

KIBSD Mathematics

K-5 Curriculum



Excellence in mathematics education requires equity- high expectations and strong support for all students and educators. A curriculum is more than a collection of activities: it must be coherent, focused on important critical content, and well-articulated across the grades. Effective mathematics teaching requires understanding what students know and need to learn and then challenging and supporting them to learn it well. Students must learn mathematics with understanding and actively build new knowledge from experience and prior knowledge. Assessment should support the learning of important mathematics and provide useful information to teachers and students. Finally, technology is essential in teaching and learning mathematics; it influences the mathematics that is taught and enhances student learning.

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Committee Members

A special thank you to members of the committee who dedicated many hours to the development of a curriculum that is designed to meet the needs of our Kodiak Learners

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KIBSD OVERVIEW

Philosophy of Education:

The Kodiak Island Borough School District has a compelling obligation to be responsive to the needs of our community and society.

The Kodiak Island Borough School District Governing Board members establish policy, hire personnel, develop annual budgets, and plan facilities needed to implement a successful public school program.

The Kodiak Island Borough School District respects each student's educational rights and is charged with providing the best possible cost-effective program for all students. Our emphasis is placed on excellence that seeks to instill a desire to keep learning, to be self-motivated and self-disciplined, and to believe in one's self-worth.

Values:

At KIBSD, we value:

- Having Integrity
- Being Accountable
- Being Collaborative
- Being Inclusive
- Being Innovative
- Being Respectful

Vision:

The vision of KIBSD is to ensure all learners are safe, seen, and supported.

Mission:

The mission of KIBSD is to engage and empower all students for growth and success.

Committee Purpose Statements:

- KIBSD learners think flexibly, critically, and creatively while problem-solving with stamina and perseverance
- KIBSD learners work collaboratively to build confidence and show their thinking as they positively apply what they have learned throughout life.
- KIBSD learners are college—and career-ready because they are critical analytical thinkers who can creatively manipulate the world around them.
- KIBSD learners (both educators and students) develop numeracy skills that lead to fluency in number sense.
- KIBSD learners confidently persevere.

Educator Expectations in Math:

- Help students make connections between strategies to build flexible thinking.
- Support students with efficient problem-solving
- Provide multiple entry points to each concept
- Use effective questioning strategies
- Provide a safe environment for risk-taking
- Support students in productive struggle

Critical Content Standard Focus and Understanding:

KIBSD critical content standards for mathematics stress conceptual understanding and procedural skills to ensure students learn and apply the critical information needed to succeed at each level.

- In kindergarten, the standards follow successful international models and recommendations by focusing kindergarten work on the number core: learning how numbers correspond to quantities and learning how to put numbers together and take them apart (the beginnings of addition and subtraction).
- The K-5 standards provide students with a solid foundation in whole numbers, addition, subtraction, multiplication, division, fractions, and decimals--which help young students build the foundation to successfully apply more demanding math concepts and procedures and move into applications.
- Having built a strong foundation in K-5, students can do hands-on learning in geometry, algebra, probability, and statistics. Students who have completed 7th grade and mastered the content and skills through the 7th grade will be well-prepared for algebra in grade 8. The middle school standards are robust and provide a coherent and rich preparation for high school mathematics.
- The high school standards set a rigorous definition of readiness by helping students develop a depth of understanding and ability to apply mathematics to novel situations, as college students and employees regularly do.

Overview of Critical Content Standards by Grade Level

Critical standards represent the basics a student must learn and be able to reach high levels of learning, allow teachers and schools to target ‘must know’ skills to support individual students (non-negotiable skills), but do not represent all that should be taught.

Kindergarten		Grade 1			Grade 2		
<p>Counting and Cardinality</p> <ul style="list-style-type: none"> • Count to 100 by ones and tens • Count forward from a given number within the known sequence • Write numbers from 0 to 20 • Understand the relationship between numbers and quantities; connect counting to cardinality. • Identify whether the number of objects is greater than, less than, or equal to the number of objects in another group • Compare and order two numbers between 1 and 10 as written numerals <p>Operations and Algebraic Thinking</p> <ul style="list-style-type: none"> • Represent addition and subtraction • Decompose numbers less than or equal to 10 • For any number from 1-4, find the number that makes 5 when added together. • For any number 1-9, find the number that makes 10 when added together • Fluently add and subtract numbers to 5 <p>Measurement and Data</p> <ul style="list-style-type: none"> • Name in sequence the days of the week <p>Geometry</p> <ul style="list-style-type: none"> • Analyze and compare two- and three-dimensional shapes 	<p>Operations and Algebraic Thinking</p> <ul style="list-style-type: none"> • Use addition and subtraction strategies to solve word problems • Add and subtract using numbers up to 20 <p>Number and Operations in Base Ten</p> <ul style="list-style-type: none"> • Count to 120; in the range, read, write and order numerals • Model and identify place value positions of two-digit numbers • Given a two-digit number, mentally find 10 more or 10 less than the number without having to count • Mentally add 10 or 100 to a given number 100-900 • Mentally subtract 10 or 100 from a given number <p>Measurement and Data</p> <ul style="list-style-type: none"> • Express the length of an object as a whole number of length units • Tell and write time in half hours • Read a calendar distinguishing yesterday, today, and tomorrow • Read and write a date • Identify values of coins • Identify equivalent values of coins up to \$1 <p>Geometry</p> <ul style="list-style-type: none"> • Distinguish between defining attributes versus non-defining attributes (e.g., triangles are closed and three-sided) • Identify shapes that have non-defining attributes (e.g., color, orientations, overall size) • Build and draw shapes given specified attributes 	<p>Operations and Algebraic Thinking</p> <ul style="list-style-type: none"> • Use addition and subtraction strategies to estimate and then solve one-and two-step word problems • Fluently add and subtract using numbers up to 20 using mental strategies <p>Number and Operations in Base Ten</p> <ul style="list-style-type: none"> • Model and identify place value positions of three-digit numbers • Count up to 1000, skip-count by 5s, 10s, and 100s • Fluently add and subtract using numbers up to 100 • Mentally add 10 or 100 to a given number 100-900 • Mentally subtract 10 or 100 from a given number <p>Measurement and Data</p> <ul style="list-style-type: none"> • Estimate, measure, and draw lengths using whole units of inches, feet, yards, centimeters, and meters • Tell and write time to the nearest five minutes using a.m. and p.m. • Solve word problems involving dollar bills and coins using the \$ and ¢ symbols • Collect, record, interpret, represent, and describe data in a table, graph, or line plot <p>Geometry</p> <ul style="list-style-type: none"> • Partition a rectangle into rows and columns of same-size squares 					
Math Practice Standards							
<p>Make sense of problems and persevere in solving them.</p>	<p>Reason abstractly and quantitatively</p>	<p>Construct viable arguments and critique the reasoning of others</p>	<p>Model with Mathematics</p>	<p>Use appropriate tools strategically</p>	<p>Attend to precision</p>	<p>Look for and. Make use of structure</p>	<p>Look for and express regularity in repeated reasoning</p>

Overview of Critical Content Standards by Grade Level

Critical standards represent the basics a student must learn and be able to reach high levels of learning, allow teachers and schools to target ‘must know’ skills to support individual students (non-negotiable skills), but do not represent all that should be taught.

Grade 3	Grade 4	Grade 5
<p>Operations and Algebraic Thinking</p> <ul style="list-style-type: none"> Interpret products of whole numbers Interpret whole-number quotients of whole numbers Use multiplication and division numbers up to 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities Fluently multiply and divide numbers up to 100, using strategies such as the relationship between multiplication and division Solve and create two-step word problems using any of the four operations <p>Number and Operations in Base Ten</p> <ul style="list-style-type: none"> Use strategies and/or algorithms to fluently add and subtract with numbers up to 1000 <p>Number and Operations in Fractions</p> <ul style="list-style-type: none"> Understand a fraction $1/b$ as the quantity formed by 1 part when a whole is partitioned into b equal parts Explain equivalence of fractions in special cases and compare fractions by reasoning about their size <p>Measurement and Data</p> <ul style="list-style-type: none"> Tell and write time to the nearest minute and measure time intervals in minutes Solve word problems involving addition and subtraction of time intervals in minutes or hours Measure and record lengths using rulers marked with halves and fourths Recognize area as an attribute of plane figures and understand concepts of area measurement Relate area to the operations of multiplication and addition 	<p>Operations and Algebraic Thinking</p> <ul style="list-style-type: none"> Multiply & divide to solve word problems involving multiplicative comparison Distinguish multiplicative comparison from additive comparison Find all factor pairs for a whole number in the range 1-100 Explain the correlation/difference between multiples & 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 to 100 is prime or composite <p>Number and Operations in Base Ten</p> <ul style="list-style-type: none"> Read, write and compare multi-digit whole numbers using base-ten numerals, number names, and expanded form Compare two multi-digit numbers based on the value of digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons Fluently add & subtract multi-digit whole number using any algorithm 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 properties of operations Find whole # quotients & remainders with up to 4-digit dividends & 1-digit divisors, using strategies based on place value & properties of operation <p>Number and Operations in Fractions</p> <ul style="list-style-type: none"> Compare 2 fractions with different numerators & denominators Apply and extend previous understandings of multiplication to multiply a fraction by a whole number Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$ Understand a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number Solve word problems with multiplication of a fraction by a whole number Compare two decimals to hundredths by reasoning about their size <p>Measurement and Data</p> <ul style="list-style-type: none"> Use the four operations to solve word problems involving measurement Measure and draw angles in whole number degrees using a protractor Estimate and sketch angles of specified measure <p>Geometry</p> <ul style="list-style-type: none"> Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines 	<p>Operations and Algebraic Thinking</p> <ul style="list-style-type: none"> Write simple expressions that record calculations with numbers and interpret numerical expressions without evaluating them <p>Number and Operations in Base Ten</p> <ul style="list-style-type: none"> Read, write, and compare decimals to thousandths Use place values understanding to round decimals to any place Fluently multiply multi-digit whole numbers using a standard algorithm 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 and/or the relationship between multiplication and division. 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 the operations <p>Numbers and Operations in Fractions</p> <ul style="list-style-type: none"> Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators Interpret a fraction as division of the numerator by the denominator ($a/b = a$ divided by b) Apply and extend previous understanding of multiplication to multiply a fraction or whole number by a fraction <p>Measurement and Data</p> <ul style="list-style-type: none"> Relate volume to the operations of multiplication and addition and solve real-world and mathematical problems involving volume. <p>Geometry</p> <ul style="list-style-type: none"> Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines

Math Practice Standards

Make sense of problems & persevere in solving them.	Reason abstractly and quantitatively	Construct viable arguments and critique the reasoning of others	Model with Mathematics	Use appropriate tools strategically	Attend to precision	Look for and. Make use of structure	Look for and express regularity in repeated reasoning
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Kindergarten Math Curriculum

Kindergarten Critical Content Standards Scope and Sequence

As Aligned to Reveal Math 2022

Critical standards represent the basics a student must learn and be able to reach high levels of learning, allow teachers and schools to target ‘must know’ skills to support individual students (non-negotiable skills), but do not represent all that should be taught.

The date indicates the start date for that unit.

	Unit 1 Math Is... 10 days	Unit 2 Numbers to 5 (9/16) 15 days	Unit 3 Numbers to 10 (10/7) 18 Days	Unit 4 Sort, Classify, and Count Objects (11/11) 8 Days	Unit 5 Two- Dimensional Shapes (11/22) 9 Days	Unit 6 Understanding Addition (12/12) 9 Days	Unit 7 Understand Subtraction (1/13) 9 Days
Counting and Cardinality	<u>K.CC.1-</u> Count to 100 by ones and by tens <u>K.CC.4-</u> Understand number quantity <i><u>K.CC.5-</u> Count to answer “how many?” questions</i>	<u>K.CC.3-</u> Write numbers from 0 to 20 <u>K.CC.4-</u> Understand number quantity <u>K.CC.6-</u> Identify greater than, less than, or equal to	<u>K.CC.3-</u> Write numbers from 0 to 20 <u>K.CC.4-</u> Understand number quantity <u>K.CC.6-</u> Identify greater than, less than, or equal to <u>K.CC.7-</u> Compare and order numbers between 1 and 10				
Operations and Algebraic Thinking						<u>K.OA.1-</u> Represent addition and subtraction <i><u>K.OA.2-</u> Add or subtract whole numbers to 10</i>	<u>K.OA.1-</u> Represent addition and subtraction <i><u>K.OA.2-</u> Add or subtract whole numbers to 10</i>
Measurement and Data				<i><u>K.MD.3-</u> Classify objects into given categories</i>			
Geometry	<i><u>K.G.1-</u> Describe objects in the environment</i>				<i><u>K.G.1-</u> Describe objects in the environment</i> <i><u>K.G.2-</u> Name shapes</i>		

Bold text- critical standard

Italicized text- supporting standard

	Unit 8 Addition and Subtraction Strategies (1/27) 14 Days	Unit 9 Numbers 11 to 15 (2/14) 10 Days	Unit 10 Numbers 16 to 19 (3/3) 10 Days	Unit 11 3- Dimensional Shapes (3/24) 10 Days	Unit 12 Count to 100 (4/7) 9 Days	Unit 13 Analyze, Compare, and Compose Shapes (4/18) 10 Days	Unit 14 Compare Measurable Attributes (5/2) 9 Days
Counting and Cardinality		K.CC.3- Write numbers from 0 to 20	K.CC.3- Write numbers from 0 to 20		K.CC.1- Count to 100 by ones and by tens K.CC.2- Count forward beginning from a given number <i>K.CC.5-</i> Count to answer “how many?” questions		
Operations and Algebraic Thinking	K.OA.1- Represent addition and subtraction K.OA.3- Decompose numbers less than or equal to 10 K.OA.4- Structure to 5 and 10 K.OA.5- Fluently add and subtract numbers up to 5						
Numbers and Operations in Base 10		<i>K.NBT.1-</i> Compose and Decompose numbers from 11 to 19	<i>K.NBT.1-</i> Compose and Decompose numbers from 11 to 19				
Measurement and Data							<i>K.MD.1-</i> Describe measurable attributes of objects <i>K.MD.2-</i> Make comparisons between two objects with a measurable attribute in common
Geometry				<i>K.G.1-</i> Describe objects in the environment <i>K.G.2-</i> Name shapes <i>K.G.3-</i> Identify shapes as two- and three-dimensional		<i>K.G.1-</i> Describe objects in the environment K.G.4- Analyze and compare two- and three-dimensional shapes <i>K.G.5-</i> Build shapes and draw shapes <i>K.G.6-</i> Put together two-dimensional shapes to form larger shapes	

Bold text- critical standard

Italicized text- supporting standard

Kindergarten Standards Not Covered in Reveal

MA.K.OA.6 Recognize, identify and continue simple patterns of color, shape, and size

MA.K.MD.4 Name in sequence the days of the week.

MA.K.MD.5 Tell time to the hour using both analog and digital clocks.

MA.K.MD.6 Identify coins by name.

INSTRUCTIONAL RESOURCES:	
Core Instructional Materials Reveal Mathematics RedBird Mathematics: Personalized Learning IXL Math	Tier II and Tier III Bridges Interventions FastBridge Interventions

Kindergarten	Content Area: Mathematics Topic: Counting and Cardinality
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.K.CC.1 Count to 100 by ones and by tens.	x	
MA.K.CC.2 Count forward beginning from a given number within the known sequence.	x	
MA.K.CC.3 Write numbers from 0 to 20; represent a number of objects with a written numeral 0-20.	x	
MA.K.CC.4 Understand the relationship between numbers and quantities; connect counting to cardinality	x	
MA.K.CC.5 Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array or a circle, or as many as 10 things in a scattered configuration; given a number from 1-20, count out that many.		x
MA.K.CC.6 Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group.	x	
MA.K.CC.7 Compare and order two numbers between 1 and 10 presented as written numerals.	x	
Focus Units		
<ul style="list-style-type: none"> • Unit 1 – Math is... • Unit 2 – Numbers to 5 • Unit 3 – Numbers to 10 • Unit 9 – Numbers 11-15 • Unit 10 – Numbers 16-19 • Unit 12 – Count to 100 		

<h1>Kindergarten</h1>	Content Area: Mathematics Topic: Operations and Algebraic Thinking
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.K.OA.1 Represent addition and subtraction with objects, fingers, mental images, drawings, sounds	X	
MA.K.OA.2 Add or subtract whole numbers to 10		X
MA.K.OA.3 Decompose numbers less than or equal to 10 into pairs in more than one way	X	
MA.K.OA.4 For any number from 1-4, find the number that makes 5 when added to the given number and for any number from 1-9, find the number that makes 10 when added to the given number	X	
MA.K.OA.5 Fluently add and subtract numbers up to 5.	X	
MA.K.OA.6 Recognize, identify and continue simple patterns of color, shape, and size <i>(NOTE – missing in Reveal)</i>		X
Units		
<ul style="list-style-type: none"> Unit 6 – Understand Addition Unit 7 – Understand Subtraction Unit 8 – Addition and Subtraction Strategies 		

<h1>Kindergarten</h1>	Content Area: Mathematics Topic: Number and Operations in Base Ten
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.K.NBT.1 Compose and decompose numbers from 11 to 19 into ten ones and some further ones (e.g., by using objects or drawings) and record each composition and decomposition by a drawing or equation (e.g., $18 = 10 + 8$); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight or nine ones.		X
Units		
<ul style="list-style-type: none"> Unit 9 – Numbers 11 to 15 Unit 10 – Numbers 16 to 19 		

Kindergarten	Content Area: Mathematics Topic: Measurement
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.K.MD.1 Describe measurable attributes of objects (e.g., length or weight). Match measuring tools to attribute (e.g., ruler to length). Describe several measurable attributes of a single object.		X
MA.K.MD.2 Make comparison between two objects with a measurable attribute in common, to see which object has “more of”/ “less of” the attribute and describe the difference.		X
MA.K.MD.3 Classify objects into given categories (attributes). Count the number of objects in each category (limit category counts to be less than or equal to 10).		X
MA.K.MD.4 Name in sequence the days of the week. <i>(NOTE – missing in Reveal)</i>	X	
MA.K.MD.5 Tell time to the hour using both analog and digital clocks. <i>(NOTE – missing in Reveal)</i>		X
MA.K.MD.6 Identify coins by name. <i>(NOTE – missing in Reveal)</i>		X
Units		
<ul style="list-style-type: none"> • Unit 4 – Sort, Classify, and Count Objects • Unit 14 – Compare Measurable Attributes 		

Kindergarten	Content Area: Mathematics Topic: Geometry
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.K.G.1 Describe objects in the environment using names of shapes and describes their relative positions.		X
MA.K.G.2 Name shapes regardless of their orientation or overall size.		X
MA.K.G.3 Identify shapes as two-dimensional or three-dimensional.		X
MA.K.G.4 Analyze and compare two- and three-dimensional shapes.	X	
MA.K.G.5 Build shapes and draw shapes		X
MA.K.G.6 Put together two-dimensional shapes to form larger shapes		X
Units		
<ul style="list-style-type: none"> • Unit 1 – Math is... • Unit 5 – 2- Dimensional Shapes • Unit 11 – 3- Dimensional Shapes • Unit 13 – Analyze, Compare, and Compose Shapes 		

1st Grade Math Curriculum

First Grade Critical Content Standards Scope and Sequence - Aligned to Reveal Math 2022

Critical standards represent the basics a student must learn and be able to reach high levels of learning, allow teachers and schools to target ‘must know’ skills to support individual students (non-negotiable skills), but do not represent all that should be taught.

The date indicates the start date for that unit.

	Unit 1 Math Is... 10 days	Unit 2 Number Patterns (9/16) 9 days	Unit 3 Place Value (9/27) 14 Days	Unit 4 Additions within 20: Facts and Strategies (10/22) 17 Days	Unit 5 Subtraction within 20: Facts and Strategies (11/15) 15 Days	Unit 6 Shapes and Solids (12/11) 10 Days	Unit 7 Meanings of Additions (1/10) 10 Days
Operations and Algebraic Thinking				<i>1.OA.2- Solve word problems that call for three whole numbers whose sum is less than or equal to 20</i> <i>1.OA.3- Apply properties of operations as strategies to add and subtract</i> <i>1.OA.5- Relate counting to addition and subtraction</i> 1.OA.6- Add and subtract using numbers to 20 <i>1.OA.7- Understand the meaning of the equal sign</i>	<i>1.OA.4- Understand subtraction as an unknown-addend problem</i> <i>1.OA.5- Relate counting to addition and subtraction</i> 1.OA.6- Add and subtract using numbers to 20 <i>1.OA.7- Understand the meaning of the equal sign</i> <i>1.OA.8- Determine the unknown whole number in an addition or subtraction equation</i>		1.OA.1-Use addition and subtraction strategies to solve word problems <i>1.OA.2- Solve word problems that call for three whole numbers whose sum is less than or equal to 20</i>
Numbers and Operations in Base 10		1.NBT.1- Count to 120	1.NBT.2- Model and identify place value of two-digit numbers <i>1.NBT.3- Compare two two-digit numbers</i>				
Geometry						1.G.1- Distinguish between defining attributes <i>1.G.2- Compose two-dimensional or three-dimensional shapes to create a larger shape</i>	

Bold text- critical standard *Italicized text- supporting standard*

	Unit 8 Meanings of Subtraction (1/28) 12 Days	Unit 9 Addition within 100 (2/12) 14 Days	Unit 10 Compare Using Addition and Subtraction (3/4) 8 Days	Unit 11 Subtraction within 100 (3/24) 10 Days	Unit 12 Measurement and Data (4/7) 16 Days	Unit 13 Equal Shares (4/29) 10 Days
Operations and Algebraic Thinking	1.OA.1 -Use addition and subtraction strategies to solve word problems		1.OA.1 -Use addition and subtraction strategies to solve word problems			
Numbers and Operations in Base 10		<i>1.NBT.4- Add using numbers up to 100</i> <i>1.NBT.5- Given a two-digit number find 10 more or 10 less</i>		<i>1.NBT.5- Given a two-digit number find 10 more or 10 less</i> <i>1.NBT.6- Subtract multiples of 10 up to 100</i>		
Measurement and Data					1.MD.1- Measure and compare three objects using standard and non-standard units 1.MD.2- Express the length of an object as a whole number of length 1.MD.3- Tell and write time in hours and half-hours using analog and digital clocks <i>3.MD.7 (CC.1.MD.4)- Organize, represent, and interpret data with up to 3 categories</i>	
Geometry						<i>1.G.3- Partition circles and rectangles into two and four equal shares</i>

Bold text- critical standard

Italicized text- supporting standard

First Grade Standards Not Covered in Reveal
MA.1.CC.1 Skip count by 2s and 5s.
MA.1.CC.2 Use ordinal numbers correctly when identifying object position (e.g., first, second, third, etc.)
MA.1.CC.3 Order numbers from 1-100; demonstrate ability in counting forward and backward.
MA.1.CC.4 Count a large quantity of objects by grouping into 10s and counting forward and backward
MA.1.CC.5 Use the symbols for greater than, less than, and equal to ($<$, $>$, $=$) when comparing two numbers or groups of objects.
MA.1.CC.6 Estimate how many and how much in a given set to 20 and then verify estimate by counting.
MA.1.OA.9 Identify, continue and label patterns. Create patterns using number, shape, size, rhythm or color.
MA.1.MD.4 Read a calendar distinguishing yesterday, today and tomorrow. Read and write a date.
MA.1.MD.5 Recognize and read money symbols including \$ and ¢.
MA.1.MD.6 Identify values of coins. Identify equivalent values of coins up to \$1.

INSTRUCTIONAL RESOURCES:	
Core Instructional Materials Reveal Mathematics RedBird Mathematics: Personalized Learning IXL Math	Tier II and Tier III Bridges Interventions FastBridge Interventions

1 st Grade	Content Area: Mathematics Topic: Counting & Cardinality
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.1.CC.1 Skip count by 2s and 5s. <i>(NOTE – missing in Reveal)</i>		x
MA.1.CC.2 Use ordinal numbers correctly when identifying object position (e.g., first, second, third, etc.) <i>(NOTE – missing in Reveal)</i>		x
MA.1.CC.3 Order numbers from 1-100; demonstrate ability in counting forward and backward. <i>(NOTE – missing in Reveal)</i>		x
MA.1.CC.4 Count a large quantity of objects by grouping into 10s and counting forward and backward <i>(NOTE – missing in Reveal)</i>		x
MA.1.CC.5 Use the symbols for greater than, less than, and equal to (<, >, =) when comparing two numbers or groups of objects. <i>(NOTE – missing in Reveal)</i>		x
MA.1.CC.6 Estimate how many and how much in a given set to 20 and then verify estimate by counting. <i>(NOTE – missing in Reveal)</i>		x
Units		
<ul style="list-style-type: none"> • These are Alaska Content Standards not included in the Reveal Mathematics program and will need to be supplemented with materials outside of the program. • Part II in Developing Number Knowledge: Learning Number Word Sequences 		

1st Grade	Content Area: Mathematics Topic: Operations and Algebraic Thinking
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.1.OA.1 Use addition and subtraction within 20 to solve word problems involving situation of adding to taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with symbol for the unknown.	x	
MA.1.OA.2 Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with symbol for the unknown number to represent the problem.		x
MA.1.OA.3 Apply properties of operations as strategies to add and subtract, Examples: if $8+3=11$ is known, then $3+8=11$ is also known. (Commutative property of addition.) To add $2+6+4=2+10 = 12$ (Associative property of addition.)		x
MA.1.OA.4 Understand subtraction as an unknown-addend problem.		x
MA.1.OA.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2.)		x
MA.1.OA.6 Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on; making ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.	x	
MA.1.OA.7 Understand the meaning of the equal sign and determine if equations involving addition and subtraction are true or false.		x
MA.1.OA.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers.		x
MA.1.OA.9 Identify, continue and label patterns. Create patterns using number, shape, size, rhythm or color. (<i>NOTE – missing in Reveal</i>)		x
Units		
<ul style="list-style-type: none"> • Unit 4 – Addition within 20: Facts and Strategies • Unit 5 – Subtraction within 20: Facts and Strategies • Unit 7 – Meanings of Addition • Unit 8 – Meanings of Subtraction • Unit 10 – Compare Using Addition and Subtraction 		

1st Grade	Content Area: Mathematics Topic: Numbers and Operations in Base Ten
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.1.NBT.1 Count to 120; in this range, read, write and order numerals and represent a number of objects with a written numeral.	x	
MA.1.NBT.2 Model and identify place value positions of two-digit numbers.	x	
MA.1.NBT.3 Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, $<$.		x
MA.1.NBT.4 Add using numbers up to 100 including adding a two-digit number and a one-digit number and adding a two-digit number and a multiple of 10.		x
MA.1.NBT.5 Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.		x
MA.1.NBT.6 Subtract multiples of 10 up to 100		x
Units		
<ul style="list-style-type: none"> • Unit 2 – Number Patterns • Unit 3 – Place Value • Unit 9 – Addition within 100 • Unit 11 – Subtraction within 100 		

1st Grade	Content Area: Mathematics Topic: Geometry
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.1.MD.1 Measure and compare three objects using standard or non-standard units.		x
MA.1.MD.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.	x	
MA.1.MD.3 Tell and write time. In half hours using both analog and digital clocks.	x	
MA.1.MD.4 Read a calendar distinguishing yesterday, today and tomorrow. Read and write a date. <u>(NOTE – missing in Reveal)</u>	x	
MA.1.MD.5 Recognize and read money symbols including \$ and ¢. <u>(NOTE – missing in Reveal)</u>		x
MA.1.MD.6 Identify values of coins. Identify equivalent values of coins up to \$1. <u>(NOTE – missing in Reveal)</u>	x	
MA.1.MD.7 Organize, represent and interpret data with up to three categories; ask and answer comparison and quantity questions about the data. (CC.1.MD.4)		x
Units		
<ul style="list-style-type: none"> • Unit 12 – Measurement and Data 		

1st Grade	Content Area: Mathematics Topic: Geometry
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.1.G.1 Distinguish between defining attributes versus non-defining attributes. Identify shapes that have non defining attributes. Build and draw shapes given specified attributes.	x	
MA.1.G.2 Compose two-dimensional or three-dimensional shapes to create a larger, composite shape, and compose new shapes from the composite shape.		x
MA.1.G.3 Partition circles and rectangles into two and four equal shares. Describe the shares using the words, halves, fourths, and quarters and phrases half of, fourth of and quarter of.		x
Units		
<ul style="list-style-type: none"> • Unit 6 – Shapes and Solids • Unit 13 – Equal Shares 		

2nd Grade Math Curriculum

Second Grade Critical Content Standards Scope and Sequence - Aligned to Reveal Math 2022

Critical standards represent the basics a student must learn and be able to reach high levels of learning, allow teachers and schools to target ‘must know’ skills to support individual students (non-negotiable skills), but do not represent all that should be taught.

The date indicates the start date for that unit.

	Unit 1 Math Is... 10 days	Unit 2 Place Value to 1,000 (9/16) 9 days	Unit 3 Patterns within Numbers (9/27) 12 Days	Unit 4 Meanings of Addition and Subtraction (10/10) 16 Days	Unit 5 Strategies to Fluently Add within 100 (11/5) 16 Days	Unit 6 Strategies to Fluently Subtract within 100 (12/3) 16 Days
Operations and Algebraic Thinking			<i>2.OA.3 – Determine whether a group of objects is odd or even</i> <i>2.OA.4 – Use addition to find the total number of objects arranged in rectangular arrays and write an equation</i>	2.OA.1-Use addition and subtraction within 100 to estimate and solve word problems	2.OA.1-Use addition and subtraction within 100 to estimate and solve word problems 2.OA.2- Fluently add and subtract within 20 using mental strategies	2.OA.1-Use addition and subtraction within 100 to estimate and solve word problems 2.OA.2- Fluently add and subtract within 20 using mental strategies
Numbers and Operations in Base 10		2.NBT.1- Model and identify place value positions of three-digit numbers 2.NBT.3 – Read, write, order up to 1000 using numerals, number names, and expanded form <i>2.NBT.4 – Compare two 3-digit numbers using >, <, =</i>	2.NBT.2- Count up to 1000, skip-count by 5s, 10s, and 100s		2.NBT.5 Fluently add and subtract using numbers up to 100	2.NBT.5 Fluently add and subtract using numbers up to 100
Measurement and Data					<i>2.MD.6- Represent whole numbers as lengths</i>	<i>2.MD.6- Represent whole numbers as lengths</i>

Bold text- critical standard

Italicized text- supporting standard

	Unit 7 Measure and Compare Lengths (1/9) 17 Days	Unit 8 Measurement Money and Time (2/4) 10 Days	Unit 9 Strategies to Add 3-Digit Numbers (2/19) 12 Days	Unit 10 Strategies to Subtract 3-Digit Numbers (3/7) 15 Days	Unit 11 Data Analysis (4/4) 10 Days	Unit 12 Geometric Shapes and Equal Shares (4/17) 10 Days
Numbers and Operations in Base 10			<i>2.NBT.7 – Add and subtract using numbers up to 1000</i> 2.NBT.8- Mentally add or subtract 10 or 100 to a given number <i>2.NBT.9 – Explain or illustrate the processes of addition and subtraction, using place value and properties of operations</i>	<i>2.NBT.7 – Add and subtract using numbers up to 1000</i> 2.NBT.8- Mentally add or subtract 10 or 100 to a given number <i>2.NBT.9 – Explain or illustrate the processes of addition and subtraction, using place value and properties of operations</i>		
Measurement and Data	<i>2.MD.1 – Measure the length of an object by selecting and using standard tools</i> <i>2.MD.2 – Measure the length of an object twice using different length units</i> 2.MD.3- Estimate, measure and draw lengths using whole units <i>2.MD.4 – Measure to compare lengths of two objects</i> <i>2.MD.5- Solve addition and subtraction word problems involving length</i> <i>2.MD.6- Represent whole numbers as lengths</i>	2.MD.7- Tell and write time to the nearest 5 minutes using a.m. and p.m. from analog and digital clocks 2.MD.8 – Solve word problems involving dollar bills and coins			2.MD.9 – Collect, record, interpret, represent, and describe data in a table, graph, or line plot <i>2.MD.10 – Draw a picture graph and bar graph to represent a data set with up to four categories, solve problems using information presented in the graph</i>	
Geometry						<i>2.G.1- Identify and draw shapes having specified attributes.</i> 2.G.2- Partition a rectangle into rows and columns of same-size squares <i>2.G.3- Partition circles and rectangles into shares</i>

Bold text- critical standard

Italicized text- supporting standard

Second Grade Standards Not Covered in Reveal

MA.2.OA.5 Identify, continue and label number patterns (e.g., aabb, abab). Describe a rule that determines and continues a sequence or pattern.

MA.2.NBT.6 Add up to four two-digit numbers using strategies based on place value and properties of operations

INSTRUCTIONAL RESOURCES:	
Core Instructional Materials Reveal Mathematics RedBird Mathematics: Personalized Learning IXL Math	Tier II and Tier III Bridges Interventions FastBridge Interventions

2 nd Grade	Content Area: Mathematics Topic: Operations and Algebraic Thinking
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.2.OA.1 Use addition and subtraction within 100 to solve one and two step word problems involving adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions.	x	
MA.2.OA.2 Fluently add and subtract within 20 using mental strategies. Know from memory all sums of two one-digit numbers.	x	
MA.2.OA.3 Determine whether a group of objects (up to 20) is odd or even (e.g., by pairing objects and comparing, counting by 2s. Model an even number as two equal groups of objects and then write an equation as a sum of two equal addends.		x
MA.2.OA.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns. Write an equation to express the total as repeated addition (e.g., array. Of 4 by 5 would be $5+5+5+5=20$).		x
MA.2.OA.5 Identify, continue and label number patterns (e.g., aabb, abab). Describe a rule that determines and continues a sequence or pattern. <i>(NOTE – missing in Reveal)</i>		x
Units		
<ul style="list-style-type: none"> Unit 3 – Patterns within Numbers Unit 4 – Meanings of Addition and Subtraction Unit 5 – Strategies to Fluently Add within 100 Unit 6 – Strategies to Fluently Subtract within 100 		

2nd Grade	Content Area: Mathematics Topic: Numbers and Operations in Base Ten
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.2.NBT.1 Model and identify place value positions of three-digit numbers.	x	
MA.2.NBT.2 Count up to 1000, skip-counting by 5s, 10s, and 100s	x	
MA.2.NBT.3 Read, write, order up to 1000 using base-ten numerals, number names and expanded form	x	
MA.2.NBT.4 Compare two three-digit numbers based on the meanings of the hundreds, tens and one's digits, using $>$, $=$, $<$ symbols to record the results		x
MA.2.NBT.5 Fluently add and subtract numbers up to 100	x	
MA.2.NBT.6 Add up to four two-digit numbers using strategies based on place value and properties of operations (<i>NOTE – missing in Reveal</i>)		x
MA.2.NBT.7 Add and subtract using numbers up to 1000		x
MA.2.NBT.8 Mentally add 10 or 100 to a given number 100-900 and mentally subtract 10 or 100 from a given number	x	
MA.2.NBT.9 Explain or illustrate the processes of addition or subtraction and their relationship using place value and the properties of operations		x
Units		
<ul style="list-style-type: none"> • Unit 2 – Place Value to 100 • Unit 3 – Patterns within Numbers • Unit 5 – Strategies to Fluently Add within 100 • Unit 6 – Strategies to Fluently Subtract within 100 • Unit 9 – Strategies to Add 3-Digit Numbers • Unit 10 – Strategies to Subtract 3-Digit Numbers 		

2nd Grade	Content Area: Mathematics Topic: Measurement and Data
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.2.MD.1 Measure the length of an object by selecting and using standard tools such as rulers, yardsticks, metersticks, and measuring tapes		x
MA.2.MD.2 Measure the length of an object twice using different length units for the two measurements. Describe how the two measurements relate to the size of the unit chosen		x
MA.2.MD.3 Estimate, measure and draw lengths using whole units of inches, feet, yards, centimeters and meters	x	
MA.2.MD.4 Measure to compare lengths of two objects, expressing the difference in terms of a standard-length unit		x
MA.2.MD.5 Solve addition and subtraction word problems using numbers up to 100 involving length that are given in the same units. Write an equation with a symbol for the unknown to represent the problem.		x
MA.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.		x
MA.2.MD.7 Tell and write time to the nearest five minutes using a.m. and p.m. from analog and digital clocks	x	
MA.2.MD.8 Solve word problems involving dollar bills and coins using the \$ and ¢ symbols appropriately	x	
MA.2.MD.9 Collect, record, interpret, represent, and describe data in a table, graph or line plot	x	
MA.2.MD.10 Draw a picture graph and a bar graph 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.		x
Units		
<ul style="list-style-type: none"> • Unit 5 – Strategies to Fluently Add within 100 • Unit 7 – Measure and Compare Lengths • Unit 8 – Measurement: Time and Money • Unit 11 – Data Analysis 		

2nd Grade	Content Area: Mathematics Topic: Geometry
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.2.G.1 Measure the length of an object by selecting and using standard tools such as rulers, yardsticks, metersticks, and measuring tapes		x
MA.2.G.2 Measure the length of an object twice using different length units for the two measurements. Describe how the two measurements relate to the size of the unit chosen	x	
MA.2.G.3 Estimate, measure and draw lengths using whole units of inches, feet, yards, centimeters and meters		x
Units		
<ul style="list-style-type: none"> • Unit 12 – Geometric Shapes and Equal Shares 		

3rd Grade Math Curriculum

Third-Grade Critical Content Standards Scope and Sequence - Aligned to Reveal Math 2022

Critical standards represent the basics a student must learn and be able to reach high levels of learning, allow teachers and schools to target ‘must know’ skills to support individual students (non-negotiable skills), but do not represent all that should be taught.

Grayed boxes indicate standards with the highest percentage tested.

The date indicates the start date for that unit.

	Unit 1 Math Is... 10 days	Unit 2 Use Place Value to Fluently Add and Subtract within 1,000 (9/16) 18 days	Unit 3 Multiplication and Division (10/10) 12 Days	Unit 4 Use Patterns to Multiply by 0, 1, 2, 5, and 10 (10/30) 10 Days	Unit 5 Use Properties to Multiply by (11/14) 12 Days	Unit 6 Connect Area and Multiplication (12/5) 11 Days
Operations and Algebraic Thinking		3.OA.8- Solve and create two-step word problems using any of the four operations <i>3.OA.9- Identify arithmetic pattern</i>	3.OA.1- Interpret products of whole numbers. 3.OA.2- Interpret whole-number quotients of whole numbers. <i>3.OA.4- Determine the unknown whole number in multiplication or division</i> <i>3.OA.5- Make, test, support, draw conclusions and justify conjectures about properties of operations</i>	3.OA.3- Use multiplication and division numbers up to 100 to solve word problems <i>3.OA.4- Determine the unknown whole number in multiplication or division</i> 3.OA.7- Fluently multiply & divide numbers up to 100 <i>3.OA.9- Identify arithmetic pattern</i>	3.OA.3- Use multiplication and division numbers up to 100 to solve word problems <i>3.OA.4- Determine the unknown whole number in multiplication or division</i> <i>3.OA.5- Make, test, support, draw conclusions and justify conjectures about properties of operations</i> 3.OA.7- Fluently multiply and divide numbers up to 100	
Numbers and Operations in Base 10		<i>3.NBT.1- Use place value understanding to round whole numbers to the nearest 10 or 100</i> 3.NBT.2- Use strategies and/or algorithms to fluently add and subtract numbers up to 1000				
Measurement and Data						3.MD.7 (CC.3.MD.5)- Recognize area as an attribute of plane figures and understand the concept of area <i>3.MD.8 (CC.3.MD.6- Measure areas by tiling with unit squares</i> 3.MD.9 (CC.3.MD.7)-Recognize area as an attribute of plane figures and understand concepts of area measurement

Bold text- critical standard

Italicized text- supporting standard

	Unit 7 Fractions (1/7) 10 Days	Unit 8 Fraction Equivalence and Comparison (1/22) 12 Days	Unit 9 Use Multiplication to Divide (2/7) 15 Days	Unit 10 Use Properties & Strategies to Multiply & Divide (3/3) 10 Days	Unit 11 Perimeter (3/24) 9 Days	Unit 12 Measurement and Data (4/4) 17 Days	Unit 13 Describe and Analyze Shapes (4/29) 8 Days
Operations and Algebraic Thinking			<i>3.OA.6- Understand division as an unknown-factor problem</i> 3.OA.7- Fluently multiply and divide numbers up to 100	<i>3.OA.5- Make, test, support, draw conclusions and justify conjectures about properties of operations</i> 3.OA.8- Solve and create two-step word problems using any of the four operations <i>3.OA.9- Identify arithmetic pattern</i>	3.OA.3- Use multiplication and division numbers up to 100 to solve word problems <i>3.OA.4- Determine the unknown whole number in multiplication or division</i>		
Numbers and Operations in Base 10				<i>3.NBT.3- Multiply one-digit whole numbers by multiples of 10 in the range 10-90</i>			
Numbers and Operations- Fractions	3.NF.1- Understand a fraction $1/b$ (e.g., $1/4$) as the quantity formed by 1 part when a whole is partitioned into b (e.g., 4) equal parts <i>3.NF.2- Understand and represent a fraction as a number on a number line</i> 3.NF.3- Explain and compare fractions by reasoning about their size	3.NF.3- Explain and compare fractions by reasoning about their size					
Measurement and Data					<i>3.MD.10 (CC.3.MD.8)- Solve real-world and mathematical problems involving perimeters of polygons</i>	3.MD.1- Tell and write time to the nearest minute and measure time intervals in minutes, solve word problems involving time <i>3.MD.2- Estimate and measure liquid volumes and masses of objects</i> 3.MD.4 (CC.3.MD.3)- Draw and solve problem using a scaled picture graph and bar graph 3.MD.5 (CC.3MD.4)- Measure and record lengths using rulers marked with halves and fourths	
Geometry	<i>3.G.2- Partition shapes into parts with equal areas</i>						<i>3.G.1- Categorize shapes by different attributes</i>

Bold text- critical standard

Italicized text- supporting standard

Third Grade Standards Not Covered in Reveal

MA.3.MD.3. Select an appropriate unit of English, metric, or non-standard measurement to estimate the length, time, weight, or temperature (L).

MA. 3.MD.6. Explain the classification of data from real-world problems shown in graphical representations. Use the terms minimum and maximum. (L)

INSTRUCTIONAL RESOURCES:	
Core Instructional Materials Reveal Mathematics RedBird Mathematics: Personalized Learning IXL Math	Tier II and Tier III Bridges Interventions FastBridge Interventions

3 rd Grade	Content Area: Mathematics Topic: Operations and Algebraic Thinking
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.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	x	
MA.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, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each).	x	
MA.3.OA.3 Use multiplication and division numbers up to 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).	x	
MA.3.OA.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers.		x
MA.3.OA.5 Make, test, support, draw conclusions and justify conjectures about properties of operations as strategies to multiply and divide.		x
MA.3.OA.6 Understand division as an unknown-factor problem.		x
MA.3.OA.7 Fluently multiply and divide numbers up to 100, using strategies such as the relationship between multiplication and division or properties of operations. By the end of 3 rd grade, know from memory all products of two one-digit numbers.	x	
MA.3.OA.8 Solve and create two-step word problems using any of the four operations.	x	
MA.3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table) and explain them using properties of operations.		x
Focus Units		
<ul style="list-style-type: none"> Unit 2 – Use Place Value to Fluently Add and Subtract within 1,000 Unit 3 – Multiplication and Division Unit 4 – Use Patterns to Multiply by 0, 1, 2, 5, and 10 Unit 5 – Use Properties to Multiply by 3, 4, 6, 7, 8 and 9 Unit 9 – Use Multiplication to Divide Unit 10 – Use Properties and Strategies to Multiply and Divide Unit 11 – Perimeter 		

3rd Grade	Content Area: Mathematics Topic: Numbers and Operations in Base Ten
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100		x
MA.3.NBT.2 Use strategies and/or algorithms to fluently add and subtract with numbers up to 1000, demonstrating understanding of place value, properties of operations, and/or the relationship between addition and subtraction	x	
MA.3.NBT.3 Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9x80, 10x60) using strategies based on place value and properties of operations		x
Units		
<ul style="list-style-type: none"> • Unit 2 – Use Place Value to Fluently Add and Subtract within 1,000 • Unit 10 – Properties and Strategies to Multiply and Divide 		

3rd Grade	Content Area: Mathematics Topic: Numbers and Operations- Fractions
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.3.NF.1 Understand a fraction $\frac{1}{b}$ (e.g., $\frac{1}{4}$) as the quantity formed by 1 part when a whole is partitioned into b (e.g., 4) equal parts; understand a fraction $\frac{a}{b}$ (e.g., $\frac{2}{4}$) as the quantity formed by a (e.g., 2) parts of size $\frac{1}{b}$ (e.g., $\frac{1}{4}$)	x	
MA.3.NF.2 Understand a fraction as a number on the number line; represent fractions on a number line diagram		x
MA.3.NF.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size	x	
Units		
<ul style="list-style-type: none"> • Unit 7 – Fractions • Unit 8 – Fraction Equivalence and Comparison 		

3rd Grade	Content Area: Mathematics Topic: Measurement and Data
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.3.MD.1. Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes or hours (e.g., by representing the problem on a number line diagram or clock).	x	
MA.3.MD.2. Estimate and measure liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).		x
MA.3.MD.3. Select an appropriate unit of English, metric, or non-standard measurement to estimate the length, time, weight, or temperature (L). <i>(NOTE – missing in Reveal)</i>		x
MA.3.MD.4. 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. (CC.3.MD.3)		x
MA.3.MD.5. Measure and record lengths using rulers marked with halves and fourths of an inch. Make a line plot with the data, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters. (CC.3.MD.4)	x	
MA. 3.MD.6. Explain the classification of data from real-world problems shown in graphical representations. Use the terms minimum and maximum. (L) <i>(NOTE – missing in Reveal)</i>		x
MA. 3.MD.7. Recognize area as an attribute of plane figures and understand concepts of area measurement. (CC.3.MD.5)	x	
MA.3.MD.8. Measure areas by tiling with unit squares (square centimeters, square meters, square inches, square feet, and improvised units). (CC.3.MD.6)		x
MA.3.MD.9. Relate area to the operations of multiplication and addition. (CC.3.MD.7)	x	
MA.3.MD.10. Solve real world and mathematical problems involving perimeter of polygons. (CC.3.MD.8)		x
Focus Units		
<ul style="list-style-type: none"> • Unit 6 – Connect Area and Multiplication • Unit 11 – Perimeter • Unit 12 – Measurement and Data 		

3rd Grade	Content Area: Mathematics Topic: Geometry
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA. 3.G.1. Categorize shapes by different attribute classifications and recognize that shared attributes can define a larger category. Generalize to create examples or non-examples.		x
MA.3.G.2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole		x
Focus Units		
<ul style="list-style-type: none"> • Unit 7 – Fractions • Unit 13 – Describe and Analyze 2-Dimensional Shapes 		

4th Grade Math Curriculum

Fourth Grade Critical Content Standards Scope and Sequence - Aligned to Reveal Math 2022

Critical standards represent the basics a student must learn and be able to reach high levels of learning, allow teachers and schools to target ‘must know’ skills to support individual students (non-negotiable skills), but do not represent all that should be taught.

Grayed boxes indicate standards with the highest percentage tested.

The date indicates the start date for that unit.

	Unit 1 Math Is... 10 days	Unit 2 Generalize Place-Value Structure (9/16) 8 days	Unit 3 Addition and Subtraction Strategies and Algorithms (9/26) 15 Days	Unit 4 Multiplication as Comparison (10/21) 8 Days	Unit 5 Numbers and Number Patterns (10/31) 10 Days	Unit 6 Multiplication Strategies with Multi-Digit Numbers (11/15) 14 Days	Unit 7 Division Strategies with Multi-Digit Dividends and 1-Digit Divisors (12/10) 14 Days
Operations and Algebraic Thinking			<i>4.OA.3- Solve multistep word problems posed with whole numbers and having whole number answers using the four operations.</i>	<i>4.OA.1- Interpret a multiplication equation as a comparison.</i> 4.OA.2- Multiply or divide to solve word problems involving multiplicative comparison.	4.OA.4- Find all factor pairs for a whole number in the range 1-100 <i>4.OA.5- Generate a number, shape pattern, table, t-chart, or input/output function that follows a given rule</i>	<i>4.OA.3- Solve multistep word problems posed with whole numbers and having whole number answers using the four operations.</i>	<i>4.OA.3- Solve multistep word problems posed with whole numbers and having whole number answers using the four operations.</i>
Numbers and Operations in Base 10		<i>4.NBT.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</i> 4.NBT.2 Read and write multi-digit whole numbers using base-ten numbers, number names and expanded form. <i>4.NBT.3 – Use place value understanding to round multi-digit whole numbers</i>	4.NBT.4- Fluently add and subtract multi-digit whole numbers using any algorithm.			4.NBT.5- Multiply a whole-number of up to four digits by a one-digit whole number and multiply two two-digit numbers.	4.NBT.6- Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors

Bold text- critical standard

Italicized text- supporting standard

	Unit 8 Fraction Equivalence (1/14) 9 Days	Unit 9 Addition and Subtraction Meanings and Strategies with Fractions (1/29) 10 Days	Unit 10 Addition and Subtraction Strategies with Mixed Numbers (2/12) 10 Days	Unit 11 Multiply Fractions by Whole Numbers (2/27) 9 Days	Unit 12 Decimal Fractions (3/12) 9 Days	Unit 13 Units of Measurement and Data (4/1) 17 Days	Unit 14 Geometric Figures (4/24) 16 Days
Operations and Algebraic Thinking						<i>4.OA.3- Solve multistep word problems posed with whole numbers and having whole number answers using the four operations.</i>	
Numbers and Operations- Fractions	<i>4.NF.1- Explain why a fraction a/b is equivalent to a fraction by using visual models</i> 4.NF.2- Compare two fractions with different numerators and different denominators.	<i>4.NF.3- Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$.</i>	<i>4.NF.3- Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$.</i>	4.NF.4- Apply and extend previous understanding of multiplication to multiply a fraction by a whole number.	<i>4.NF.5- Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use to add two fractions</i> <i>4.NF.6- Use decimal notation for fractions with denominators 10-100</i> 4.NF.7- Compare two decimals to hundredths by reasoning about their size.		
Measurement and Data					4.MD.2- Use the 4 operations to solve word problems using measurement	<i>4.MD.1- Know relative sizes of measurement units</i> 4.MD.2- Use the 4 operations to solve word problems using measurement <i>4.MD.3- Apply the area and perimeter formulas for a rectangle</i> <i>4.MD.4- Solve real-world problems involving elapsed time between time zones</i>	<i>4.MD.5(CC.5.MD.4)- Make a line plot to display a data set of measurements in fractions of a unit, solve problems involving addition and subtraction</i> <i>4.MD.6- Explain the classification of data from real world problems</i> 4.MD.7(CC.5.MD.4)- Recognize angles as geometric shapes that are formed where ever two rays share a common endpoint, and understand the concepts of angle measurements
Geometry							<i>4.G.1- Draw points, lines, line segments, rays, angles, and perpendicular, parallel, and intersecting line segments</i> 4.G.2- Classify two-dimensional figures <i>4.G.3- Recognize a line of symmetry</i>

Bold text- critical standard

Italicized text- supporting standard

Fourth Grade Standards Not Covered in Reveal

MA.4.OA.6 Extend patterns that use addition, subtraction, multiplication, division or symbols, up to 10 terms, represented by models (function machines), tables, sequences, or in problem situations (L).

MA.4.MD.8 Measure and draw angles in whole-number degrees using a protractor. Estimate and sketch angles of specified measure. (CC.4.MD.6)

MA.4.MD.9 Recognize angle and measure as additive. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems. (CC.4.MD.7)

4th Grade	Content Area: Mathematics Topic: Operations and Algebraic Thinking
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.4.OA.1. Interpret a multiplication equation as a comparison (e.g., interpret $35=5 \times 7$ as a statement that 35 is 5 groups of 7 and 7 groups of 5). (Commutative property) represent verbal statements of multiplicative comparisons as multiplication equations.		x
MA.4.OA.2. Multiply or divide to solve word problems involving multiplicative comparison (e.g., by using drawings and equations with a symbol for the unknown number to represent the problem or missing numbers in an array). Distinguish multiplicative comparison from additive comparison.	x	
MA.4.OA.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. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.		x
MA.4.OA.4 Find all factor pairs for a whole number in the range 1-100; explain the correlation/differences between multiples and 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.	x	
MA.4.OA.5 Generate a number, shape pattern, table, t-chart, or input/output function that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. Be able to express the pattern in algebraic terms.		x
MA.4.OA.6 Extend patterns that use addition, subtraction, multiplication, division or symbols, up to 10 terms, represented by models (function machines), tables, sequences, or in problem situations (L). <i>(NOTE – missing in Reveal)</i>		x
Focus Units		
<ul style="list-style-type: none"> • Unit 3 – Place Value and Number Relationships • Unit 4 – Add and Subtract Decimals • Unit 5 – Multiply Multi-Digit Whole Numbers • Unit 6 – Multiply Decimals • Unit 7 – Divide Whole Numbers • Unit 8 – Divide Decimals • Unit 13 – Geometry 		

4th Grade	Content Area: Mathematics Topic: Numbers and Operations in Base Ten
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.4.NBT.1. Recognize that a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.		x
MA.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 the value of the digits in each place, using >, +, and < symbols to record the results of comparisons.	x	
MA.4.NBT.3 Use place value understanding to round multi-digit whole numbers to any place using a variety of estimation methods; be able to describe, compare, and contrast solutions.		x
MA.4.NBT.4 Fluently add and subtract multi-digit whole numbers to any place using a variety of estimation methods; be able to describe, compare, and contrast solutions.	x	
MA.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.	x	
MA.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	x	
Focus Units		
<ul style="list-style-type: none"> • Unit 2 – Generalize Place-Value Structure • Unit 3 – Addition and Subtraction Strategies and Algorithms • Unit 6 – Multiply Decimals • Unit 7 – Divide Whole Numbers 		

4th Grade	Content Area: Mathematics Topic: Numbers and Operations - Fractions
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.4.NF.1. Explain why a fraction a/b is equivalent to a fraction $(n \times a)/(n \times b)$ by using visual fraction models, with attention to how the number and size or the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.		x
MA.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 $\frac{1}{2}$). 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.	x	
MA.4.NF.3 Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$.		x
MA.4.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.	x	
MA.4.NF.5 Express a fraction with denominator 10 as equivalent fraction with denominator 100 and use this technique to add two fractions with respective denominators 10 and 100.		x
MA.4.NF.6 Use decimal notation for fractions with denominators 10 or 100.		x
MA.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).	x	
Units		
<ul style="list-style-type: none"> • Unit 8 – Divide Decimals • Unit 9 – Addition and Subtraction Meanings and Strategies with Fractions • Unit 10 – Addition and Subtraction Strategies with Mixed Numbers • Unit 11 – Multiply Fractions by Whole Numbers • Unit 12 – Decimal Fractions 		

4th Grade	Content Area: Mathematics Topic: Measurement and Data
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz; l, nl; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.		x
MA.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 measurement quantities using diagrams such as number line.	x	
MA.4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems.		x
MA.4.MD.4 Solve real-world problems involving elapsed time between U.S. time zones (including Alaska Standard time). (L)		x
MA.4.MD.5 Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Solve problems involving addition and subtraction of fractions by using information presented in line plots. (CC.4.MD.4)		x
MA.4.MD.6 Explain the classification of data from real-world problems shown in graphical representations including the use of terms range and mode with a given set of data. (L)		x
MA.4.MD.7 Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand the following concepts of angle measurement. (CC.4.MD.5)		x
MA.4.MD.8 Measure and draw angles in whole-number degrees using a protractor. Estimate and sketch angles of specified measure. (CC.4.MD.6) <i>(NOTE – missing in Reveal)</i>	x	
MA.4.MD.9 Recognize angle and measure as additive. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems. (CC.4.MD.7) <i>(NOTE – missing in Reveal)</i>		x
Units		
<ul style="list-style-type: none"> • Unit 12 – Decimal Fractions • Unit 13 – Units of Measurement and Data • Unit 14 – Geometric Figures 		

4 th Grade	Content Area: Mathematics Topic: Geometry
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA. 4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular, parallel, and intersecting line segments. Identify these in two dimensional (plane) figures.		x
MA.4.G.2. Classify two-dimensional (plane) figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category and identify right triangles.	x	
MA.4.MD.3 Recognize a line of symmetry for a two-dimensional (plane) figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.		x
Focus Units		
<ul style="list-style-type: none"> Unit 14 – Geometric Figures 		

5th Grade Math Curriculum

Fifth Grade Critical Content Standards Scope and Sequence - Aligned to Reveal Math 2022

Critical standards represent the basics a student must learn and be able to reach high levels of learning, allow teachers and schools to target ‘must know’ skills to support individual students (non-negotiable skills), but do not represent all that should be taught.

Grayed boxes indicate standards with the highest percentage tested.

The date indicates the start date for that unit.

	Unit 1 Math Is... 10 days	Unit 2 Volume (9/16) 9 days	Unit 3 Place Value and Number Relationships (9/27) 9 Days	Unit 4 Add and Subtract Decimals (10/11) 14 Days	Unit 5 Multiply Multi-Digit Whole Numbers (11/5) 12 Days	Unit 6 Multiply Decimals (11/22) 10 Days	Unit 7 Divide Whole Numbers (12/13) 12 Days
Numbers and Operations in Base 10			<i>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</i> 5.NBT.3- Read, write, and compare decimals to thousandths 5.NBT.4- Use place values understanding to round decimals to any place	5.NBT.7- Add, subtract, multiply, and divide decimals to hundredths	<i>5.NBT.2- Explain and extend the patterns in the number of zeros of the product when multiplying a number by powers of 10</i> 5.NBT.4- Fluently multiply multi-digit whole numbers using a standard algorithm.	<i>5.NBT.2- Explain and extend the patterns in the number of zeros of the product when multiplying a number by powers of 10</i> 5.NBT.7- Add, subtract, multiply, and divide decimals to hundredths	5.NBT.6- Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors
Measurement and Data		<i>5.MD.5 (CC.5.MD.3)- Recognize volume as an attribute of solid figures and understand concepts of volume measurement</i> <i>5.MD.6 (CC.5.MD.4)- Estimate and measure volumes by counting unit cubes</i> 5.MD.7 (CC.5.MD.5)- Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume					

Bold text- critical standard

Italicized text- supporting standard

	Unit 8 Divide Decimals (1/15) 16 Days	Unit 9 Add & Subtract Fractions (2/7) 15 Days	Unit 10 Multiply Fractions (3/3) 10 Days	Unit 11 Divide Fractions (3/24) 10 Days	Unit 12 Measurement & Data (4/7) 10 Days	Unit 13 Geometry (4/21) 10 Days	Unit 14 Algebraic Thinking (5/5) 10 Days
Operations and Algebraic Thinking							<p><u>5.OA.1</u>- Use parentheses to construct numerical expressions, and evaluate numerical expressions with these symbols</p> <p>5.OA.2 Write simple expressions that record calculations with numbers and interpret numerical expressions without evaluating them.</p> <p><u>5.OA.3</u>- Generate two numerical patterns using two given rules</p>
Numbers and Operations in Base 10	<p><u>5.NBT.2</u>- Explain and extend the patterns in the number of zeros of the product when multiplying a number by powers of 10</p> <p>5.NBT.7- Add, subtract, multiply, and divide decimals to hundredths</p>						
Numbers and Operations- Fractions		<p><u>5.NF.1</u>- Add and subtract fractions with unlike denominators</p> <p>5.NF.2- Solve word problems involving addition and subtraction of fractions referring to the same whole.</p>	<p>5.NF.4- Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.</p> <p><u>5.NF.5</u>- Interpret multiplication as scaling.</p> <p><u>5.NF.6</u>- Solve real world problems involving multiplication of fractions and mixed numbers.</p>	<p>5.NF.3- Interpret a fraction as division of the numerator by the denominator($a/b=a\div b$)</p> <p><u>5.NF.7</u>- Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions</p>			
Measurement and Data					<p><u>5.MD.1</u>- Identify, estimate measure, and convert equivalent measures within English measurement, and solve problems</p> <p><u>5.MD.3(CC.5.MD.2)</u>- Make a line plot to display a data set of measurements in fractions of a unit and solve problems</p>		

<p>Geometry</p>						<p>5.G.1- Use a pair of perpendicular number lines to define coordinate systems <i>5.G.2- Represent real-world and mathematical problems by graphing points</i> <i>5.G.3- Understand that attributes belonging to a category of two-dimensional figures</i> <i>5.G.4- Classify two-dimensional figures in a hierarchy based on attributes and properties</i></p>	
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Bold text- critical standard

Italicized text- supporting standard

Fifth Grade Standards Not Covered in Reveal**MA.5.NBT.5 Fluently multiply multi-digit whole numbers using a standard algorithm.**

MA.5.MD.2. Solve problems involving elapsed time between world time zones. (L)

MA.5.MD.4 Explain the classification of data from real-world problems shown in graphical representations including the use of terms mean and median with given set of data. (L).

INSTRUCTIONAL RESOURCES:	
Core Instructional Materials Reveal Mathematics RedBird Mathematics: Personalized Learning IXL Math	Tier II and Tier III Bridges Interventions FastBridge Interventions

5 th Grade	Content Area: Mathematics Topic: Operations and Algebraic Thinking
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.5.OA.1. Use parentheses to construct numerical expressions and evaluate numerical expressions with these symbols.		x
MA.5.OA.2. Write simple expressions that record calculations with numbers and interpret numerical expressions without evaluating them.	x	
MA.5.OA.3 Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns and graph the ordered pairs on a coordinate plane.		x
Units		
<ul style="list-style-type: none"> Unit 14 – Algebraic Thinking 		

5th Grade	Content Area: Mathematics Topic: Numbers and Operations in Base Ten
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.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.		x
MA.5.NBT.2. Explain and extend the patterns in the number of zeros of the product when multiplying a number by powers of 10 and explain and extend the 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.		x
MA.5.NBT.3 Read, write, and compare decimals to thousandths.	x	
MA.5.NBT.4 Use place values understanding to round decimals to any place.	x	
MA.5.NBT.5 Fluently multiply multi-digit whole numbers using a standard algorithm. <i>(NOTE – missing in Reveal)</i>	x	
MA.5.NBT.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, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, number lines, real life situations, and/or area models.	x	
MA.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 the operations. Related the strategy to a written method and explain their reasoning in getting their answers.	x	
Units		
<ul style="list-style-type: none"> • Unit 3 – Place Value and Number Relationships • Unit 4 – Add and Subtract Decimals • Unit 5 – Multiply Multi-Digit Whole Numbers • Unit 6 – Multiply Decimals • Unit 7 – Divide Whole Numbers • Unit 8 – Divide Decimals 		

5th Grade	Content Area: Mathematics Topic: Numbers and Operations - Fractions
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.5.NF.1. Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.		x
MA.5.NF.2. Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators (e.g., by using visual fraction models or equations to represent the problem). Use benchmark fractions and number sense of fractions to estimate mentally and check the reasonableness of answers.	x	
MA.5.NF.3 Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers (e.g., by using visual fraction models or equations to represent the problem).	x	
MA.5.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.	x	
MA.5.NF.5 Interpret multiplication as scaling		x
MA.5.NF.6 Solve real world problems involving multiplication of fractions and mixed numbers (e.g., by using visual fraction models or equations to represent the problem).		x
MA.5.NF.7. Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.		x
Focus Units		
<ul style="list-style-type: none"> • Unit 9 – Add and Subtract Fractions • Unit 10 – Multiply Fractions • Unit 11 – Divide Fractions 		

5th Grade	Content Area: Mathematics Topic: Measurement and Data
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What We Want Our Students to Know, Understand and Be Able to Do		
Alaska State Standards	Critical	Supporting
MA.5.MD.1. Identify, estimate measure, and convert equivalent measures within systems English lengths (inches, feet, yards, miles) weight (ounces, pounds, tons) volume (fluid ounces, cups, pints, quarts, gallons) temperature (Fahrenheit) Metric length (millimeters, centimeters, meters, kilometers) volume (milliliters, liters), temperature (Celsius), and use these conversions in solving multi-step, real world problems using appropriate tools.		x
MA.5.MD.2. Solve problems involving elapsed time between world time zones. (L) <i>(NOTE – missing in Reveal)</i>		x
MA.5.MD.3 Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$,). Solve problems involving information presented in line plots. (CC.5.MD.2)		x
MA.5.MD.4 Explain the classification of data from real-world problems shown in graphical representations including the use of terms mean and median with given set of data. (L). <i>(NOTE – missing in Reveal)</i>		x
MA.5.MD.5 Recognize volume as an attribute of solid figures and understand concepts of volume measurement. (CC.5.MD.3)		x
MA.5.MD.6 Estimate and measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and non-standard units. (CC.5.MD.4)		x
MA.5.MD.7. Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume. (CC.5.MD.5)	x	
Focus Units		
<ul style="list-style-type: none"> • Unit 2 – Volume • Unit 12 – Measurement and Data 		