

ALABAMA NUMERACY ACT toolbox



The Alabama Numeracy Act has been established to implement steps to improve mathematics proficiency of public school K-5 grade students and to ensure that those students are proficient in math at or above grade level by the end of fifth grade by monitoring the progression of each student from one grade level to another.

WHAT DOES IT LOOK LIKE IN THE CLASSROOM?

Each K-5 teacher who is providing instruction in mathematics, with the full support of his or her principal, shall do all the following: (1) Dedicate an average minimum of 60 minutes per day for Tier I instruction, for a minimum of 164 instructional hours per year. (2) Use approved comprehensive mathematics curricula for core instruction, recommended by the Elementary Mathematics Task Force (EMTF). Find a comprehensive list teacher requirements in SECTION 5, PGS. 14 – 15 of the Alabama Numeracy Act (ANA).

HOW ARE STUDENTS WITH MATH DEFICIENCIES IDENTIFIED?

A K-5 student who exhibits a mathematics deficiency based on an approved screener assessment, diagnostic assessment, benchmark assessment, or classroom formative assessment shall receive immediate mathematics intervention. – ANA, SECTION 6, PG. 15

WHAT HAPPENS AFTER STUDENTS ARE IDENTIFIED?

Students identified with a mathematics deficiency, or who demonstrates the signs of dyscalculia, shall be provided intensive mathematics interventions recommended by the EMTF to address his or her specific mathematics deficiency. Intensive interventions should be a part of the multi-tiered system of support of a school. – ANA, SECTION 6, PG. 15

Each LEA shall provide a summer math camp for students in grades K-5 who are identified with a mathematics deficiency. – ANA, SECTION 9, PG. 36

HOW ARE PARENTS/GUARDIANS NOTIFIED ABOUT PROGRESS?

The mathematics teacher of the student receiving mathematics intervention shall prepare reports that coincide with grading periods and a comprehensive end of year report detailing any mathematics intervention provided.

A report from a screener, diagnostic, or formative assessment that includes all the information in subdivision (2) may be provided to the parent or legal guardian in lieu of a separate report. – ANA, SECTION 6, PGS. 15 - 16

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Screeners and Diagnostics

- Students shall be assessed by November using an early numeracy screener recommended by the Elementary Mathematics Task Force (EMTF) to identify those students in need of support for key numeracy concepts. A kindergarten student identified by the screener as having a mathematics deficiency shall be assessed using the diagnostic assessment to identify student misconceptions and gaps in mathematical knowledge or skills.
- Incoming first and second grade students shall be assessed using an early numeracy screener recommended by the EMTF a minimum of two times a year to identify those students in need of support for key numeracy concepts. A first or second grade student identified by the screener as having a mathematics deficiency shall be assessed using the diagnostic assessment to identify student misconceptions and gaps in mathematical knowledge or skills.
- Incoming fourth and fifth grade students shall be assessed using a fractional reasoning screener approved by the EMTF a minimum of two times a year to identify those students in need of support for fractional reasoning. A fourth or fifth grade student identified by the screener as having a mathematics deficiency shall be assessed using the diagnostic assessment to identify student misconceptions and gaps in mathematical knowledge and gaps in mathematical knowledge or skills.

Benchmarks

The EMTF shall recommend to the Office of Mathematics Improvement a guide for developmental benchmark formative assessments to be used for determining appropriate mathematics progress for K-5 mathematics. The benchmarks shall include, but not limited to, the following grade level progressions.

Kindergarten Level

- Number sequence
- One-to-One correspondence
- Cardinality
- Oral and written names for numbers based on grade level standards
- Subitizing
- Number relationships
- Computational fluency with whole numbers based on grade level standards
- Addition and subtraction in word problems based on grade level standards
- Spatial Reasoning based on grade level standards

First and Second Grade Level

- Counting and recognizing whole numbers
- Comparing and ordering numbers
- Composing and decomposing numbers
- Operations with whole numbers

Incoming Third Grade Level

- Operations of addition 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 and 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



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Assessment
Continued



Benchmarks Continued

Incoming Fourth Grade Level

- Representing unit fractions with area and length models
- Representing equivalent fractions using a variety of objects and pictorial models
- Understanding multiplication and division and strategies for multiplication and division within 100
- Understanding the meanings of multiplication and division of whole numbers involving equal-sized 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
- Generating and solving problem situations for a given mathematical number sentence involving addition and subtraction of whole numbers using a variety of strategies and algorithms based on place value

Incoming Fifth Grade Level

- 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 using fraction equivalence and properties of operations
- Understanding the relationship between addition and subtraction
- Multiplying a whole number and a fraction

