Istation® Math

Correlation of Standards

State of Arkansas Mathematics

Grades 2-5

Istation

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Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 2

Standards	Objectives	Istation Application	Istation Teacher Resources
Operations and Algebraic Thinking			
Represent and solve problems involving addition and subtraction			
2.OA.A.1	Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions Represent a strategy with a related equation including a symbol for the unknown number	**Unit 32:** *Two-Step Problems – Addition and Subtraction – Unknowns at the End* **Unit 32:** *Two-Step Problems – Addition and Subtraction – Unknowns in the Middle*	**Unit 32:** *Build Multistep Equations (Darcy's Diner)* **Unit 32:** *Build Multistep Equations with Multiple Operations (Jewels by Jules)* **Unit 32:** *Solve Multistep Equations with Multiple Operations (Cason's Closet)* **ISIP Math:** *Working Backward to Problem-Solve* **ISIP Math:** *Ben's Aquatic Adventure* **ISIP Math:** *Problem Solving with Base 10 Models* **ISIP Math:** *Choosing the Operation*
Add and subtract within 20			
2.OA.B.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 Note: *Fact fluency* means that students should have automaticity when recalling these *facts.*	**Unit 31:** *Fact Families – Addition and Subtraction*	**Unit 31:** *Fact Families – Addition and Subtraction* **ISIP Math:** *Addition and Subtraction Fact Families* **ISIP Math:** *Fact Family Triangles* **ISIP Math:** *Math Mind Reader*

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Standards	Objectives	Istation Application	Istation Teacher Resources
Number and Operations in Base Ten			
Understand place value			
2.NBT.A.1	Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 726 equals 7 hundreds, 2 tens, and 6 ones	**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:** *Building Numbers Using Base 10 Blocks* **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:** *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*
	Understand that 100 can be thought of as a group of ten tens — called a "hundred"		
	Understand that the numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine groups of 100		
2.NBT.A.2	Count within 1000 Skip-count by 5s, 10s, and 100s beginning at zero		**ISIP Math:** *Skip Counting*
2.NBT.A.3	Read and write numbers to 1000 using base-ten numerals, number names, and a variety of *expanded forms*	**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*
	Model and describe numbers within 1000 as groups of 10 in a variety of ways		

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2.NBT.A.4	Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols and correct terminology for the symbols to record the results of comparisons	**Unit 30:** *Comparing Whole Numbers with Language and Symbols* **Unit 30:** *Comparing Two Three-Digit Numbers* **Unit 30:** *Comparing Two Three-Digit Numbers with Zeroes*	**Unit 30:** *Comparison Symbols* **Unit 30:** *Comparison – Three-Digit Numbers* **ISIP Math:** *Steps for Comparing Three-Digit Numbers*
Use place value understanding and properties of operations to add and subtract			
2.NBT.B.5	Add and subtract within 100 with *computational fluency* using strategies based on *place value*, properties of operations, and the relationship between addition and subtraction	**Unit 31:** *Adding with Regrouping Using Concrete Models* **Unit 31:** *Subtracting with Regrouping Using Concrete Models* **Unit 31:** *Adding with Regrouping – Partitioning* **Unit 31:** *Subtracting with Regrouping – Partitioning* **Unit 31:** *Adding on a Number Line* **Unit 31:** *Subtracting on a Number Line* **Unit 31:** *Fact Families – Addition and Subtraction*	**Unit 31:** *Adding with Regrouping – Concrete* **Unit 31:** *Subtracting with Regrouping – Concrete* **Unit 31:** *Adding Using Partitioning* **Unit 31:** *Subtracting Using Partitioning* **Unit 31:** *Adding on a Number Line* **Unit 31:** *Subtracting on a Number Line* **Unit 31:** *Fact Families – Addition and Subtraction* **ISIP Math:** *Addition and Subtraction Fact Families* **ISIP Math:** *Fact Family Triangles* **ISIP Math:** *Break Apart to Add* **ISIP Math:** *Race to the Cube* **ISIP Math:** *Using Arrow Paths to Add and Subtract* **ISIP Math:** *Math Mind Reader* **ISIP Math:** *Partitioning*

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Standards	Objectives	Istation Application	Istation Teacher Resources
2.NBT.B.7	Add and subtract within 1000, using concrete models or drawings and strategies based on *place value,* properties of operations, and the relationship between addition and subtraction; relate the strategy to a written expression or equation	**Unit 31:** *Adding with Regrouping Using Concrete Models* **Unit 31:** *Subtracting with Regrouping Using Concrete Models* **Unit 31:** *Adding with Regrouping – Partitioning* **Unit 31:** *Subtracting with Regrouping – Partitioning* **Unit 31:** *Adding on a Number Line* **Unit 31:** *Subtracting on a Number Line* **Unit 31:** *Fact Families – Addition and Subtraction*	**Unit 31:** *Adding with Regrouping – Concrete* **Unit 31:** *Subtracting with Regrouping – Concrete* **Unit 31:** *Adding Using Partitioning* **Unit 31:** *Subtracting Using Partitioning* **Unit 31:** *Adding on a Number Line* **Unit 31:** *Subtracting on a Number Line* **ISIP Math:** *Break Apart to Add* **ISIP Math:** *Race to the Cube* **ISIP Math:** *Using Arrow Paths to Add and Subtract* **ISIP Math:** *Partitioning* **ISIP Math:** *Skip Counting*

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Standards	Objectives	Istation Application	Istation Teacher Resources
2.NBT.B.9	Explain why addition and subtraction strategies work, using *place value* and the properties of operations Note: Explanations could be supported by drawings or objects.	**Unit 31:** *Adding with Regrouping Using Concrete Models* **Unit 31:** *Subtracting with Regrouping Using Concrete Models* **Unit 31:** *Adding with Regrouping – Partitioning* **Unit 31:** *Subtracting with Regrouping – Partitioning* **Unit 31:** *Adding on a Number Line* **Unit 31:** *Subtracting on a Number Line* **Unit 31:** *Fact Families – Addition and Subtraction*	**Unit 31:** *Adding with Regrouping – Concrete* **Unit 31:** *Subtracting with Regrouping – Concrete* **Unit 31:** *Adding Using Partitioning* **Unit 31:** *Subtracting Using Partitioning* **Unit 31:** *Adding on a Number Line* **Unit 31:** *Subtracting on a Number Line* **ISIP Math:** *Addition and Subtraction Fact Families* **ISIP Math:** *Fact Family Triangles* **ISIP Math:** *Break Apart to Add* **ISIP Math:** *Race to the Cube* **ISIP Math:** *Using Arrow Paths to Add and Subtract* **ISIP Math:** *Math Mind Reader* **ISIP Math:** *Partitioning*
Measurement and Data			
Measure and estimate lengths in standard units			
2.MD.A.1	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes		**ISIP Math:** *Appropriate Tools for Linear Measurement* **ISIP Math:** *How to Use Linear Measurement Tools* **ISIP Math:** *Measuring Objects* **ISIP Math:** *Ruler Relay*
2.MD.A.2	Measure the length of an object twice with two different length units Describe how the two measurements relate to the size of the unit chosen For example: A desktop is measured in both centimeters and inches. Student compares the size of the unit of measure and the number of those units.		**ISIP Math:** *Unit Relationships*

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Standards	Objectives	Istation Application	Istation Teacher Resources
2.MD.A.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:** *Ruler Relay*
Relate addition and subtraction to length			
2.MD.B.5	Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, and write *equations* with a symbol for the unknown number to represent the problem		**ISIP Math:** *The Benevolent Ruler*
2.MD.B.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 solve addition and subtraction problems within 100 on the *number line diagram*	**Unit 31:** *Adding on a Number Line* **Unit 31:** *Subtracting on a Number Line*	**Unit 31:** *Adding on a Number Line* **Unit 31:** *Subtracting on a Number Line* **ISIP Math:** *Skip Counting*
Work with time and money			
2.MD.C.7	Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. Note: This standard is a continuation of previous instruction at lower grades with the expectation of mastery by the end of third grade.	**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*
2.MD.C.8	Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately For example: A student has 2 dimes and 3 pennies; how many cents does he have?		**Unit 32:** *Money Word Problems (Retail Riddles)*
Represent and interpret data			
2.MD.D.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:** *Solve Problems Using Information Presented in Picture Graphs* **Unit 33:** *Solve Problems Using Information Presented in Bar Graphs*	**Unit 33:** *Solving Picture Graph Problems* **Unit 33:** *Solving Bar Graph Problems*
Geometry			
Reason with shapes and their attributes			
2.G.A.3	Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths	**Unit 32:** *Partitioning to Identify Halves, Thirds, and Fourths* **Unit 32:** *Equal Shares of Identical Wholes*	**Unit 32:** *Identifying Halves, Thirds, Fourths* **Unit 32:** *Equal Shares of Identical Wholes*

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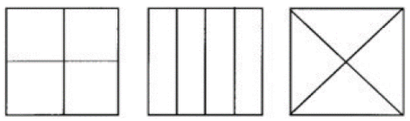
Standards	Objectives	Istation Application	Istation Teacher Resources
2.G.A.4	Recognize that equal shares of identical wholes need not have the same shape 	**Unit 32:** *Equal Shares of Identical Wholes*	**Unit 32:** *Equal Shares of Identical Wholes*
End of Grade 2			

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 3

Standards	Objectives	Istation Application	Istation Teacher Resources
Operations and Algebraic Thinking			
Represent and solve problems involving multiplication and division			
3.OA.A.1	Interpret *products of whole numbers* (e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each) For example, describe a context in which a total number of objects can be expressed as 5 × 7.	**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*
3.OA.A.2	Interpret whole-number *quotients of whole numbers* (e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each) For example: Describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.		**ISIP Math:** *Relating Multiplication and Division*
3.OA.A.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*
3.OA.A.4	Determine the unknown whole number in a multiplication or division equation relating three *whole numbers* For example: Determine the unknown number that makes the equation true in each of the *equations* 8 × ? = 48, 5 = _ ÷ 3, 6 × 6 = ?	**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*
Understand properties of multiplication and the relationship between multiplication and division			

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Standards	Objectives	Istation Application	Istation Teacher Resources
3.OA.B.5	Apply properties of operations as strategies to multiply and divide For example: If 6 × 4 = 24 is known, then 4 × 6 = 24 is also known (*Commutative property of multiplication*). 3 × 5 × 2 can be found by 3 × 5 = 15, then 15 × 2 = 30, or by 5 × 2 = 10, then 3 × 10 = 30 (Associative property of multiplication). Knowing that 8 × 5 = 40 and 8 × 2 = 16, one can find 8 × 7 as 8 × (5 + 2) = (8 × 5) + (8 × 2) = 40 + 16 = 56 (Distributive property). Note: Students are not required to use formal terms for these properties.	**Unit 36:** *Properties of Multiplication*	**ISIP Math:** *Using the Commutative Property of Multiplication* **ISIP Math:** *Multiplying with Three Factors*
3.OA.B.6	Understand division as an unknown-factor problem For example, find 32 ÷ 8 by finding the number that makes 32 when multiplied by 8.	**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*

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Standards	Objectives	Istation Application	Istation Teacher Resources
Multiply and divide within 100			
3.OA.C.7	Using *computational fluency,* multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations By the end of Grade 3, automatically *(fact fluency)* recall all products of two one-digit numbers Note: Computational fluency is defined as a student's ability to efficiently and accurately solve a problem with some degree of flexibility with their strategies.	**Unit 35:** *Arithmetic Patterns in Multiplication* **Unit 36:** *Multiply One-Digit Numbers Using Concrete Models* **Unit 36:** *Fact Families – Multiplication and Division* **Unit 36:** *Two-Step Word Problems – All Operations* **Unit 36:** *Properties of Multiplication*	**Unit 35:** *Arithmetic Patterns in Multiplication* **Unit 36:** *One-Digit by One-Digit Multiplication* **Unit 36:** *Multiplying Two One-Digit Numbers with Arrays* **Unit 36:** *Two-Step Word Problems – All Operations* **Unit 36:** *Fact Families – Multiplication and Division* **Fact Practice Activities:** *Dice Blocks; Multominoes; Spider Queen's Hidden Products; Spider Queen's Spiders; Tall Towers; Wipe Out* **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* **ISIP Math:** *Doubling and Halving*
Solve problems involving the four operations, and identify and explain patterns in arithmetic			
3.OA.D.8	Solve two-step word problems using the four operations, and be able to: Represent these problems using *equations* with a letter standing for unknown quantity Assess the reasonableness of answers using mental computation and estimation strategies including rounding Note: This standard is limited to problems posed with *whole numbers* and having whole-number answers; students should know how to perform operations in conventional order when there are no parentheses to specify a particular order (Order of Operations).	**Unit 36:** *Two-Step Word Problems – All Operations*	**Unit 35:** *Problem Solving without Numbers: Addition and Subtraction* **Unit 36:** *Problem Solving without Numbers: Multiplication and Division* **Unit 36:** *Two-Step Word Problems – All Operations*

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Standards	Objectives	Istation Application	Istation Teacher Resources
3.OA.D.9	Identify arithmetic patterns (including, but not limited to, patterns in the addition table or multiplication table), and explain them using properties of operations 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.	**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*
Number and Operations in Base Ten			
Use place value understanding and properties of operations to perform multi-digit arithmetic			
3.NBT.A.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*
3.NBT.A.2	Using *computational fluency* , add and subtract within 1000 using strategies and *algorithms* based on *place value* , properties of operations, and the relationship between addition and subtraction Note: *Computational fluency* is defined as a student's ability to efficiently and accurately solve a problem with some degree of flexibility with their strategies.	**Unit 36:** *Two-Step Word Problems – All Operations*	**Unit 36:** *Two-Step Word Problems – All Operations*
3.NBT.A.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*

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 3

Standards	Objectives	Istation Application	Istation Teacher Resources
Number and Operations – Fractions			
Develop understanding of fractions as numbers			
3.NF.A.1	Understand a *fraction* 1/*b* as the quantity formed by 1 part when a whole is partitioned into *b* equal parts For example: *Unit fractions* are *fractions* with a *numerator* of 1 derived from a whole partitioned into equal parts and having 1 of those equal parts (1/4 is 1 part of 4 equal parts).	**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:** *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* **ISIP Math:** *Fractions in Problem Situations* **ISIP Math:** *Recognizing Fractions in Different Forms* **ISIP Math:** *Writing Fractions – Symbolic Notation* **ISIP Math:** *Identifying Equivalent Fractions Using Area Models*
	Understand a *fraction a/b* as the quantity formed by *a* parts of size 1/*b* For example: *Unit fractions* can be joined together to make non-unit fractions (¼ + ¼ + ¼ = ¾).		

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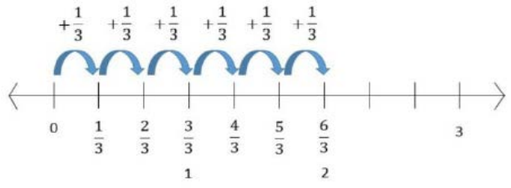
Standards	Objectives	Istation Application	Istation Teacher Resources
3.NF.A.2	Understand a *fraction* as a number on the number line; represent fractions on a *number line diagram*	**Unit 37:** *Fractions Equivalent to One* **Unit 37:** *Fractions Equivalent to Whole Numbers* **Unit 37:** *Mixed Numbers* **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:** *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*
	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* and that the endpoint of the part based at 0 locates the number 1/*b* on the number line Example:  		
	Represent a *fraction* *a/b* on a *number line diagram* by marking off a lengths 1/*b* from 0		
	Recognize that the resulting interval has size *a/b* and that its endpoint locates the number *a/b* on the number line Example:  		

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
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Standards	Objectives	Istation Application	Istation Teacher Resources
3.NF.A.3	Explain equivalence of *fractions* in special cases and 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 Numerators* **Unit 37:** *Comparing Fractions with Like Denominators*	**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*
	Understand two *fractions* as equivalent (equal) if they are the same size or the same point on a number line		
	Recognize and generate simple equivalent *fractions* (e.g., 1/2 = 2/4, 4/6 = 2/3)		
	Explain why the *fractions* are equivalent (e.g., by using a *visual fraction model*)		
	Express *whole numbers* as *fractions* and recognize *fractions* that are equivalent to *whole numbers* (e.g., Express 3 in the form 3 = 3/1; recognize that 6/1 = 6; locate 4/4 and 1 at the same point of a *number line diagram*)		
	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 symbols (>, =, <) and justify the conclusions (e.g., by using a *visual fraction model*)		
Measurement and Data			
Represent and interpret data			
3.MD.B.3	Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories (e.g., Draw a bar graph in which each square in the bar graph might represent 5 pets)	**Unit 39:** *Solve Two-Step Problems Using Information Presented in Scaled Bar Graphs*	**Unit 39:** *Solving Two-Step Problems Using Bar Graphs*
	Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled picture graphs and scaled bar graphs		

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Standards	Objectives	Istation Application	Istation Teacher Resources
3.MD.B.4	Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch		**ISIP Math:** *Measuring to the Nearest Quarter Inch*
	Show the data by making a *line plot* , where the horizontal scale is marked off in appropriate units—*whole numbers* , halves, or quarters		
Geometric measurement: understand concepts of area and relate area to multiplication and to addition			
3.MD.C.5	Recognize area as an *attribute* of plane figures and understand concepts of area measurement:		**ISIP Math:** *Area Square* **ISIP Math:** *Finding the Area of Polygons* **ISIP Math:** *Finding the Area of Rectangles*
	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.		
	A plane figure, which can be covered without gaps or overlaps by *n* unit squares, is said to have an area of *n* square units		
3.MD.C.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*
3.MD.C.7	Relate area to the operations of multiplication and addition:		**ISIP Math:** *Area Square* **ISIP Math:** *Finding the Area of Polygons* **ISIP Math:** *Finding the Area of Rectangles*
	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		
	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		
	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		
	Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems		

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
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Standards	Objectives	Istation Application	Istation Teacher Resources
Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures			
3.MD.D.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 Bundle* **ISIP Math:** *Perimeter of Polygons*
Geometry			
Reason with shapes and their attributes			
3.G.A.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 Note: An informal discussion of types of lines (parallel and perpendicular) and angles is needed; however, student assessment is not required. Note: Trapezoids will be defined to be a quadrilateral with at least one pair of opposite sides parallel, therefore all parallelograms are trapezoids.		**ISIP Math:** *Are Squares the Perfect Shape?* **ISIP Math:** *Attributes of Polygons* **ISIP Math:** *Building Hexagons* **ISIP Math:** *Defining Quadrilaterals by Attributes* **ISIP Math:** *Multiplying with Polygons*

End of Grade 3

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 4

Standards	Objectives	Istation Application	Istation Teacher Resources
Operations and Algebraic Thinking			
Use the four operations with whole numbers to solve problems			
4.OA.A.1	Interpret a multiplication equation as a comparison (e.g., interpret 35 = 5 × 7 as a statement that 35 is 5 times as many as 7 and 7 times as many as 5)	**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*
	Represent verbal statements of multiplicative comparisons as multiplication *equations*		
4.OA.A.2	Multiply or divide to solve word problems involving multiplicative comparison	**Unit 42:** *Solve Multistep Word Problems*	**Unit 42:** *Solve Multistep Word Problems* **ISIP Math:** *Using Multiplication to Solve If-Then Word Problems*
	Use drawings and *equations* with a letter for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison		
4.OA.A.3	Solve multistep word problems posed 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 letter standing for the unknown quantity	**Unit 42:** *Solve Multistep Word Problems*	**Unit 42:** *Solve Multistep Word Problems* **ISIP Math:** *Using Multiplication to Solve If-Then Word Problems*
	Assess the reasonableness of answers using mental computation and estimation strategies including rounding		
Gain familiarity with factors and multiples			
4.OA.B.4	Find all factor pairs for a whole number in the range 1-100		**Fact Practice Activities:** *Dice Blocks; Multominoes; Spider Queen's Hidden Products; Spider Queen's Spiders; Tall Towers; Wipe Out* **ISIP Math:** *Multiplication Practice Game*
	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 Note: Informal classroom discussion might include divisibility rules, finding patterns and other strategies.		

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 4

Standards	Objectives	Istation Application	Istation Teacher Resources
Generate and analyze patterns			
4.OA.C.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 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. Explain why the numbers will continue to alternate in this way.		**ISIP Math:** *Integrating Fact Practice Using Input/Output Function Tables*
Number and Operations in Base Ten			
Generalize place value understanding for multi-digit whole numbers			
4.NBT.A.1	Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right For example: Recognize that 700 ÷ 70 = 10 or 700 = 10 × 70 by applying concepts of *place value* and division.	**Unit 40:** *Writing Standard Form from Expanded Form to Thousands* **Unit 40:** *Writing Expanded Form from Standard Form to Thousands* **Unit 40:** *Writing Word Form from Expanded and Standard Form to Thousands* **Unit 40:** *Writing Standard Form from Expanded Form through Millions* **Unit 40:** *Writing Expanded Form from Standard Form through Millions* **Unit 40:** *Writing Word Form from Expanded and Standard Form through Thousands and Millions*	**Unit 40:** *Writing Expanded Form from Standard Form through Thousands and Millions* **Unit 40:** *Writing Standard Form from Expanded Form through Thousands and Millions* **Unit 40:** *Writing Word Form from Expanded and Standard Form through Thousands and Millions*

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 4

Standards	Objectives	Istation Application	Istation Teacher Resources
4.NBT.A.2	Read and write multi-digit *whole numbers* using base-ten numerals, number names, and *expanded form*	**Unit 40:** *Writing Standard Form from Expanded Form to Thousands* **Unit 40:** *Writing Expanded Form from Standard Form to Thousands* **Unit 40:** *Writing Word Form from Expanded and Standard Form to Thousands* **Unit 40:** *Writing Standard Form from Expanded Form through Millions* **Unit 40:** *Writing Expanded Form from Standard Form through Millions* **Unit 40:** *Writing Word Form from Expanded and Standard Form through Thousands and Millions*	**Unit 40:** *Writing Expanded Form from Standard Form through Thousands and Millions* **Unit 40:** *Writing Standard Form from Expanded Form through Thousands and Millions* **Unit 40:** *Writing Word Form from Expanded and Standard Form through Thousands and Millions*
	Compare two multi-digit numbers based on meanings of the digits in each place, using symbols (>, =, <) to record the results of comparisons		
4.NBT.A.3	Use *place value* understanding to round multi-digit *whole numbers* to any place	**Unit 40:** *Rounding within Whole Numbers to the Nearest Ten, Hundred, Thousand with Number Line* **Unit 40:** *Rounding within Whole Numbers to the Nearest Ten, Hundred, Thousand with Algorithm* **Unit 40:** *Rounding Zero*	**Unit 40:** *Rounding – Nearest Thousand* **Unit 40:** *Rounding – Nearest Ten, Hundred, Thousand* **Unit 40:** *Rounding within Three- and Four-Digit Numbers – Number Line* **Unit 40:** *Rounding within Three- and Four-Digit Numbers – Abstract* **Unit 40:** *Zero as the Rounding Digit*

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 4

Standards	Objectives	Istation Application	Istation Teacher Resources
Use place value understanding and properties of operations to perform multi-digit arithmetic			
4.NBT.B.4	Add and subtract multi-digit *whole numbers* with *computational fluency* using a standard *algorithm* Notes: *Computational fluency* is defined as a student's ability to efficiently and accurately solve a problem with some degree of flexibility with their strategies. A standard *algorithm* can be viewed as, but should not be limited to, the traditional recording system. A standard *algorithm* denotes any valid base-ten strategy.		**ISIP Math:** *Adding Multidigit Numbers and Checking for Reasonableness*
4.NBT.B.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 area models Note: Properties of operations need to be referenced.	**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*
4.NBT.B.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 the relationship between multiplication and division Illustrate and explain the calculation by using *equations, rectangular arrays,* and area models	**Unit 42:** *Solve Multistep Word Problems*	**Unit 42:** *Solve Multistep Word Problems*

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 4

Standards	Objectives	Istation Application	Istation Teacher Resources
Number and Operations – Fractions			
Extend understanding of fraction equivalence and ordering			
4.NF.A.1	By using *visual fraction models*, explain why a *fraction* a/b is equivalent to a *fraction* $(n \times a)/(n \times b)$ with attention to how the number and size of the parts differ even though the two *fractions* themselves are the same size Use this principle to recognize and generate equivalent *fractions* For example: 1/5 is equivalent to (2 × 1) / (2 × 5).	**Unit 43:** *Use 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*
4.NF.A.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 ½) Recognize that comparisons are valid only when the two *fractions* refer to the same whole. Record the results of comparisons with symbols (>, =, <), 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*

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 4

Standards	Objectives	Istation Application	Istation Teacher Resources
Build fractions from unit fractions by applying and extending previous understanding of operations of whole numbers			
4.NF.B.3	Understand a *fraction a/b* with *a* > 1 as a sum of *fractions* 1/*b* (e.g., 3/8=1/8+1/8+1/8):	**Unit 43:** *Add Fractions with Both Denominators of 10 and 100* **Unit 43:** *Add a Denominator of 10 to a Denominator of 100* **Unit 43:** *Add Fractions with Denominators of 10 and 100* **Unit 43:** *Decomposing Fractions (Reteach lesson)*	**Unit 43:** *Add Denominators of 10 to Denominators of 100* **Unit 43:** *Adding Like Denominators of 10 and 100*
	Understand addition and subtraction of *fractions* as joining and separating parts referring to the same whole		
	Decompose a *fraction* into a *sum* of *fractions* with the same *denominator* in more than one way, recording each decomposition by an equation and justify decompositions (e.g., by using a *visual fraction model*) (e.g., 3/8 = 1/8 + 1/8 + 1/8 ; 3/8 = 1/8 + 2/8 ; 2 1/8 = 1 + 1 + 1/8 = 8/8 + 8/8 + 1/8)		
	Add and subtract mixed numbers with like *denominators* (e.g., by using properties of operations and the relationship between addition and subtraction and by replacing each number with an equivalent *fraction*)		
	Solve word problems involving addition and subtraction of *fractions* referring to the same whole and having like *denominators* (e.g., by using *visual fraction models* and *equations* to represent the problem) Note: Converting a mixed number to an improper *fraction* should not be viewed as a separate technique to be learned by rote memorization, but simply a case of *fraction* addition (e.g., 7 1/5 =7 + 1/5 = 35/5 + 1/5 = 36/5).		
Understand decimal notation for fractions, and compare decimal fractions			
4.NF.C.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 For example: Express 3/10 as 30/100, and add 3/10 + 4/100 = 34/100. Note: Students who can generate equivalent *fractions* can develop strategies for adding *fractions* with unlike *denominators* in general. However, addition and subtraction with unlike *denominators* in general is not a requirement at this grade.	**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*

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 4

Standards	Objectives	Istation Application	Istation Teacher Resources
4.NF.C.6	Use decimal notation for *fractions* with *denominators* 10 or 100 For example: Write 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a *number line diagram* .	**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*
4.NF.C.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 using symbols (>, =, <), and justify the conclusions (e.g., by using a visual model)		**ISIP Math:** *Comparing and Ordering Decimals*
Measurement and Data			
Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit			
4.MD.A.1	Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec; yd, ft, in; gal, qt, pt, c Within a single system of measurement, express measurements in the form of a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table For example: Know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), and (3, 36).	**Unit 44:** *Converting Units of Measurement to Solve Word Problems*	**Unit 44:** *Measurement Conversion Word Problems*

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 4

Standards	Objectives	Istation Application	Istation Teacher Resources
4.MD.A.2	Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money including the ability to make change; 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 Note: This is a standard that may be addressed throughout the year focusing on different context.	**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*
4.MD.A.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*

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 4

Standards	Objectives	Istation Application	Istation Teacher Resources
Geometric measurement: understand concepts of angle and measure angles			
4.MD.C.5	Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:	**Unit 45:** *Measure Angles with a Protractor*	**Unit 45:** *Measure Angles with a Protractor* **ISIP Math:** *Line and Angle Identification*
	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 1/360 of a circle is called a "*one-degree angle,*" and can be used to measure angles		
	An angle that turns through *n* one-degree angles is said to have an angle measure of *n* degree Note: Use the degree symbol (e.g., 360°).		
4.MD.C.6	Measure angles in whole-number degrees using a protractor	**Unit 45:** *Measure Angles with a Protractor*	**Unit 45:** *Measure Angles with a Protractor* **ISIP Math:** *Line and Angle Identification*
	Sketch angles of specified measure		
4.MD.C.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	**Unit 45:** *Missing Angles*	**Unit 45:** *Missing Angles* **ISIP Math:** *Decomposing Figures to Find the Area of Polygons*
	Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems For example: Use an equation with a symbol for the unknown angle measure.		

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 4

Standards	Objectives	Istation Application	Istation Teacher Resources
Geometry			
Draw and identify lines and angles, and classify shapes by properties of their lines and angles			
4.G.A.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*
End of Grade 4			

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 5

Standards	Objectives	Istation Application	Istation Teacher Resources
Operations and Algebraic Thinking			
Write and interpret numerical expressions			
5.OA.A.1	Use *grouping symbols* including parentheses, brackets, or braces in numerical expressions, and evaluate *expressions* with these symbols Note: *Expressions* should not contain nested *grouping symbols* such as [4 + 2(10 + 3)] and they should be no more complex than the *expressions* one finds in an application of the associative or distributive property (e.g., (8 + 7) × 2 or {6 × 30} + {6 × 7}).	**Unit 49:** *Writing Expressions from Words* **Unit 49:** *Interpreting Expressions* **Unit 49:** *Evaluate 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*
5.OA.A.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 × (8 + 7). Recognize that 3 × (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*
Analyze patterns and relationships			
5.OA.B.3	Generate two numerical patterns, each 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 in the first quadrant of the *coordinate plane* Note: Terms of the numerical patterns will be limited to whole number coordinates.	**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*
Number and Operations in Base Ten			
Understand the place value system			

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 5

Standards	Objectives	Istation Application	Istation Teacher Resources
5.NBT.A.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:** *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 10*	**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*
5.NBT.A.2	Understand why multiplying or dividing by a power of 10 shifts the *value* of the digits of a whole number or decimal: Explain patterns in the number of zeros of the *product* when multiplying a whole number by powers of 10 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 10*	**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*

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 5

Standards	Objectives	Istation Application	Istation Teacher Resources
5.NBT.A.3	Read, write, and compare decimals to thousandths: Read and write decimals to thousandths using base-ten numerals, number names, and expanded form(s) Examples could include: ○ Base-ten numerals “standard form” (347.392) ○ Number name form (three-hundred forty seven and three hundred ninety-two thousandths) ○ *Expanded form* (s): 300 + 40 + 7 + .3 + .09 +.002 = 300 + 40 + 7 + 3/10 + 9/100 + 2/100 = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (1/10) + 9 × (1/100) + 2 × (1/1000)= 3 × 102 + 4 × 101 × 7 × 100 + 3 × (1/101) + 9 × (1/102) +2 × (1/103) Compare two decimals to thousandths based on the *value* of the digits in each place, using >, =, and < symbols to record the results of comparisons	**Unit 46:** *Concrete Decimal Comparison* **Unit 46:** *Decimal Comparison with Grids* **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*
5.NBT.A.4	Apply *place value* understanding to round decimals to any 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*
Perform operations with multi-digit whole numbers and with decimals to hundredths			
5.NBT.B.5	Fluently (efficiently, accurately and with some degree of flexibility) multiply multi-digit whole numbers using a standard *algorithm* Note: A “standard *algorithm*” can be viewed as, but should not be limited to, the traditional recording system. A “standard *algorithm*” denotes any valid base-ten strategy.		**ISIP Math:** *Factor Game for Multiplication Facts Practice* **ISIP Math:** *Solving Multiplication and Division Word Problems with Diagrams*

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
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Standards	Objectives	Istation Application	Istation Teacher Resources
5.NBT.B.6	Find whole-number *quotients* of whole numbers with up to four-digit *dividends* and two-digit *divisors*, using strategies based on: ○ *Place value* ○ The properties of operations ○ Divisibility rules; and ○ The relationship between multiplication and division		**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*
	Illustrate and explain calculations by using *equations*, *rectangular arrays*, and area models		
5.NBT.B.7	Perform basic operations on decimals to the hundredths place:	**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 10*	**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 47:** *Decimal Addition* **Unit 47:** *Decimal Subtraction* **Unit 47:** *Concrete Decimal Division* **Unit 47:** *Representational Decimal Division* **ISIP Math:** *Adding and Subtracting Decimal Numbers in a Word Problem* **ISIP Math:** *Calculating Reasonable Estimates of Decimal Number Sums*
	Add and subtract decimals to hundredths using concrete models or drawings and strategies based on *place value*, properties of operations, and the relationship between addition and subtraction		
	Multiply and divide decimals to hundredths using concrete models or drawings and strategies based on place value, properties of operations, and the relationship between multiplication and division		

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 5

Standards	Objectives	Istation Application	Istation Teacher Resources
Number and Operations – Fractions			
Use equivalent fractions as a strategy to add and subtract fractions			
5.NF.A.1	Efficiently, accurately, and with some degree of flexibility, add and subtract *fractions* with unlike *denominators* (including mixed numbers) using equivalent *fractions* and common *denominators* For example: Understand that 2/3 + 5/4 = 8/12 + 15/12 = 23/12 (In general, a/b + c/d = (ad + bc)/bd) Note: The focus of this standard is applying equivalent *fractions* , not necessarily finding *least common denominators* or putting results in *simplest form* .		**Unit 48:** *Adding Fractions with Unlike Denominators* **ISIP Math:** *Adding and Subtracting Fractions with Unlike Denominators*
Apply and extend previous understandings of multiplication and division			
5.NF.B.4	Apply and extend previous understandings of multiplication to multiply a *fraction* or whole number by a *fraction* : Interpret the *product* (*a/b*) × *q* as a parts of a partition of *q* into *b* equal parts; equivalently, as the result of a sequence of operations *a* × *q* ÷ *b* For example: Use a *visual fraction model* to show (2/3) × 12 means to take 12 and divide it into thirds (1/3 of 12 is 4) and take two of the parts (2 × 4 is 8), so (2/3) × 12 = 8, and create a story context for this equation. Do the same with (2/3) × (4/5) = 8/15. (In general, (a/b) × (c/d) = ac/bd.). Find the area of a rectangle with fractional (less than and/or greater than 1) side lengths, by tiling it with unit squares of the appropriate *unit fraction* side lengths, by multiplying the fractional side lengths, and then show that both procedures yield the same area	**Unit 48:** *Multiplying by Fractions Less than One* **Unit 48:** *Multiplying by Fractions Less Than One with Improper Fractions* **Unit 50:** *Area of a Rectangle with Fractional Sides*	**Unit 48:** *Multiplying by Fractions Less Than One* **Unit 48:** *Multiplying by Fractions Less Than One with Improper Fractions* **Unit 50:** *Area of a Rectangle with Fractional Sides*

Istation Math Curriculum Correlated to Arkansas Mathematics Standards
Grade 5

Standards	Objectives	Istation Application	Istation Teacher Resources
5.NF.B.5	Interpret multiplication as scaling (resizing), by: 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 For example: Understand that 2/3 is twice as large as 1/3. Explaining why multiplying a given number by a *fraction* greater than 1 results in a *product* greater than the given number Explain why multiplying a given number by a *fraction* less than 1 results in a *product* smaller than the given number Relate the principle of *fraction* equivalence *a/b* = (*n* × *a*)/(*n* × *b*) to the effect of multiplying *a/b* by 1	**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 by Fractions Less Than One with Improper Fractions*
Measurement and Data			
Convert like measurement units within a given measurement system			
5.MD.A.1	Convert among different-sized standard measurement units within the metric system For example: Convert 5 cm to 0.05 m. Convert among different-sized standard measurement units within the customary system For example: Convert 1½ ft to 18 in. Use these conversions in solving multi-step, real world problems		**ISIP Math:** *Converting Standard Units of Measurement* **ISIP Math:** *Performing Customary Measurement Conversions*
Geometric measurement: understand concepts of volume			
5.MD.C.3	Recognize volume as an *attribute* of solid figures and understand concepts of volume measurement: 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 A solid figure, which can be packed without gaps or overlaps using *n* unit cubes, is said to have a volume of *n* cubic units		**ISIP Math:** *Quantifying Volume: Counting Same-Sized Units* **ISIP Math:** *Volume as an Attribute of Three-Dimensional Space*
5.MD.C.4	Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.		**ISIP Math:** *Quantifying Volume: Counting Same-Sized Units*

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Grade 5

Standards	Objectives	Istation Application	Istation Teacher Resources
5.MD.C.5	Relate volume to the operations of multiplication and addition and solve real-world and mathematical problems involving volume. 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 (B) Represent threefold whole-number *products* as volumes (e.g., to represent the associative property of multiplication) Apply the formulas V = l × w × h and V = B × 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 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 Example: John was finding the volume of this figure. He decided to break it apart into two separate *rectangular prisms.* John found the volume of the solid below using this expression: (4 × 4 × 1) + (2 × 4 × 2). Decompose the figure into two *rectangular prisms* and shade them in different colors to show one way John might have thought about it. Phillis also broke this solid into two *rectangular prisms* , but she did it differently than John. She found the volume of the solid below using this expression: (2 × 4 × 3) + (2 × 4 × 1). Decompose the figure into two *rectangular prisms* and shade them in different colors to show one way Phillis might have thought about it.		**ISIP Math:** *Quantifying Volume: Counting Same-Sized Units* **ISIP Math:** *Volume as an Attribute of Three-Dimensional Space* **ISIP Math:** *Calculating Volume in Multistep Word Problems* **ISIP Math:** *Integrating Fact Practice and Volume*

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Geometry			
Graph points on the coordinate plane to solve real-world and mathematical problems			
5.G.A.1	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*	**Unit 51:** *Graph Points on a Coordinate Plane* **Unit 51:** *Comparing Points on a Coordinate Plane*	**Unit 51:** *Graph Points on a Coordinate Plane* **Unit 51:** *Comparing Points on a Coordinate Plane* **ISIP Math:** *Identifying and Plotting Ordered Pairs on the Coordinate Plane*
	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) Note: Graphing will be limited to the first quadrant and the non-negative *x*- and *y*-axes only.		
5.G.A.2	Represent real world and mathematical problems by graphing points in the first quadrant and on the non-negative *x*- and *y*-axes of the *coordinate plane*	**Unit 51:** *Graph Points on a Coordinate Plane* **Unit 51:** *Comparing Points on a Coordinate Plane*	**Unit 51:** *Graph Points on a Coordinate Plane* **Unit 51:** *Comparing Points on a Coordinate Plane* **ISIP Math:** *Identifying and Plotting Ordered Pairs on the Coordinate Plane*
	Interpret coordinate values of points in the context of the situation.		
Classify two-dimensional figures into categories based on their properties			
5.G.B.3	Understand that *attributes* belonging to a category of two-dimensional figures also belong to all subcategories of that category For example: All rectangles have four right angles and squares are rectangles, so all squares have four right angles. All isosceles triangles have at least two sides *congruent* and equilateral triangles are isosceles. Therefore, equilateral triangles have at least two *congruent* sides.		**ISIP Math:** *Analyzing Properties of Two- and Three-Dimensional Figures* **ISIP Math:** *What's My Rule? Corresponding Sides of Similar Triangles* **ISIP Math:** *Triangles: Finding a Missing Angle Measurement*

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Standards	Objectives	Istation Application	Istation Teacher Resources
5.G.B.4	Classify two-dimensional figures in a hierarchy based on properties. Note: Trapezoids will be defined to be a quadrilateral with at least one pair of opposite sides parallel, therefore all parallelograms are trapezoids.		**ISIP Math:** *Analyzing Properties of Two- and Three-Dimensional Figures*
End of Grade 5			