GRADES K-5 MATHEMATICS ASSESSMENT SYSTEMS TO INCLUDE EARLY NUMERACY SCREENERS, FORMATIVE BENCHMARK ASSESSMENTS, FRACTIONAL REASONING SCREENERS, INTERVENTION RESOURCES, AND/OR SUMMER MATH CAMP CURRICULA

Request for Information

RFI ALSDE 2026-05

Alabama State Department of Education (ALSDE)
Division of Instruction
Montgomery, AL

***There will not be a formal proposal opening and no contract will be awarded. This is an opportunity for interested entities to present their materials to the ALSDE to be reviewed and vetted as part of a list of recommended Early Numeracy Screeners, Formative Benchmark Assessments, Fractional Reasoning Screeners, Intervention Resource, and/or Summer Math Camp Curricula provided by the Elementary Mathematics Task Force to all school districts in the state of Alabama, in accordance with the *Alabama Numeracy Act.* (*Ala. Code 16-6G-1, et. Seq*.). All material received by the ALSDE will be shared with the Elementary Mathematics Task Force. All communication must be through the ALSDE contact.**

Proposal Submission Deadline
October 29, 2026

All submissions should be mailed to this address:

Alabama State Department of Education
Office of Mathematics Improvement
P305 Gordon Persons Building
50 North Ripley Street
Montgomery, AL 36104
ATTN: Dr. Karen Anderson

Table of Contents

SECTION 1: BACKGROUND, PURPOSES, AND TIMELINE 3

SECTION 2: EARLY NUMERACY SCREENERS, FORMATIVE BENCHMARK ASSESSMENTS, FRACTIONAL REASONING SCREENERS, INTERVENTION RESOURCES, AND SUMMER MATH CAMP CURRICULA SUBMISSION REQUIREMENTS 4

2.1 Scope of Vendor's Work and Responsibilities: 4

2.2 Components of Systems 6

2.2 a. Early Numeracy Screener 6

2.2 b. Formative Benchmark Assessment 8

2.2 c. Fractional Reasoning Screener 25

2.2 d. Intervention Resources 27

2.2 e. Summer Math Camp Curriculum 30

SECTION 3: OTHER 30

SECTION 4: SUBMISSION DEADLINE 32

SECTION 1: BACKGROUND, PURPOSES, AND TIMELINE

The Alabama State Department of Education (ALSDE) is seeking submission of Early Numeracy Screeners, Formative Benchmark Assessments, Fractional Reasoning Screeners, Intervention Resources, and Summer Math Camp Curricula. This Request for Information (RFI) is not an offer to contract but seeks the submission of Early Numeracy Screeners, Formative Benchmark Assessments, Fractional Reasoning Screeners, Intervention Resources, and/or Summer Math Camp Curricula from interested providers for the purpose of assisting the Elementary Mathematics Task Force in the provision of recommendations to the State Superintendent of Education and Alabama State Board of Education in accordance with the *Alabama Numeracy Act*.

Vendors chosen through this RFI process may be included on an ALSDE-approved product list to be published. Said list will remain in effect through July 1, 2032. Any contracts resulting from the approved intervention list would be between local education agencies (LEAs) and their chosen vendor. Districts will receive funds to offset the cost of their purchase of one of the approved systems based on legislative appropriations.

Specific terms and requirements in this RFI may be waived or modified by the state of Alabama as it deems necessary and appropriate. The state has no liability for any costs incurred by a vendor for the preparation and production of a proposal or for any work performed prior to the issuance of a recommendation. The ALSDE reserves the right to reject all proposals and to solicit additional proposals if that is determined to be in the best interests of the state of Alabama.

Specific Disqualifier for Review

The ALSDE reserves the right to reject any or all proposals that are deemed to be non-responsive, late in submission, or unsatisfactory in any way. If a vendor's submission does not meet all the stated non-negotiables, the ALSDE shall not review the vendor submission. This RFI aligns with the *Alabama Numeracy Act*, which states that the state of Alabama hereby terminates all plans, programs, activities, efforts, and expenditures relative to the implementation of the educational initiative commonly referred to as the Common Core State Standards. Therefore, any references to the Common Core Standards in the proposal shall result in immediate rejection.

Vendor questions should be submitted to this email address according to the timeline found below: OMI@alsde.edu.

Anticipated Timeline

Vendor Questions Due to the ALSDE	September 30, 2026
The ALSDE Responses Due to Vendors	October 7, 2026
Proposal Submission Deadline	October 29, 2026

SECTION 2: EARLY NUMERACY SCREENERS, FORMATIVE BENCHMARK ASSESSMENTS, FRACTIONAL REASONING SCREENERS, INTERVENTION RESOURCES, AND SUMMER MATH CAMP CURRICULA SUBMISSION REQUIREMENTS

2.1 Scope of Vendor's Work and Responsibilities:

The Elementary Mathematics Task Force requests submission of Early Numeracy Screeners, Formative Benchmark Assessments, Fractional Reasoning Screeners, Intervention Resources, and/or Summer Math Camp Curricula to be reviewed by the Elementary Mathematics Task Force and the ALSDE.

Vendors can submit in one or more categories. However, proposals must be submitted as individual documents for each submission category. The proposal in each submission category must contain information for that single category only, and must be clearly labeled either:

Early Numeracy Screener,

Formative Benchmark Assessment,

Fractional Reasoning Screener,

Intervention Resource, OR

Summer Math Camp Curriculum

Each proposal must contain a section/tab labeled for each item listed below in this order:

Vendor Contact Information and Qualifications – Include contact information (phone number and email address, to respond to questions that may arise during the review process), vendor qualifications, experience, and a list of three references from users of the product submitted for review in the document.

Costs Overview – The LEAs receive an allocation at the rate of $6 per student each for early numeracy screeners, formative benchmark screeners, fractional reasoning screeners, and intervention resources. Additional funding sources are available to fund summer math camp curricula at the same rate. Vendors are encouraged to be mindful of these figures when computing costs for each resource.

Completed Rubric – Completed Rubric for each component submitted for review. Click here for Rubrics: Early Numeracy Screeners, Formative Benchmark Assessments, Fractional Reasoning Screeners, Intervention Resources, Summer Math Camp Curricula

Bank of Assessment Items – Assessment items for each grade level, aligned to the critical standards in 2019 Alabama Mathematics Course of Study. The critical standards are available here. These test items will remain confidential and only available to the RFI evaluators during the review window.

Assessment Results with Next Steps for Instruction – Lessons should be provided to address gaps in student learning identified by assessment results.

Alignment with 2019 COS – For Intervention Resources and Summer Math Camp Curricula, also provide lessons aligned with the critical standards in the 2019 Alabama Mathematics Course of Study.

Access to Online Resources – If applicable, provide access to online resources such as a website, with username and passwords for both teacher and student access. Provide a link to the assessment site for reviewers to see reports.

Professional Development Overview – Provide an itemized list of professional development that is included or available for purchase with each product. Include number of hours, content covered, audience, and cost. Include detailed descriptions of development, training materials unique to Alabama, and support provided to utilize the products.

Accessibility and Accommodations – Description of accessibility features and accommodations allowed for students in special populations with disabilities, including hearing and vision impairments and English Learners. Include alternate options provided for students with the most significant cognitive disabilities (provide examples and links).

Description and Examples of Reports – Description of the process for creating automatic reports for teachers, administrators, and parents. Provide examples of all available reports. Provide a link to the platform or video demonstrating the process in the electronic submission.

Timelines – Description of the timelines in creating assessment reports for teachers, administrators, and parents for beginning, middle, and end of the year administrations if applicable.

Progress Monitoring Capabilities – Description of the assessment, screening and diagnostic capabilities for monitoring student progress.

Administration Format – Assessments, screeners, intervention resources, and summer math camp curriculum must be face-to-face, teacher led, in person, and must not be screen-based.

Administration Time Required – The time required to administer each assessment product for which a proposal is submitted.

Assurances Letter – Signed assurances letter on company letterhead agreeing to the following conditions if granted recommendation as a vendor.

1. Data Sharing Agreement - Vendors should maintain a direct data reporting agreement with the LEA for whom they are reporting data. This may be in an electronic format.
2. Send the ALSDE assessment, screening, and/or intervention data electronically in format required by the ALSDE Data Report Chart. Including rostering identifiers – TCERT, SSID.

3. Submit data to the ALSDE as required. Early Numeracy Screener – two times a year, Formative Benchmark Assessment - beginning-of-year, middle-of-year, end-of-year, and summer, Fractional Reasoning Screener - two times a year.
4. Provide a minimum of five quick turnaround reports per calendar year to meet the ALSDE deadlines as requested by the ALSDE.
5. Provide dedicated personnel for technical assistance to the ALSDE and LEA.
6. The software solution automatically captures, stores, and reports all relevant assessments, instructional, and intervention data without requiring manual data entry by educators, administrators, or other staff.
7. Compliance Requirements -
    a. SOC 2 Type II Attestation: Provide evidence of the current SOC 2 Type II attestation. Documentation must be included with the proposal and demonstrate compliance with industry-standard controls for security, availability, confidentiality, processing integrity, and privacy.
    b. Privacy and Regulatory Compliance Attestation: Provide a signed attestation affirming compliance with applicable federal, state, and local privacy and security laws, including *Family Educational Rights Privacy Act* (FERPA) and *Children Online Privacy Protection Act* (COPPA), and certifying appropriate safeguards for protecting sensitive data.

***<u>Automatic disqualification</u> will occur for individuals who do not submit a completed proposal with evidence outlining each component and <u>separate sections for each submission area</u> of the evaluation criteria.**

2.2 Components of Systems

2.2 a. Early Numeracy Screener

<u>EARLY NUMERACY SCREENER NON-NEGOTIABLES</u>

The Early Numeracy Screener:

- Must be designed for administration to all students.
- Must be time-efficient.
- Must be a one-on-one teacher/student interview assessment and not computer-based.
- Results should be interpreted quickly and accurately.
- Must not be adaptive.
- Identifies student misconceptions.
- Provides resources and explicit instructional action steps for teachers to plan instruction.
- Provides two forms of the screener for the two required administrations within the administration windows stated in the ALSDE annual memos, and as required by the *Alabama Numeracy Act.*

EARLY NUMERACY SCREENER SPECIFIC CONTENT REQUIREMENTS

Kindergarten

- Number sequence.
- One to one correspondence.
- Subitizing.
- Compare groups of objects (same or different, more, less, or fewer).
- Count forward and backward.
- Count out a specific number of objects.
- Cardinality.
- Use addition and subtraction concepts with sets of objects.

First Grade

Develop a formal sense of numbers including:

- Number sequence.
- One to one correspondence.
- Cardinality.
- Subitizing.
- Count forward and backwards (by ones and tens).
- Write numerals.
- Connect counting to cardinality using concrete objects.
- Compare numbers of objects (greater/more than; less/fewer than; equal/the same as; without using inequality symbols).
- Represent addition and subtraction up to 10 with concrete objects, fingers, drawings, etc.
- Solve addition and subtraction word problems within 10 using concrete objects or drawings.

Second Grade

Show understanding of:

- Counting forwards and backwards within 120.
- Counting and recognizing whole numbers within 120.
- Comparing and ordering numbers.
- Compare equations for equality.
- Composing and decomposing numbers.
- Solve word problems with addition and subtraction within 20.
- Recognize and model place value with tens and ones.

2.2 b. Formative Benchmark Assessment

FORMATIVE BENCHMARK ASSESSMENTS K-5 NON-NEGOTIABLES

The formative benchmark assessment:

- Shall be adaptive and should inform all three tiers of instruction.
- Should be time-efficient in administration.
- Must identify student misconceptions.
- Provides resources and explicit instructional action steps for teachers to plan instruction.
- Can produce automatic reports for teachers, administrators, and parents that can be interpreted quickly and accurately.

FORMATIVE BENCHMARK ASSESSMENTS SPECIFIC CONTENT REQUIREMENTS

Kindergarten Critical Standards

Foundations of Counting

Know number names and the count sequence. Note on number reversals: Learning to write numerals is generally more difficult than learning to read them. It is common for students to reverse numerals at this stage.

- Count forward orally from 0 to 100 by ones and by tens. Count backward orally from 10 to 0 by ones.
- Count to 100 by ones beginning with any given number between 0 and 99.
- Write numerals from 0 to 20.
- Represent 0 to 20 using concrete objects when given a written numeral from 0 to 20 (with 0 representing a count of no objects).
- Connect counting to cardinality using a variety of concrete objects.
- Say the number names in consecutive order when counting objects.
- Indicate that the last number name said tells the number of objects counted in a set.
- Indicate that the number of objects in a set is the same regardless of their arrangement or the order in which they were counted.
- Explain that each successive number name refers to a quantity that is one larger.
- Count to answer “how many?” questions.
- Count using no more than 20 concrete objects arranged in a line, a rectangular array, or a circle.
- Count using no more than 10 concrete objects in a scattered configuration.
- Draw the number of objects that matches a given numeral from 0 to 20.
- Compare numbers.
- Orally identify whether the number of objects in one group is greater/more than, less/fewer than, or equal/the same as the number of objects in another group, in groups containing up to 10 objects, by using matching, counting, or other strategies.

Operations and Algebraic Thinking:

Understand addition as putting together and adding to and understand subtraction as taking apart and taking from. *Note: Drawings need not be detailed but should show the mathematics in the problem.

- Represent addition and subtraction up to 10 with concrete objects, fingers, pennies, mental images, drawings, claps or other sounds, acting out situations, verbal explanations, expressions, or equations.
- Solve addition and subtraction word problems, and add and subtract within 10, by using concrete objects or drawings to represent the problem.
- Decompose numbers less than or equal to 10 into pairs of smaller numbers in more than one way, by using concrete objects or drawings, and record each decomposition by a drawing or equation. Example: 5 = 2 + 3 and 5 = 4 + 1
- For any number from 0 to 10, find the number that makes 10 when added to the given number, by using concrete objects or drawings, and record the answer with a drawing or equation.
- Fluently add and subtract within 5.

Understand simple patterns.

Duplicate and extend simple patterns using concrete objects.

Operations with Numbers

Work with numbers 11 to 19 to gain foundations for place value.

Compose and decompose numbers from 11 to 19 by using concrete objects or drawings to demonstrate understanding that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

Data Analysis

Collect and analyze data and interpret results.

- Classify objects into given categories of 10 or fewer; count the number of objects in each category and sort the categories by count.
- Categorize data on Venn diagrams, pictographs, and "yes-no" charts using real objects, symbolic representations, or pictorial representations.

Measurement

- Describe and compare measurable attributes.
- Directly compare two objects with a measurable attribute in common to see which object has “more of” or “less of” the attribute and describe the difference.
- Example: Directly compare the heights of two children and describe one child as “taller” or “shorter.”

Geometry

Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).

- Describe objects in the environment using names of shapes and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.
- Correctly name shapes regardless of their orientations or overall sizes.
- Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").

Analyze, compare, create, and compose shapes.

- Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (number of sides and vertices or "corners"), and other attributes.
- Model shapes in the world by building them from and by drawing them.
- Use simple shapes to compose larger shapes. Example: Join two triangles with full sides touching to make a rectangle.

First Grade Critical Standards

Operations and Algebraic Thinking

Represent and solve problems involving addition and subtraction. Note: Students use properties of operations and different strategies to find the sum of three whole numbers, such as counting on, making tens, decomposing numbers, doubles, and near doubles.

- Use addition and subtraction to solve word problems within 20 by using concrete objects, drawings, and equations with a symbol for the unknown number to represent the problem.
- Add to with change unknown to solve word problems within 20.
- Take from with change unknown to solve word problems within 20.
- Put together/take apart with addend unknown to solve word problems within 20.
- Compare quantities, with difference unknown, bigger unknown, and smaller unknown while solving word problems within 20.
- Count to 100 by ones beginning with any given number between 0 and 99.
- Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20 by using concrete objects, drawings, or equations with a symbol for the unknown number to represent the problem.

Understand and apply properties of operations and the relationship between addition and subtraction. Note: Students need not use formal terms for these properties.

- 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, the second and third numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12 (associative property of addition).
- When adding 0 to a number, the result is the same number (identity property of zero for addition).
- Explain subtraction as an unknown-addend problem. Example: subtracting 10 - 8 by finding the number that makes 10 when added to 8.

Note: Fluency involves a mixture of "just knowing" answers, knowing answers from patterns, and knowing answers from the use of strategies. The word fluently is used in the standards to mean accurately, efficiently, and flexibly.

- Relate counting to addition and subtraction. Example: counting on 2 to add 2.
- Add and subtract within 20.
- Demonstrate fluency with addition and subtraction facts with sums or differences to 10 by counting on.
- Demonstrate fluency with addition and subtraction facts with sums or differences to 10 by making ten.
- Demonstrate fluency with addition and subtraction facts with sums or differences to 10 by decomposing a number leading to a ten. Example: 13 - 4 = 13 - 3 - 1 = 10 - 1 = 9
- Demonstrate fluency with addition and subtraction facts with sums or differences to 10 by using the relationship between addition and subtraction. Example: Knowing that 8 + 4 = 12, one knows 12 - 8 = 4.
- Demonstrate fluency with addition and subtraction facts with sums or differences to 10 by creating equivalent but easier or known sums. Example: adding 6 + 7 by creating the known equivalent 6 + 6 + 1 = 12 + 1 = 13

Work with addition and subtraction equations.

- Explain that the equal sign means "the same as." Determine whether equations involving addition and subtraction are true or false. Example: determining which of the following equations are true and which are false: 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2
- Solve for the unknown whole number in various positions in an addition or subtraction equation, relating three whole numbers that would make it true.
  Example: determining the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = ? – 3, and 6 + 6 = ?

Understand simple patterns.

Reproduce, extend, and create patterns and sequences of numbers using a variety of materials.

Operations with Numbers

Extend the counting sequence.

Extend the number sequence from 0 to 120.

- Count forward and backward by ones, starting at any number less than 120.
- Read numerals from 0 to 120.
- Write numerals from 0 to 120.
- Represent a number of objects from 0 to 120 with a written numeral.

Understand place value.

- Explain that the two digits of a two-digit number represent amounts of tens and ones.
- Identify a bundle of ten ones as a "ten."
- Identify the numbers from 11 to 19 as composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
- Identify the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 as one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).
- Compare pairs of two-digit numbers based on the values of the tens and ones digits, recording the results of comparisons with the symbols >, =, and < and orally with the words "is greater than," "is equal to," and "is less than."

Use place value understanding and properties of operations to add and subtract.

- Add within 100, using concrete models or drawings and strategies based on place value.
- Add a two-digit number and a one-digit number.
- Add a two-digit number and a multiple of 10.
- Demonstrate that in adding two-digit numbers, tens are added to tens, ones are added to ones, and sometimes it is necessary to compose a ten.
- Relate the strategy for adding a two-digit number and a one-digit number to a written method and explain the reasoning used.
- Given a two-digit number, mentally find 10 more or 10 less than the number without having to count, and explain the reasoning used.
- Subtract multiples of 10 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. Relate the strategy to a written method and explain the reasoning used.

Data Analysis

Collect and analyze data and interpret results.

- Organize, represent, and interpret data with up to three categories.
- Ask and answer questions about the total number of data points in organized data.
- Summarize data on Venn diagrams, pictographs, and "yes-no" charts using real objects, symbolic representations, or pictorial representations.
- Determine "how many" in each category using up to three categories of data.

- Determine “how many more” or “how many less” are in one category than in another using data organized into two or three categories.

Measurement

Describe and compare measurable attributes.

- Order three objects by length; compare the lengths of two objects indirectly by using a third object.
- Determine the length of an object using non-standard units with no gaps or overlaps, expressing the length of the object with a whole number.

Work with time and money.

Tell and write time to the hours and half hours using analog and digital clocks.
Identify pennies and dimes by name and value.

Geometry

Reason with shapes and their attributes. Note: Students do not need to learn formal names such as “right rectangular prism.”

- Build and draw shapes which have defining attributes.
- Distinguish between defining attributes and non-defining attributes. Examples: Triangles are closed and three-sided, which are defining attributes; color, orientation, and overall size are non-defining attributes.
- Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape and compose new shapes from the composite shape.
- Partition circles and rectangles into two and four equal shares and describe the shares using the words halves, fourths, and quarters, and use the phrases half of, fourth of, and quarter of.
- Describe “the whole” as two of or four of the shares of circles and rectangles partitioned into two or four equal shares.
- Explain that decomposing into more equal shares creates smaller shares of circles and rectangles.

Second Grade Critical Standards

Operations and Algebraic Thinking

Represent and solve problems involving addition and subtraction. Note: Second grade problem types include adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions.

Use addition and subtraction within 100 to solve one- and two-step word problems by using drawings and equations with a symbol for the unknown number to represent the problem.

Add and subtract within 20.

- Fluently add and subtract within 20 using mental strategies such as counting on, making ten, decomposing a number leading to ten, using the relationship between addition and subtraction, and creating equivalent but easier or known sums.
- State automatically all sums of two one-digit numbers.

Work with equal groups of objects to gain foundations for multiplication.

- Use concrete objects to determine whether a group of up to 20 objects is even or odd. Write an equation to express an even number as a sum of two equal addends.
- Using concrete and pictorial representations and repeated addition, determine the total number of objects in a rectangular array with up to 5 rows and up to 5 columns.
- Write an equation to express the total number of objects in a rectangular array with up to 5 rows and up to 5 columns as a sum of equal addends.

Understand simple patterns.

Reproduce, extend, create, and describe patterns and sequences using a variety of materials.

<u>Operations and Numbers: Base Ten</u>

Understand Place Value.

- Explain that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.
- Explain the following three-digit numbers as special cases: 100 can be thought of as a bundle of ten tens, called a "hundred," and the numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
- Count within 1,000 by ones, fives, tens, and hundreds.
- Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form.
- Compare two three-digit numbers based on the value of the hundreds, tens, and ones digits, recording the results of comparisons with the symbols >, =, and < and orally with the words "is greater than," "is equal to," and "is less than."

Use place value understanding and properties of operations to add and subtract.

- Fluently add and subtract within 100, using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
- Use a variety of strategies to add up to four two-digit numbers.
- Add and subtract within 1,000 using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method.
- Explain that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.
- Mentally add and subtract 10 or 100 to a given number between 100 and 900.

- Explain why addition and subtraction strategies work, using place value and the properties of operations. Note: Explanations may be supported by drawings or objects.

Data Analysis

Collect and analyze data and interpret results.

- Measure lengths of several objects to the nearest whole unit.
- Create a line plot where the horizontal scale is marked off in whole number units to show the lengths of several measured objects.
- Create a picture graph and bar graph to represent data with up to four categories.
- Using information presented in a bar graph, solve simple “put-together,” “take-apart,” and “compare” problems.
- Using Venn diagrams, pictographs, and "yes-no" charts, analyze data to predict an outcome.

Measurement

Measure and estimate lengths in standard units.

- Measure the length of an object by selecting and using standard units of measurement shown on rulers, yardsticks, meter sticks, or measuring tapes.
- Measure objects with two different units and describe how the two measurements relate to each other and the size of the unit chosen.
- Estimate lengths using the following standard units of measurement: inches, feet, centimeters, and meters.
- Measure to determine how much longer one object is than another, expressing the length difference of the two objects using standard units of length.

Relate addition and subtraction to length.

- Use addition and subtraction within 100 to solve word problems involving the same units of length, representing the problem with drawings (such as drawings of rulers) and/or equations with a symbol for the unknown number.
- Create a number line diagram using whole numbers and use it to represent whole number sums and differences within 100.

Work with time and money.

- Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
- Express an understanding of common terms such as, but not limited to, quarter past, half past, and quarter to.
- Solve problems with money.
- Identify nickels and quarters by name and value.
- Find the value of a collection of quarters, dimes, nickels, and pennies.

- Solve word problems by adding and subtracting within one dollar, using the $ and ¢ symbols appropriately (not including decimal notation). Example: 24¢ + 26¢ = 50¢

Geometry

Reason with shapes and their attributes.

- Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.
- Recognize and draw shapes having specified attributes.
- Examples: a given number of angles or a given number of equal faces
- Partition a rectangle into rows and columns of same-size squares, and count to find the total number of squares.
- Partition circles and rectangles into two, three, or four equal shares. Describe the shares using such terms as halves, thirds, half of, or a third of, and describe the whole as two halves, three thirds, or four fourths.
- Explain that equal shares of identical wholes need not have the same shape.

Third Grade Critical Standards

Operations and Algebraic Thinking

Represent and solve problems involving multiplication and division.

- Illustrate the product of two whole numbers as equal groups by identifying the number of groups and the number in each group and represent as a written expression.
- Illustrate and interpret the quotient of two whole numbers as the number of objects in each group or the number of groups when the whole is partitioned into equal shares.
- Solve word situations using multiplication and division within 100 involving equal groups, arrays, and measurement quantities; represent the situation using models, drawings, and equations with a symbol for the unknown number.
- Determine the unknown whole number in a multiplication or division equation relating three whole numbers.

Understand properties of multiplication and the relationship between multiplication and division. Note: Students need not use formal terms for these properties.

- Develop and apply properties of operations as strategies to multiply and divide.
- Use the relationship between multiplication and division to represent division as an equation with an unknown factor.

Multiply and divide within 100.

- Use strategies based on properties and patterns of multiplication to demonstrate fluency with multiplication and division within 100.
- Fluently determine all products obtained by multiplying two one-digit numbers.
- State automatically all products of two one-digit numbers by the end of third grade.

Solve problems involving the four operations and identify and explain patterns in arithmetic.

- Determine and justify solutions for two-step word problems using the four operations and write an equation with a letter standing for the unknown quantity. Determine reasonableness of answers using number sense, context, mental computation, and estimation strategies including rounding.
- Recognize and explain arithmetic patterns using properties of operations.

Operations and Numbers: Base Ten

Use place value understanding and properties of operations to perform multi-digit arithmetic.

- Identify the nearest 10 or 100 when rounding whole numbers, using place value understanding.
- Use various strategies to add and subtract fluently within 1,000.
- Use concrete materials and pictorial models based on place value and properties of operations to find the product of a one-digit whole number by a multiple of ten (from 10 to 90).

Operations and Numbers: Fractions

Develop understanding of fractions as numbers. Denominators are limited to 2, 3, 4, 6, and 8.

- Demonstrate that a unit fraction represents one part of an area model or length model of a whole that has been equally partitioned; explain that a numerator greater than one indicates the number of unit pieces represented by the fraction.
- Interpret a fraction as a number on the number line; locate or represent fractions on a number line diagram.
- Represent a unit fraction (1b) on a number line by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts as specified by the denominator.
- Represent a fraction (ab) on a number line by marking off a length of size (1b) from zero.
- Explain equivalence and compare fractions by reasoning about their size using visual fraction models and number lines.
- Express whole numbers as fractions and recognize fractions that are equivalent to whole numbers.
- Compare two fractions with the same numerator or with the same denominator by reasoning about their size (recognizing that fractions must refer to the same whole for the comparison to be valid). Record comparisons using <, >, or = and justify conclusions.

Data Analysis

Represent and interpret data.

- For a given or collected set of data, create a scaled (one-to-many) picture graph and scaled bar graph to represent a data set with several categories.
- Determine a simple probability from a context that includes a picture.
- Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled graphs.

- Measure lengths using rulers marked with halves and fourths of an inch to generate data and create a line plot marked off in appropriate units to display the data.

Measurement

Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

- Tell and write time to the nearest minute; measure time intervals in minutes (within 90 minutes.)
- Solve real-world problems involving addition and subtraction of time intervals in minutes by representing the problem on a number line diagram.
- Estimate and measure liquid volumes and masses of objects using liters (l), grams (g), and kilograms (kg).
- Use the four operations to solve one-step word problems involving masses or volumes given in the same metric units.

Geometric measurement

Understand concepts of area and relate area to multiplication and to addition.

- Find the area of a rectangle with whole number side lengths by tiling without gaps or overlays and counting unit squares.
- Count unit squares (square cm, square m, square in, square ft, and improvised or non-standard units) to determine area.
- Relate area to the operations of multiplication using real-world problems, concrete materials, mathematical reasoning, and the distributive property.
- Decompose rectilinear figures into smaller rectangles to find the area, using concrete materials.

Geometric measurement

Recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.

- Construct rectangles with the same perimeter and different areas or the same area and different perimeters.
- Solve real-world problems involving perimeters of polygons, including finding the perimeter given the side lengths and finding an unknown side length of rectangles.

Geometry

Reason with shapes and their attributes.

- Recognize and describe polygons (up to 8 sides), triangles, and quadrilaterals (rhombuses, rectangles, and squares) based on the number of sides and the presence or absence of square corners.
- Draw examples of quadrilaterals that are and are not rhombuses, rectangles, and squares.

Fourth Grade Critical Standards

Operations and Algebraic Thinking

Solve problems with whole numbers using the four operations.

- Interpret and write equations for multiplicative comparisons.
- Solve word problems involving multiplicative comparison using drawings and write equations to represent the problem, using a symbol for the unknown number.
- Determine and justify solutions for multi-step word problems, including problems where remainders must be interpreted.
- Write equations to show solutions for multi-step word problems with a letter standing for the unknown quantity.
- Determine reasonableness of answers for multi-step word problems, using mental computation and estimation strategies including rounding.
- Gain familiarity with factors and multiples.
- For whole numbers in the range 1 to 100, find all factor pairs, identifying a number as a multiple of each of its factors.
- Determine whether a whole number in the range 1 to 100 is a multiple of a given one-digit number.
- Determine whether a whole number in the range 1 to 100 is prime or composite.

Generate and analyze patterns.

Generate and analyze a number or shape pattern that follows a given rule.

Operations and Numbers: Base Ten

Generalize place value understanding for multi- digit whole numbers.

- Using models and quantitative reasoning, explain that in a multi-digit whole number, a digit in any place represents ten times what it represents in the place to its right.
- Read and write multi-digit whole numbers using standard form, word form, and expanded form.
- Use place value understanding to compare two multi-digit numbers using >, =, and < symbol.
- Round multi-digit whole numbers to any place using place value understanding.

Use place value understanding and properties of operations to perform multi-digit arithmetic with whole numbers.

- Use place value strategies to fluently add and subtract multi-digit whole numbers and connect strategies to the standard algorithm.
- Find the product of two factors (up to four digits by a one-digit number and two two-digit numbers), using strategies based on place value and the properties of operations.
- Illustrate and explain the product of two factors using equations, rectangular arrays, and area models.

- Use strategies based on place value, properties of operations, and/or the relationship between multiplication and division to find whole number quotients and remainders with one-digit divisors and up to four-digit dividends.
- Illustrate and/or explain quotients using equations, rectangular arrays, and/or area models.

Operations and Numbers: Fractions

Extend understanding of fraction equivalence and ordering. Denominators are limited to 2, 3, 4, 6, 8, 10, 12, and 100.

- Using area and length fraction models, explain why one fraction is equivalent to another, taking into account that the number and size of the parts differ even though the two fractions themselves are the same size.
- Apply principles of fraction equivalence to recognize and generate equivalent fractions.
- Compare two fractions with different numerators and different denominators using concrete models, benchmarks (0, 1⁄2, 1), common denominators, and/or common numerators, recording the comparisons with symbols >, =, or <, and justifying the conclusions.
- Explain that comparison of two fractions is valid only when the two fractions refer to the same whole.

Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

- Model and justify decompositions of fractions and explain addition and subtraction of fractions as joining or separating parts referring to the same whole.
- Decompose a fraction as a sum of unit fractions and as a sum of fractions with the same denominator in more than one way using area models, length models, and equations.
- Add and subtract fractions and mixed numbers with like denominators using fraction equivalence, properties of operations, and the relationship between addition and subtraction.
- Solve word problems involving addition and subtraction of fractions and mixed numbers having like denominators, using drawings, visual fraction models, and equations to represent the problem.
- Apply and extend previous understandings of multiplication to multiply a whole number times a fraction.
- Model and explain how a non-unit fraction can be represented by a whole number times the unit fraction.
- Extend previous understanding of multiplication to multiply a whole number times any fraction less than one.
- Solve word problems involving multiplying a whole number times a fraction using visual fraction models and equations to represent the problem.

Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. Denominators are limited to 10 and 100.

- Express, model, and explain the equivalence between fractions with denominators of 10 and 100.
- Use fraction equivalency to add two fractions with denominators of 10 and 100.
- Use models and decimal notation to represent fractions with denominators of 10 and 100.
- Use visual models and reasoning to compare two decimals to hundredths (referring to the same whole), recording comparisons using symbols >, =, or <, and justifying the conclusions.

<u>Data Analysis</u>

- Interpret data in graphs (picture, bar, and line plots) to solve problems using numbers and operations.
- Create a line plot to display a data set of measurements in fractions of a unit.
- Solve problems involving addition and subtraction of fractions using information presented in line plots.

<u>Measurement</u>

Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

- Select and use an appropriate unit of measurement for a given attribute (length, mass, liquid volume, time) within one system of units: metric–km, m, cm; kg, g, l, ml; customary–lb, oz; time–hr, min, sec.
- Within one system of units, express measurements of a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.
- Use the four operations to solve measurement word problems with distance, intervals of time, liquid volume, mass of objects, and money.
- Solve measurement problems involving simple fractions or decimals.
- Solve measurement 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.
- Apply area and perimeter formulas for rectangles in real-world and mathematical situations.

Geometric measurement: understand concepts of angle and measure angles.

- Identify an angle as a geometric shape formed wherever two rays share a common endpoint.
- Use a protractor to measure angles in whole number degrees and sketch angles of specified measure.
- Decompose an angle into non-overlapping parts to demonstrate that the angle measure of the whole is the sum of the angle measures of the parts.
- Solve addition and subtraction problems on a diagram to find unknown angles in real-world or mathematical problems.

Geometry

- Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines, and identify these in two-dimensional figures.
- Identify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size.
- Describe right triangles as a category and identify right triangles.
- Define a line of symmetry for a two-dimensional 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.

Fifth Grade Critical Standards

Operations and Algebraic Thinking

Write and interpret numerical expressions.

- Write, explain, and evaluate simple numerical expressions involving the four operations to solve up to two-step problems. Include expressions involving parentheses, brackets, or braces, using commutative, associative, and distributive properties.

Analyze patterns and relationships.

- Generate two numerical patterns using two given rules and complete an input/output table for the data.
- Use data from an input/output table to identify apparent relationships between corresponding terms.
- Form ordered pairs from values in an input/output table.
- Graph ordered pairs from an input/output table on a coordinate plane.

Operations and Numbers: Base Ten

Write and interpret numerical expressions.

- Using models and quantitative reasoning, explain that in a multi-digit number, including decimals, a digit in any place represents ten times what it represents in the place to its right and 110 of what it represents in the place to its left.
- Explain patterns in the number of zeros of the product when multiplying a number by powers of 10, using whole number exponents to denote powers of 10. *Example: 347.392* = 3 × 100 + 4 × 10 + 7 × 1 + 3 × (110) + 9 x (1100) + 2 x (11000).
- Explain patterns in the placement of the decimal point when a decimal is multiplied or divided by the power of 10, using whole number exponents to denote powers of 10.
- Read, write, and compare decimals to thousandths.
- Read and write decimals to thousandths using base-ten numerals, number names, and expanded form.
- Compare two decimals to thousandths based on the meaning of the digits in each place, using >, =, and < to record the results of comparisons.
- Use place value understanding to round decimals to thousandths.

Perform operations with multi-digit whole numbers and decimals to hundredths.

- Fluently multiply multi-digit whole numbers using the standard algorithm.
- Use strategies based on place value, properties of operations, and/or the relationship between multiplication and division to find whole number quotients and remainders with up to four-digit dividends and two-digit divisors. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.
- Add, subtract, multiply, and divide decimals to hundredths using strategies based on place value, properties of operations, and/or the relationships between addition/subtraction and multiplication/division; relate the strategy to a written method, and explain the reasoning used.
- Use concrete models and drawings to solve problems with decimals to hundredths.
- Solve problems in a real-world context with decimals to hundredths.

<u>Operations and Numbers: Fractions</u>

Use equivalent fractions as a strategy to add and subtract fractions.

- Model and solve real-word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.
- *Example: Recognize an incorrect result 2/5 + 1/2 = 3/7 by observing that 3/7 < ½*
- Add and subtract fractions and mixed numbers with unlike denominators, using fraction equivalence to calculate a sum or difference of fractions or mixed numbers with like denominators.

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

- Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers.
- Model and interpret a fraction as division of the numerator by the denominator (a/b = $a \div b$).
- Use visual fraction models, drawings, or equations to represent word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers.
- Apply and extend previous understandings of multiplication to find the product of a fraction times a whole number or a fraction times a fraction.
- Use a visual fraction model (area model, set model, or linear model) to show (a/b) $\times q$ and create a story context for this equation to interpret the product as a parts of a partition of q into b equal parts.
- Use a visual fraction model (area model, set model, or linear model) to show (a/b) $\times$ (c/d) and create a story context for this equation to interpret the product.
- Multiply fractional side lengths to find areas of rectangles and represent fraction products as rectangular areas.

- Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths to show that the area is the same as would be found by multiplying the side lengths.
- Interpret multiplication as scaling (resizing).
- Compare 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. *Example: Use reasoning to determine which expression is greater? 3/4 x 225; 11/50 or 3/2 x 11/50*
- Explain why multiplying a given number by a fraction greater than 1 results in a product greater than the given number and relate the principle of fraction equivalence.
- Explain why multiplying a given number by a fraction less than 1 results in a product smaller than the given number and relate the principle of fraction equivalence.
- Model and solve real-world problems involving multiplication of fractions and mixed numbers using visual fraction models, drawings, or equations to represent the problem.
- Apply and extend previous understandings of division to divide unit fractions by whole numbers and whole numbers by unit fractions.
- Solve real-world problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions and illustrate using visual fraction models, drawings, and equations to represent the problem.
- Create a story context for a unit fraction divided by a whole number and use a visual fraction model to show the quotient.
- Create a story context for a whole number divided by a unit fraction and use a visual fraction model to show the quotient.

Data Analysis

Represent and interpret data.

- Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, and 1/8).
- Add, subtract, multiply, and divide fractions to solve problems involving information presented in line plots.
- *Note: Division is limited to unit fractions by whole numbers and whole numbers by unit fractions.*

Measurement

Convert like measurement units within a given measurement system.

Convert among different-sized standard measurement units within a given measurement system and use these conversions in solving multi-step, real-world problems.

Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.

- Identify volume as an attribute of solid figures, and measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised (non-standard) units.
- Pack a solid figure without gaps or overlaps using *n* unit cubes to demonstrate volume as *n* cubic units.
- Relate volume to the operations of multiplication and addition and solve real-world and mathematical problems involving volume.
- Use the associative property of multiplication to find the volume of a right rectangular prism and relate it to packing the prism with unit cubes. Show that the volume can be determined by multiplying the three edge lengths or by multiplying the height by the area of the base.
- Apply the formulas $V = l \times w \times h$ and $V = B \times h$ for rectangular prisms to find volumes of right rectangular prisms with whole number edge lengths in the context of solving real-world and mathematical problems.
- Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the two parts, applying this technique to solve real-world problems.

<u>Geometry</u>

- Graph points in the first quadrant of the coordinate plane and interpret coordinate values of points to represent real-world and mathematical problems.
- Classify triangles according to side length (isosceles, equilateral, scalene) and angle measure (acute, obtuse, right, equiangular).
- Classify quadrilaterals in a hierarchy based on properties.
- Explain that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category. *Example: All rectangles have four right angles*, *and squares have four right angles, so squares are rectangles.2.*

2.2 c. Fractional Reasoning Screener

The Fractional Reasoning Screener Instrument will be designed to provide real-time screening of fractional reasoning skill levels for students enrolled in Grades 4-5 as outlined by the 2019 Alabama Mathematics Course of Study Standards.

<u>FRACTIONAL REASONING SCREENER NON-NEGOTIABLES</u>

The Fractional Reasoning Screener:

- Is a one-on-one teacher-led assessment and ***is not computer-based.***
- Includes an interview tool that is implemented one-on-one between teacher and student, face-to-face, with no computer screen involved.
- Aligns with the 2019 Alabama Mathematics Course of Study Standards.
- Identifies student misconceptions.
- Provides resources and explicit instructional action steps for teachers to plan instruction.

- Provides evidence of alignment to the 2019 Alabama Mathematics Course of Study.
- Provides two forms of the screener for the two required administrations within the administration windows stated in the ALSDE annual memos, and as required by the ANA.
- Provides the preliminary identification of students at risk for mathematics difficulties in fractional reasoning.
- Provides performance measures which shall include student outcomes.
- Provides reports based on the outcome data from their screener at the student, teacher, school, LEA and state level.
- Provides automatic reports for students, guardians, teachers, administrators, state and regional audiences.
- Monitors strengths and areas for improvement in Tier I instruction.
- Integrates assessment results with instructional support suggestions for teachers and students for Tier II and Tier III instruction (i.e., student learning paths, personalized student suggestions, lessons for reteaching).
- Provides teachers with student groupings based on identified deficiencies.
- Is designed to be administered twice a year to meet the requirements of the ANA.
- Minimizes assessment time.
- Provides accessibility features and accommodations are allowed for students in special populations: disabilities, including hearing and vision impairments and English Learners.
- Includes alternate assessment options that are provided for students with the most significant cognitive disabilities.
- Aligns tasks at each grade level with the end of the grade-level expectations from the prior year.
- Provides opportunities to address standards from lower grade levels.
- Includes a series of counting questions.

FRACTIONAL REASONING SCREENER REQUIRED COMPONENTS

Fourth Grade

Denominators are limited to 2, 3, 4, 5, 6, 8, 10, 12, and 100.

- Place a fraction on an open number line:
  - With pre-existing partitions.
  - With no partitions.
- Count to one by unit fraction parts understanding/recognizing the one as one (1) whole.
- Recognize when the numerator and denominator are the same non-zero number, you have one whole.
- Count by unit fractions backwards from one to zero.
- Count concrete fractional objects to determine amount in unit fractions and mixed numbers recognizing when the numerator and denominator are the same non-zero number you have a whole.
- Compare fractions by reasoning about their size in word problem type situations.
- Fractions in the word problems should have same numerator or same denominator.
- Demonstrate equivalent fractions using number lines.

- Demonstrate equivalent fractions using a range of visual fraction models.
- Decompose a fraction ***a/b*** as the quantity formed by ***a*** parts of ***1/b*** size.
- Representing unit fractions with area models.
- Representing unit fractions with length models.
- Representing equivalent fractions using a variety of objects and pictorial models.

Fifth Grade

- Write a fraction as a sum of two fractions in more than one way. i.e., 5/8 = 3/8 + 2/8 and 1/8 + 4/8.
- Given a fraction, find and model an equivalent fraction.
- Compare fractions based on benchmarks of 0, 1/2, or 1.
- Write a fraction to represent a decimal value less than 1 (limited to tenths or hundredths).
- Comparing and ordering fractions to hundredths.
- Comparing and ordering decimals to hundredths.
- Adding and subtracting fractions and mixed numbers with like denominators using fraction equivalence and properties of operations.
- Multiplying a whole number times a fraction.

2.2 d. Intervention Resources

INTERVENTION RESOURCES NON-NEGOTIABLES

- Lessons must be taught in person by a teacher in small groups and not computer-based. Intervention shall not be a computer-based pathway. One Hundred percent (100%) of lessons shall involve face-to-face interactive lessons with teachers and students.
- Weekly progress monitoring must show what students have achieved during that week and provide the next instructional steps based on student progress.

INTERVENTION RESOURCES OVERALL DESIGN & LOGISTICS

The Intervention resource:

- Builds conceptual understanding as well as procedural fluency.
- Incorporates concrete objects and a variety of representations to build understanding.
- Incorporates explicit systematic strategy instruction, including summarizing key points and reviewing vocabulary before the lesson.
- Provides clear, extensive guidance on intervention group placement, size, scheduling, and daily time requirements.
- Provides ample content for daily intervention if needed.
- Supports a high level of student and teacher interaction.
- Includes tools for continuous progress monitoring.
- Includes guidance of next steps based on evidence of individual student thinking.
- Includes opportunities to give individual students immediate feedback.

- Includes multimodal/multisensory tasks for students.
- Includes a way to report strengths, growth, and next steps to students, classroom teachers, and parents/guardians (at least each grading period and at the end of the year).

INTERVENTION RESOURCE MATHEMATICS PRACTICES

- Includes cognitively-demanding tasks that ask students to problem solve (apply their mathematical knowledge to mathematical and real-world situations where the solution path is not readily clear).
- Includes opportunities for students to provide their justification for strategies and solutions.
- Includes opportunities for students to learn and see connections among strategies and mathematical concepts.
- Includes opportunities for students to activate prior knowledge from previous grades.
- Includes ways for students to make connections among concrete (hands-on materials), pictorial (drawings or pictures), and abstract (equations) representations.
- Includes a structure for students to summarize & reflect on their learning each day.
- Includes correct mathematical vocabulary and opportunities for students to incorporate it into their learning.
- Includes resources for a home-based mathematics plan including family training workshops or regular, family-guided math activities for home.

INTERVENTION RESOURCES SPECIFIC CONTENT REQUIREMENTS

Kindergarten

- Number sequence.
- One-to-one correspondence.
- Cardinality.
- Oral and written names for number specified in the Alabama Mathematics Course of Study for Kindergarten.
- Subitizing.
- Number relationships.
- Computational fluency with whole numbers referenced in the Alabama Mathematics Course of Study for Kindergarten.
- Word problems that address all problem types & structures referenced in the Alabama Mathematics Course of Study for Kindergarten.
- Spatial Reasoning.

First Grade and Second Grade

- Comparing and ordering whole numbers.
- Composing and decomposing numbers.
- Operations with whole numbers.

- Computational fluency.
- Spatial reasoning.
- Word problems.

Third Grade

- Operations of additional and subtraction.
- Properties of operations.
- Counting and recognizing numbers to 1,000.
- Understanding models for addition and subtraction within 1,000.
- Comparing and ordering numbers up to 1,000.
- Composing decomposing numbers up to 1,000.
- Solving one-step and two-step word problems involving addition and subtraction within 100.
- Using a variety of strategies and algorithms based on place value understanding.

Fourth Grade

- Representing unit fractions with area and length models.
- Representing equivalent fractions using a variety of objects and pictorial models.
- Understanding multiplication and division of whole numbers involving equal-size groups, arrays, and measurement quantities.
- Solving one-step and two-step word problems involving addition and subtraction within 1,000 using a variety of strategies and algorithms based on place value understanding.
- Generating and solving problem situations for a given number sentence involving addition and subtraction of whole numbers using a variety of strategies and algorithms based on place value understanding.

Fifth Grade

- Comparing and ordering whole numbers up to 1,000,000.
- Comparing and ordering fractions and decimals to hundredths.
- Using place value understanding and properties of operations to perform multi-digit arithmetic with whole numbers.
- Illustrating and explaining the product of two factors using equations, rectangular arrays, and area models.
- Adding and subtracting fractions and mixed numbers with like denominators (same-size pieces) using fraction equivalence and properties of operations.
- Describing the relationship between addition and subtraction.
- Multiplying a whole number and a fraction considering the complexity of creating whole number iterations of a fraction versus partitioning a whole number into a fractional amount (4th grade vs 5th grade standards).

2.2 e. Summer Math Camp Curriculum

SUMMER MATH CAMP CURRICULUM NON-NEGOTIABLES

- Lessons must be interactive, teacher-led, not computer-based.
- Summer curriculum must be problem-solving based using interactive puzzles and games (not video or screen-based games).
- Curriculum should be designed for flexible summer school schedules.
- Quick, targeted pre- and post-assessments at each grade level K-5.

SUMMER MATH CAMP CURRICULUM REQUIRED COMPONENTS

Evidence of Alignment to Critical Standards in the 2019 Alabama Mathematics Course of Study (include test items that show alignment)

SUMMER MATH CAMP CURRICULA SPECIFIC CONTENT REQUIREMENTS

Kindergarten

- Build a conceptual understanding of the Base 10 system.
- Build a conceptual understanding of addition.
- Build a conceptual understanding of subtraction.

First Grade and Second Grade

- Build a conceptual understanding of the Base 10 system.
- Build a conceptual understanding of addition.
- Build a conceptual understanding of subtraction.

Third Grade

- Build a conceptual understanding of addition.
- Build a conceptual understanding of subtraction.
- Build a conceptual understanding of multiplication.
- Build a conceptual understanding of division.

Fourth and Fifth Grade

- Build a conceptual understanding of multiplication.
- Build a conceptual understanding of division.
- Build a conceptual understanding of fractions.

SECTION 3: OTHER

Specific terms and requirements in this RFI may be waived or modified by the state of Alabama as it deems necessary and appropriate.

The state has no liability for any costs incurred by a prospective provider for the preparation and production of materials or for any work performed as a result of this request.

Responders will be notified via email to the Vendor Contact identified in the proposal when a formal recommendation report is available for review.

The ALSDE does ***not*** expect to award a contract pursuant to any submission received. Moreover, the ALSDE makes no representation concerning selection, award, or financial support of any proposal.

Only the final results of the review may be considered public. Any work papers, individual evaluator or consultant comments, notes, or scores will not be considered public. The final results of the review will not be publicly available until final submission is reported.

The ALSDE reserves the right to reject any and all submissions and to solicit additional submissions if that is determined to be in the best interests of the state of Alabama.

SECTION 4: SUBMISSION DEADLINE

DUE DATE: October 29, 2026, 3 p.m. CDT.

Five hard copies of each proposal must be sent to this address:

Alabama State Department of Education
Office of Mathematics Improvement
P305 Gordon Persons Building
50 North Ripley Street
Montgomery, AL 36104
ATTN: Dr. Karen Anderson

Each proposal must include the **completed** rubric for the desired resource.

Early Numeracy Screeners, Formative Benchmark Assessments, Fractional Reasoning Screeners, Intervention Resources, Summer Math Camp Curricula

All materials for review must be received at the address below by **October 29, 2026,** at **3 p.m. CDT.**

Alabama State Department of Education
Office of Mathematics Improvement
P305 Gordon Persons Building
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ATTN: Dr. Karen Anderson