Unit 36: <i>Two-Step Word Problems – All Operations</i></p>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 3



Standards	Objectives	Istation Application *	Istation Teacher Resources *	MP Standards
3.OA.9	Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. <i>For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</i>	Unit 35: Arithmetic Patterns in Multiplication	Unit 35: Arithmetic Patterns in Multiplication Unit 36: Fact Families – Multiplication and Division ISIP Math: Doubling and Halving ISIP Math: Practicing Fact Families ISIP Math: Relating Multiplication and Division ISIP Math: Using the Commutative Property of Multiplication	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Number and Operations in Base Ten (NBT)				
Use place value understanding and properties of operations to perform multi-digit arithmetic.				
3.NBT.1	Use place value understanding to round whole numbers to the nearest 10 or 100.	Unit 35: Rounding to the Nearest Ten Unit 35: Rounding to the Nearest Hundred	Unit 35: Rounding – Nearest Ten Unit 35: Rounding – Nearest Hundred Unit 35: Rounding – Nearest Ten, Hundred, Thousand Unit 35: Rounding within Three- and Four-Digit Numbers – Number Line	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
3.NBT.2	Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	Unit 36: Two-Step Word Problems – All Operations	Unit 36: Two-Step Word Problems – All Operations	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
3.NBT.3	Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9×80 , 5×60) using strategies based on place value and properties of operations.	Unit 35: Arithmetic Patterns in Multiplication	Unit 35: Arithmetic Patterns in Multiplication	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 3



Standards	Objectives	Istation Application *	Istation Teacher Resources *	MP Standards
Number and Operations – Fractions (NF)				
Develop understanding of fractions as numbers.				
3.NF.1	Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts (unit fraction); understand a fraction a/b as the quantity formed by a parts of size $1/b$. For example, $3/4$ means there are three $1/4$ parts, so $3/4 = 1/4 + 1/4 + 1/4$.	<p>Unit 37: Fractions Equivalent to One</p> <p>Unit 37: Fractions Equivalent to Whole Numbers</p> <p>Unit 37: Mixed Numbers</p> <p>Unit 37: Using Fraction Bars or Number Lines to Find Many Equivalent Fractions</p> <p>Unit 37: Using Fraction Bars or Number Lines to Determine If Two Fractions Are Equivalent</p>	<p>Unit 37: Fractions Equivalent to One</p> <p>Unit 37: Fractions Equivalent to Whole Numbers</p> <p>Unit 37: Mixed Numbers on a Number Line</p> <p>Unit 37: Many Equivalent Fractions</p> <p>Unit 37: Identifying Equivalent Fractions</p> <p>Unit 37: Expressing Equivalent Fractions with Denominators of 10 and 100</p> <p>Unit 37: Using Models to Identify Equivalent Fractions</p> <p>ISIP Math: Fractions in Problem Situations</p> <p>ISIP Math: Recognizing Fractions in Different Forms</p> <p>ISIP Math: Writing Fractions – Symbolic Notation</p> <p>ISIP Math: Identifying Equivalent Fractions Using Area Models</p>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
3.NF.2	<p>Understand a fraction as a number on the number line; represent fractions on a number line diagram.</p> <p>a. Represent a fraction $1/b$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $1/b$. Recognize that a unit fraction $1/b$ is located $1/b$ whole unit from 0 on the number line.</p> <p>b. Represent a non-unit fraction a/b on a number line diagram by marking off a lengths of $1/b$ (unit fractions) from 0. Recognize that the resulting interval has size a/b and that its endpoint locates the non-unit fraction a/b on the number line.</p>	<p>Unit 37: Fractions Equivalent to One</p> <p>Unit 37: Fractions Equivalent to Whole Numbers</p> <p>Unit 37: Mixed Numbers</p> <p>Unit 37: Using Fraction Bars or Number Lines to Find Many Equivalent Fractions</p> <p>Unit 37: Using Fraction Bars or Number Lines to Determine If Two Fractions Are Equivalent</p>	<p>Unit 37: Fractions Equivalent to One</p> <p>Unit 37: Fractions Equivalent to Whole Numbers</p> <p>Unit 37: Mixed Numbers on a Number Line</p> <p>Unit 37: Many Equivalent Fractions</p> <p>Unit 37: Identifying Equivalent Fractions</p>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

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Standards	Objectives	Istation Application *	Istation Teacher Resources *	MP Standards
3.NF.3	Explain equivalence of fractions through reasoning with visual fraction models. Compare fractions by reasoning about their size.	Unit 37: Fractions Equivalent to One Unit 37: Fractions Equivalent to Whole Numbers Unit 37: Mixed Numbers Unit 37: Using Fraction Bars or Number Lines to Find Many Equivalent Fractions Unit 37: Using Fraction Bars or Number Lines to Determine If Two Fractions Are Equivalent Unit 37: Comparing Fractions with Same Denominators Unit 37: Comparing Fractions with Same Numerators	Unit 37: Fractions Equivalent to One Unit 37: Fractions Equivalent to Whole Numbers Unit 37: Mixed Numbers on a Number Line Unit 37: Many Equivalent Fractions Unit 37: Identifying Equivalent Fractions Unit 37: Expressing Equivalent Fractions with Denominators of 10 and 100 Unit 37: Using Models to Identify Equivalent Fractions Unit 37: Fractions with Same Numerators Unit 37: Fractions with Like Denominators Unit 37: Whole Numbers and Fractions – Symbols ISIP Math: Comparing Fractions ISIP Math: Comparing Fractions Using Models ISIP Math: Identifying Equivalent Fractions Using Area Models	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
	a. Understand two fractions as equivalent (equal) if they are the same size or the same point on a number line.			
	b. Recognize and generate simple equivalent fractions with denominators of 2, 3, 4, 6, and 8, e.g., $1/2 = 2/4$, $4/6 = 2/3$. Explain why the fractions are equivalent, e.g., by using a visual fraction model.			
	c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. <i>Examples: Express 3 in the form $3 = 6/2$ (3 wholes is equal to six halves); recognize that $3/1 = 3$; locate $4/4$ and 1 at the same point of a number line diagram.</i>			
	d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model.			
Measurement and Data (MD)				
Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.				
3.MD.1	Tell and write time to the nearest minute and measure elapsed time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram, drawing a pictorial representation on a clock face, etc.	Unit 39: Elapsed Time on a Number Line	Unit 39: Elapsed Time within One Hour Unit 39: Elapsed Time across Hours	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 3



Standards	Objectives	Istation Application *	Istation Teacher Resources *	MP Standards
Represent and interpret data.				
3.MD.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. <i>For example, draw a bar graph in which each square in the bar graph might represent 5 pets.</i>	Unit 39: Solve Two-Step Problems Using Information Presented in Scaled Bar Graphs	Unit 39: Solving Two-Step Problems Using Bar Graphs	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
3.MD.4	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters.		ISIP Math: Measuring to the Nearest Quarter Inch	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Geometric Measurement: understand concepts of area and relate area to multiplication and to addition.				
3.MD.5	Recognize area as an attribute of plane figures and understand concepts of area measurement.		ISIP Math: Area Square	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
	a. A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area. b. A plane figure that can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.		ISIP Math: Finding the Area of Polygons ISIP Math: Finding the Area of Rectangles	
3.MD.6	Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).		ISIP Math: Area Square ISIP Math: Finding the Area of Polygons ISIP Math: Finding the Area of Rectangles	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 3



Standards	Objectives	Istation Application *	Istation Teacher Resources *	MP Standards
3.MD.7	<p>Relate area to the operations of multiplication and addition.</p> <p>a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.</p> <p>b. Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real-world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.</p> <p>c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.</p>		<p>ISIP Math: Area Square</p> <p>ISIP Math: Finding the Area of Polygons</p> <p>ISIP Math: Finding the Area of Rectangles</p>	<p>MP1</p> <p>MP2</p> <p>MP3</p> <p>MP4</p> <p>MP5</p> <p>MP6</p> <p>MP7</p> <p>MP8</p>
Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.				
3.MD.8	Solve real-world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	Unit 38: Perimeter Word Problems	<p>Unit 38: Perimeter Bundle</p> <p>ISIP Math: Perimeter of Polygons</p>	<p>MP1</p> <p>MP2</p> <p>MP3</p> <p>MP4</p> <p>MP5</p> <p>MP6</p> <p>MP7</p> <p>MP8</p>
Geometry (G)				
Reason with shapes and their attributes.				
3.G.1	Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.		<p>ISIP Math: Are Squares the Perfect Shape?</p> <p>ISIP Math: Attributes of Polygons</p> <p>ISIP Math: Building Hexagons</p> <p>ISIP Math: Defining Quadrilaterals by Attributes</p> <p>ISIP Math: Multiplying with Polygons</p>	<p>MP1</p> <p>MP2</p> <p>MP3</p> <p>MP4</p> <p>MP5</p> <p>MP6</p> <p>MP7</p> <p>MP8</p>
		<i>*Includes content released during the 2017-2018 school year</i>	<i>*Includes content released during the 2017-2018 school year</i>	
End of Grade 3				

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 4



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
K-12 Mathematical Practices (MP)				
As stated in the Common Core State Standards for Mathematics, “The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students.” Each Mathematical Practice standard is listed as applicable to the right of each Istation Math resource with the corresponding code, MP1-8.				
MP1	Make sense of problems and persevere in solving them.			
MP2	Reason abstractly and quantitatively.			
MP3	Construct viable arguments and critique the reasoning of others.			
MP4	Model with mathematics.			
MP5	Use appropriate tools strategically.			
MP6	Attend to precision.			
MP7	Look for and make use of structure.			
MP8	Look for and express regularity in repeated reasoning.			
Operations and Algebraic Thinking (OA)				
Use the four operations with whole numbers to solve problems.				
4.OA.1	Understand that a multiplicative comparison is a situation in which one quantity is multiplied by a specified number to get another quantity.	Unit 41: Multiply Two-Digit Numbers with Concrete Models Unit 42: Solve Multistep Word Problems	Unit 41: Two-Digit by Two-Digit Concrete Multiplication Unit 42: Solve Multistep Word Problems ISIP Math: Using Arrays to Derive and Learn Basic Facts ISIP Math: Commutative Property of Multiplication to Represent Numbers	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
	a. Interpret a multiplication equation as a comparison e.g., interpret $35 = 5 \times 7$ as a statement that 35 is 5 times as many as 7 and 7 times as many as 5.			
	b. Represent verbal statements of multiplicative comparisons as multiplication equations.			
4.OA.2	Multiply or divide to solve word problems involving multiplicative comparison. Use drawings and equations with a symbol or letter for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.	Unit 42: Solve Multistep Word Problems	Unit 42: Solve Multistep Word Problems ISIP Math: Using Multiplication to Solve If-Then Word Problems	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
4.OA.3	Solve multistep word problems with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a symbol or letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	Unit 42: Solve Multistep Word Problems	Unit 42: Solve Multistep Word Problems ISIP Math: Using Multiplication to Solve If-Then Word Problems	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 4



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
Gain familiarity with factors and multiples.				
4.OA.4	Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite.		Fact Practice Activities: <i>Dice Blocks; Multominoes; Spider Queen's Hidden Products; Spider Queen's Spiders; Tall Towers; Wipe Out</i> ISIP Math: <i>Multiplication Practice Game</i>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Generate and analyze patterns.				
4.OA.5	Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. Explain informally why the pattern will continue to develop in this way. <i>For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers.</i>		ISIP Math: <i>Integrating Fact Practice Using Input/Output Function Tables</i>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Number and Operations in Base Ten (NBT)				
Generalize place value understanding for multi-digit whole numbers.				
4.NBT.1	Recognize that in a multi-digit whole number, a digit in any one place represents ten times what it represents in the place to its right. <i>For example, recognize that $700 \div 70 = 10$ by applying concepts of place value and division.</i>	Unit 40: <i>Writing Standard Form from Expanded Form to Thousands</i> Unit 40: <i>Writing Expanded Form from Standard Form to Thousands</i> Unit 40: <i>Writing Word Form from Expanded and Standard Form to Thousands</i> Unit 40: <i>Writing Standard Form from Expanded Form through Millions</i> Unit 40: <i>Writing Expanded Form from Standard Form through Millions</i> Unit 40: <i>Writing Word Form from Expanded and Standard Form through Thousands and Millions</i>	Unit 40: <i>Writing Expanded Form from Standard through Thousands and Millions</i> Unit 40: <i>Writing Standard Form from Expanded through Thousands and Millions</i> Unit 40: <i>Writing Word Form from Expanded and Standard through Thousands and Millions</i>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics
Grade 4



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
4.NBT.2	Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.	<p>Unit 40: Writing Standard Form from Expanded Form to Thousands</p> <p>Unit 40: Writing Expanded Form from Standard Form to Thousands</p> <p>Unit 40: Writing Word Form from Expanded and Standard Form to Thousands</p> <p>Unit 40: Writing Standard Form from Expanded Form through Millions</p> <p>Unit 40: Writing Expanded Form from Standard Form through Millions</p> <p>Unit 40: Writing Word Form from Expanded and Standard Form through Thousands and Millions</p>	<p>Unit 40: Writing Expanded Form from Standard through Thousands and Millions</p> <p>Unit 40: Writing Standard Form from Expanded through Thousands and Millions</p> <p>Unit 40: Writing Word Form from Expanded and Standard through Thousands and Millions</p>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
4.NBT.3	Use place value understanding to round multi-digit whole numbers to any place.	<p>Unit 40: Rounding within Whole Numbers to the Nearest Ten, Hundred, Thousand with Number Line</p> <p>Unit 40: Rounding within Whole Numbers to the Nearest Ten, Hundred, Thousand with Algorithm</p> <p>Unit 40: Rounding Zero</p>	<p>Unit 40: Rounding – Nearest Thousand</p> <p>Unit 40: Rounding – Nearest Ten, Hundred, Thousand</p> <p>Unit 40: Rounding within Three- and Four-Digit Numbers – Number Line</p> <p>Unit 40: Rounding within Three- and Four-Digit Numbers – Abstract</p> <p>Unit 40: Zero as the Rounding Digit</p>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Use place value understanding and properties of operations to perform multi-digit arithmetic.				
4.NBT.4	Fluently add and subtract multi-digit whole numbers using the standard algorithm.		ISIP Math: Adding Multidigit Numbers and Checking for Reasonableness	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 4



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
4.NBT.5	Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	Unit 41: Multiply Two-Digit Numbers with Concrete Models	Unit 41: Two-Digit by Two-Digit Concrete Multiplication ISIP Math: Commutative Property of Multiplication to Represent Numbers ISIP Math: Multiplying Using the Distributive Property	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
4.NBT.6	Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	Unit 42: Solve Multistep Word Problems	Unit 42: Solve Multistep Word Problems	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Number and Operations – Fractions (NF)				
Extend understanding of fraction equivalence and ordering.				
4.NF.1	Explain why two or more fractions are equivalent $a/b = (n \times a)/(n \times b)$ ex: $1/4 = (3 \times 1)/(3 \times 4)$ by using visual fraction models. Focus attention on how the number and size of the parts differ even though the fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.	Unit 43: Using Models to Compare Equivalent Fractions Unit 43: Expressing Equivalent Fractions with Denominators of 10 and 100	Unit 37: Using Models to Identify Equivalent Fractions Unit 43: Expressing Equivalent Fractions with Denominators of 10 and 100 ISIP Math: Comparing Fractions ISIP Math: Using Area Models to Compare Fractions	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
4.NF.2	Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $1/2$. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model.	Unit 43: Use Benchmark Fractions to Compare Fractions with Different Denominators Unit 43: Compare Fractions with Unlike Denominators by Creating Common Denominators	Unit 43: Compare Fractions by Creating Common Denominators Unit 43: Benchmark Fractions Unit 43: Fractions – Symbols ISIP Math: Comparing Fractions ISIP Math: Using Area Models to Compare Fractions	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 4



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.				
4.NF.3	Understand a fraction a/b with a numerator >1 as a sum of unit fractions $1/b$.	Unit 43: Add Fractions with Both Denominators of 10 and 100		
	a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.	Unit 43: Add a Denominator of 10 to a Denominator of 100	Unit 43: Add Denominators of 10 to Denominators of 100	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
	b. Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. <i>Examples:</i> $3/8 = 1/8 + 1/8 + 1/8$; $3/8 = 1/8 + 2/8$; $2 \frac{1}{8} = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8$.	Unit 43: Add Fractions with Denominators of 10 and 100 Unit 43: Decomposing Fractions (Reteach lesson)	Unit 43: Adding Like Denominators of 10 and 100	
Understand decimal notation for fractions, and compare decimal fractions.				
4.NF.5	Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100. <i>For example, express $3/10$ as $30/100$, and add $3/10 + 4/100 = 34/100$.</i>	Unit 43: Add Fractions with Both Denominators of 10 and 100 Unit 43: Express Equivalent Fractions – Tenths and Hundredths Unit 43: Add a Denominator of 10 to a Denominator of 100 Unit 43: Add Fractions with Denominators of 10 and 100	Unit 43: Expressing Equivalent Fractions with Denominators of 10 and 100 Unit 43: Add Denominators of 10 to Denominators of 100 Unit 43: Adding Like Denominators of 10 and 100	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
4.NF.6	Use decimal notation for fractions with denominators 10 or 100. <i>For example, rewrite 0.62 as $62/100$; describe a length as 0.62 meters; locate 0.62 on a number line diagram.</i>	Unit 43: Write Word Form of Decimals (0.1-0.9 and 0.01-0.09) Unit 43: Write Word Form of Decimals (0.10-0.90) Unit 43: Write Word Form of Decimals (0.01-1.99)	Unit 43: Decimals as Fractions (Tenths and Hundredths) Unit 43: Decimals – Standard and Word Form ISIP Math: Linking Fractions to Equivalent Decimal Numbers ISIP Math: Understanding Decimal Numbers with Fractional Language	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
4.NF.7	Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual model.		ISIP Math: Comparing and Ordering Decimals	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 4



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
Measurement and Data (MD)				
Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.				
4.MD.1	<p>Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec.</p> <p>a. Understand the relationship between gallons, cups, quarts, and pints.</p> <p>b. Express larger units in terms of smaller units within the same measurement system.</p> <p>c. Record measurement equivalents in a two column table.</p>	Unit 44: Converting Units of Measurement to Solve Word Problems	Unit 44: Measurement Conversion Word Problems	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
4.MD.2	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.	Unit 44: Converting Units of Measurement to Solve Word Problems	Unit 44: Measurement Conversion Word Problems ISIP Math: Calculating Elapsed Time ISIP Math: Area of Rectangles and Part-Part-Whole Word Problems ISIP Math: Measuring Length to the Nearest Quarter Inch	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
4.MD.3	Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.		ISIP Math: Area of Rectangles and Part-Part-Whole Word Problems ISIP Math: Finding Area of Rectangles and Squares by Using Multiplication ISIP Math: Making Connections between Multiplication and Area ISIP Math: Quantifying Areas of Rectangles and Squares	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 4



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
Geometric Measurement: understand concepts of angle and measure angles.				
4.MD.5	<p>Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:</p> <p>a. An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through $\frac{1}{360}$ of a circle is called a “one-degree angle,” and can be used to measure angles.</p> <p>b. An angle that turns through n one-degree angles is said to have an angle measure of n degrees.</p>	Unit 45: Measure Angles with a Protractor	Unit 45: Measure Angles with a Protractor ISIP Math: Line and Angle Identification	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
4.MD.6	Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.	Unit 45: Measure Angles with a Protractor	Unit 45: Measure Angles with a Protractor ISIP Math: Line and Angle Identification	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
4.MD.7	Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol or letter for the unknown angle measure.	Unit 45: Missing Angles	Unit 45: Missing Angles ISIP Math: Decomposing Figures to Find the Area of Polygons	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Geometry (G)				
Draw and identify lines and angles, and classify shapes by properties of their lines and angles.				
4.G.1	Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.	Unit 45: Measure Angles with a Protractor	Unit 45: Measure Angles with a Protractor ISIP Math: Line and Angle Identification	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
		* Includes content released during the 2017-2018 school year	* Includes content released during the 2017-2018 school year	
End of Grade 4				

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 5



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
K-12 Mathematical Practices (MP)				
As stated in the Common Core State Standards for Mathematics, "The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students." Each Mathematical Practice standard is listed as applicable to the right of each Istation Math resource with the corresponding code, MP1-8.				
MP1	Make sense of problems and persevere in solving them.			
MP2	Reason abstractly and quantitatively.			
MP3	Construct viable arguments and critique the reasoning of others.			
MP4	Model with mathematics.			
MP5	Use appropriate tools strategically.			
MP6	Attend to precision.			
MP7	Look for and make use of structure.			
MP8	Look for and express regularity in repeated reasoning.			
Operations and Algebraic Thinking (OA)				
Write and interpret numerical expressions.				
5.OA.1	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.	Unit 49: Writing Expressions from Words Unit 49: Interpreting Expressions Unit 49: Evaluating Numerical Expressions with Parentheses	Unit 49: Writing Expressions from Words – Subtraction Unit 49: Writing Expressions from Words – Addition and Subtraction Unit 49: Evaluating Numerical Expressions with Parentheses Unit 49: Identifying Expressions in Scenarios	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
5.OA.2	Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them. For example, express the calculation "add 8 and 7, then multiply by 2" as $2 \times (8 + 7)$. Recognize that $3 \times (18932 + 921)$ is three times as large as $18932 + 921$, without having to calculate the indicated sum or product.	Unit 49: Writing Expressions from Words Unit 49: Interpreting Expressions	Unit 49: Writing Expressions from Words – Subtraction Unit 49: Writing Expressions from Words – Addition and Subtraction Unit 49: Evaluating Numerical Expressions with Parentheses Unit 49: Identifying Expressions in Scenarios	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Analyze patterns and relationships.				
5.OA.3	Generate two numerical patterns using a given rule. Identify apparent relationships between corresponding terms by completing a function table or input/output table. Using the terms created, form and graph ordered pairs on a coordinate plane.	Unit 51: Comparing Points on a Coordinate Plane	Unit 51: Comparing Points on a Coordinate Plane ISIP Math: Identifying and Plotting Ordered Pairs on the Coordinate Plane	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 5



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
Number and Operations in Base Ten (NBT)				
Understand the place value system.				
5.NBT.1	Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left.	Unit 46: Multiplying Decimals by 10 and 100 Unit 46: Dividing Decimals by 10 and 100 Unit 46: Exploring Powers of Ten Unit 46: Multiplying and Dividing Decimals by Powers of Ten	Unit 46: Multiplying Decimals by 10 and 100 Unit 46: Dividing Decimals by 10 and 100 Unit 46: Multiplying and Dividing Decimals by Powers of Ten Unit 46: Exploring Powers of Ten Unit 46: Decimal Grids and Place Value Mats Unit 46: Decimals on Place Value Mats	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
5.NBT.2	Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, and explain patterns in the placement of the decimal point when a decimal is multiplied or divided by a power of 10. Use whole-number exponents to denote powers of 10.	Unit 46: Multiply Decimals by 10 and 100 Unit 46: Divide Decimals by 10 and 100 Unit 46: Exploring Powers of Ten Unit 46: Multiply and Divide Decimals by Powers of Ten	Unit 46: Multiplying Decimals by 10 and 100 Unit 46: Dividing Decimals by 10 and 100 Unit 46: Multiplying and Dividing Decimals by Powers of Ten Unit 46: Exploring Powers of Ten	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
5.NBT.3	<p>Read, write, and compare decimals to thousandths.</p> <p>b. Compare two decimals to thousandths based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons.</p>	Unit 46: Concrete Decimal Comparison (Training only) Unit 46: Decimal Comparison with Grids (Training Only) Unit 46: Comparison of Tenths and Hundredths on the Number Line Unit 46: Abstract Comparison of Tenths and Hundredths Unit 46: Abstract Comparison of Thousandths Unit 46: Abstract Comparison of Whole Numbers and Decimals	Unit 46: Abstract Decimal Comparison Unit 46: Decimal Comparison on the Number Line Unit 46: Decimals to Whole Numbers	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
5.NBT.4	Use place value understanding to round decimals up to the hundredths place.	Unit 46: Rounding Decimals with a Number Line Unit 46: Rounding Decimals with Dials Unit 46: Roll-Over Rounding	Unit 46: Rounding – Decimals – Number Line Unit 46: Rounding – Decimals – Algorithm	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 5



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
Perform operations with multi-digit whole numbers and with decimals to hundredths.				
5.NBT.5	Fluently multiply multi-digit whole numbers using the standard algorithm (or other strategies demonstrating understanding of multiplication) up to a 3 digit by 2 digit factor.		ISIP Math: Factor Game for Multiplication Facts Practice ISIP Math: Solving Multiplication and Division Word Problems with Diagrams	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
5.NBT.6	Fluently divide up to 4-digit dividends and 2-digit divisors by using at least one of the following methods: strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations or concrete models. (e.g., rectangular arrays, area models)	Unit 44: Divide with Concrete Models Unit 44: Divide Using an Algorithm	Unit 44: Divide with Concrete Models Unit 44: Divide Using an Algorithm ISIP Math: Estimating Quotients Using Compatible Numbers ISIP Math: Models for Understanding Remainders ISIP Math: Using Models to Practice Extended Division Facts ISIP Math: Inverse Operations and Fact Families to Solve Simple Equations ISIP Math: Solving Multiplication and Division Word Problems with Diagrams	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
5.NBT.7	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.	Unit 46: Multiplying Decimals by 10 and 100 Unit 46: Dividing Decimals by 10 and 100 Unit 46: Exploring Powers of Ten Unit 46: Multiplying and Dividing Decimals by Powers of Ten	Unit 47: Decimal Addition Unit 47: Decimal Subtraction Unit 47: Concrete Decimal Division Unit 47: Representational Decimal Division Unit 46: Multiplying Decimals by 10 and 100 Unit 46: Dividing Decimals by 10 and 100 Unit 46: Multiplying and Dividing Decimals by Powers of Ten ISIP Math: Adding and Subtracting Decimal Numbers in a Word Problem ISIP Math: Calculating Reasonable Estimates of Decimal Number Sums	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics Grade 5



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
Number and Operations – Fractions (NF)				
Use equivalent fractions as a strategy to add and subtract fractions.				
5.NF.1	Add and subtract fractions and mixed numbers with unlike denominators by finding a common denominator and equivalent fractions to produce like denominators.		Unit 48: Adding Fractions with Unlike Denominators ISIP Math: Adding and Subtracting Fractions with Unlike Denominators	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Apply and extend previous understandings of multiplication and division to multiply and divide fractions.				
5.NF.4	Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.	Unit 48: Multiplying by Fractions Less than One	Unit 48: Multiplying by Fractions Less Than One	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
	a. Apply and use understanding of multiplication to multiply a fraction or whole number by a fraction. <i>Examples: $a/b \times q$ as $a/b \times q/1$ and $a/b \times c/d = ac/bd$</i>	Unit 48: Multiplying by Fractions Less Than One with Improper Fractions	Unit 48: Multiplying by Fractions Less Than One with Improper Fractions	
	b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths.	Unit 50: Area of a Rectangle with Fractional Sides	Unit 50: Area of a Rectangle with Fractional Sides	
5.NF.5	Interpret multiplication as scaling (resizing), by:	Unit 48: Multiplying by Fractions Less than One Unit 48: Multiplying by Fractions Less than One with Improper Fractions	Unit 48: Multiplying by Fractions Less Than One Unit 48: Multiplying Fractions Less Than One with Improper Fractions	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
	a. Comparing the size of a product to the size of one factor on the basis of the size of the other factor, without performing the indicated multiplication. <i>Example: 4×10 is twice as large as 2×10.</i>			
	b. Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than the given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.			

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 5



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
Measurement and Data (MD)				
Convert like measurement units within a given measurement system.				
5.MD.1	Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.		ISIP Math: <i>Converting Standard Units of Measurement</i> ISIP Math: <i>Performing Customary Measurement Conversions</i>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
Geometric Measurement: understand concepts of volume and relate volume to multiplication and to addition.				
5.MD.3	Recognize volume as an attribute of solid figures and understand concepts of volume measurement. a. A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume and can be used to measure volume. b. A solid figure that can be packed without gaps or overlaps using n unit cubes is said to have a volume of n cubic units.		ISIP Math: <i>Quantifying Volume: Counting Same-Sized Units</i> ISIP Math: <i>Volume as an Attribute of Three-Dimensional Space</i>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
5.MD.4	Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.		ISIP Math: <i>Quantifying Volume: Counting Same-Sized Units</i>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics
Grade 5



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
5.MD.5	<p>Relate volume to the operations of multiplication and addition and solve real-world and mathematical problems involving volume.</p> <p>a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.</p> <p>b. Apply the formulas $V = l \times w \times h$ and $V = b \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real-world and mathematical problems.</p> <p>c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real-world problems.</p>		<p>ISIP Math: <i>Quantifying Volume: Counting Same-Sized Units</i></p> <p>ISIP Math: <i>Volume as an Attribute of Three-Dimensional Space</i></p> <p>ISIP Math: <i>Calculating Volume in Multistep Word Problems</i></p> <p>ISIP Math: <i>Integrating Fact Practice and Volume</i></p>	<p>MP1</p> <p>MP2</p> <p>MP3</p> <p>MP4</p> <p>MP5</p> <p>MP6</p> <p>MP7</p> <p>MP8</p>
Geometry (G)				
Graph points on the coordinate plane to solve real-world and mathematical problems.				
5.G.1	<p>Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).</p>	<p>Unit 51: <i>Graph Points in a Coordinate Plane</i></p> <p>Unit 51: <i>Lines on a Coordinate Plane</i></p>	<p>Unit 51: <i>Graph Points in a Coordinate Plane</i></p> <p>Unit 51: <i>Lines on a Coordinate Plane</i></p> <p>ISIP Math: <i>Identifying and Plotting Ordered Pairs on the Coordinate Plane</i></p>	<p>MP1</p> <p>MP2</p> <p>MP3</p> <p>MP4</p> <p>MP5</p> <p>MP6</p> <p>MP7</p> <p>MP8</p>
5.G.2	<p>Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.</p>	<p>Unit 51: <i>Graph Points in a Coordinate Plane</i></p> <p>Unit 51: <i>Lines on a Coordinate Plane</i></p>	<p>Unit 51: <i>Graph Points in a Coordinate Plane</i></p> <p>Unit 51: <i>Lines on a Coordinate Plane</i></p> <p>ISIP Math: <i>Identifying and Plotting Ordered Pairs on the Coordinate Plane</i></p>	<p>MP1</p> <p>MP2</p> <p>MP3</p> <p>MP4</p> <p>MP5</p> <p>MP6</p> <p>MP7</p> <p>MP8</p>

Istation Math Curriculum Correlated to Georgia Standards of Excellence for Mathematics

Grade 5



Standards	Objectives	Istation Application*	Istation Teacher Resources*	MP Standards
Classify two-dimensional figures into categories based on their properties.				
5.G.3	Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. <i>For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.</i>		ISIP Math: <i>Analyzing Properties of Two- and Three-Dimensional Figures</i> ISIP Math: <i>What's My Rule? Corresponding Sides of Similar Triangles</i> ISIP Math: <i>Triangles: Finding a Missing Angle Measurement</i>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
5.G.4	Classify two-dimensional figures in a hierarchy based on properties (<i>polygons, triangles, and quadrilaterals</i>).		ISIP Math: <i>Analyzing Properties of Two- and Three-Dimensional Figures</i>	MP1 MP2 MP3 MP4 MP5 MP6 MP7 MP8
		<i>*Includes content released during the 2017-2018 school year</i>	<i>*Includes content released during the 2017-2018 school year</i>	
End of Grade 5				