SB171

218238-4

By Senators Orr and Melson

RFD: Education Policy

First Read: 02-FEB-22

SB171

ENGROSSED

A BILL

TO BE ENTITLED

AN ACT

Relating to public education; to establish the Alabama Numeracy Act and prohibit the use of the Common Core State Standards in public K-12 schools; to implement steps to improve mathematics proficiency of public school K-5 grade students and ensure that those students are proficient in mathematics at or above grade level by the end of fifth grade by monitoring the progression of each student from one grade to another, in part, by his or her proficiency in mathematics.

BE IT ENACTED BY THE LEGISLATURE OF ALABAMA:

Section 1. Sections 1 to 17, inclusive, shall be known and may be cited as the Alabama Numeracy Act.

Section 2. For the purposes of Sections 1 to 17, inclusive, the following terms shall have the following meanings:

(1) ALGEBRAIC REASONING. Recognizing and generalizing about patterns and relationships; representing patterns and relationships by analyzing structures of the

patterns; and using mathematical models (concrete, pictorial, and abstract) to represent patterns.

(2) AMSTI. The Alabama Mathematics, Science, and Technology Initiative.

(3) CARDINALITY. Understanding that the last number word said when counting tells how many objects have been counted.

(4) COMPUTATIONAL FLUENCY. Possessing efficient and accurate methods for computing.

(5) CONCEPTUAL UNDERSTANDING. The ability to reason in settings involving the careful application of concept definitions, relations, or representations of either.

(6) DEPARTMENT. The State Department of Education.

(7) DYSCALCULIA. A term used to refer to a pattern of learning difficulties characterized by problems processing numerical information, learning arithmetic facts, performing accurate or fluent calculations, difficulties with mathematical reasoning, and difficulties with word reasoning accuracy.

(8) EARLY NUMERACY SCREENING. Standardized measures that assess a student's fluency in foundational mathematics skills.

(9) FLUENCY. The ability of students to choose flexibly among methods and strategies to solve contextual and mathematical problems, to understand and explain their approaches, and to produce accurate answers efficiently.

(10) FULL SUPPORT SCHOOL. The lowest five percent performing elementary schools as measured by mathematics proficiency on the approved state summative assessment, and thereafter increasing to include an additional one percent every two years until support is administered in the lowest 10 percent performing elementary schools.

(11) LIMITED SUPPORT SCHOOLS. The lowest six to 25 percent performing elementary schools as measured by mathematics proficiency on the state approved summative assessment, and thereafter decreasing one percent every two years until support is administered in the lowest 11 to 25 percent performing elementary schools.

(12) LOCAL BOARD OF EDUCATION. A county or city board of education.

(13) LOCAL EDUCATION AGENCY. A county or city school system operating public primary and secondary schools.

(14) MENTAL COMPUTATION. The process of working on a problem and obtaining the exact or approximate answers mentally without reliance on external tools.

(15) MULTI-TIERED SYSTEM OF SUPPORT. A tiered system of supports that integrates assessment and intervention within a school-wide, multi-level prevention system to maximize student achievement and reduce behavioral problems. A multi-tiered system of support promotes systems alignment to increase efficiency and effectiveness of resources.

(16) NUMBER SENSE. The ability to represent numbers in multiple ways, numerical magnitude estimation, selecting

and using benchmarks, such as tens or hundreds, decomposing and recomposing number, understanding the effects of operations on number, and performing mental calculation and estimation.

(17) NUMERACY. The ability to understand and work with numbers.

(18) PLACE VALUE UNDERSTANDING. The understanding of representations and concepts necessary to successfully process multi-digit numbers.

(19) PROCEDURAL FLUENCY. The ability to apply procedures accurately, efficiently, and flexibly; to transfer procedures to different problems and contexts; to build or modify procedures from other procedures; and to recognize when one strategy or procedure is more appropriate to apply than another.

(20) RESPONSE TO INTERVENTION. A process within the system of a multi-tiered system of support framework. Response to intervention is part of the data-based decision-making process within progress monitoring where team members review data to determine how students are responding to the interventions in place.

(21) SPATIAL REASONING. The capacity to mentally generate, transform, and rotate a visual image and thus understand and recall spatial relationships between objects.

(22) STEM. Science, technology, engineering, and mathematics.

(23) SUBITIZING. Quickly recognizing and naming how many objects are in a small group without counting.

Section 3. (a) Within 90 days following the effective date of this act, the State Superintendent of Education shall convene an Elementary Mathematics Task Force to provide the State Superintendent of Education and the State Board of Education with vetted and approved recommendations for high quality, evidence-based comprehensive mathematics curricula for core instruction and mathematics intervention programs or curricula, or both; a state continuum of educator development for approved professional learning focusing on foundational mathematics content knowledge including, but not limited to, improving number sense, spatial skills, algebraic reasoning, and mental computations for all full support and limited support schools; and an annual list of vetted and approved assessment systems which are valid and reliable mathematics screening, diagnostic, and formative assessment systems for selection and use by local education agencies.

(b) The membership of the Elementary Mathematics Task Force shall include all of the following:

(1) The State Superintendent of Education.

(2) The Director of the Office of Mathematics Improvement.

(3) Two public K-5 teachers, with experience in implementing evidence-based mathematics teaching practices, appointed by the Executive Secretary of the Alabama Education Association.

(4) One public K-5 special education teacher, with experience implementing evidence-based mathematics teaching practices, appointed by the State Superintendent of Education.

(5) One elementary AMSTI mathematics specialist, with experience supporting school-based mathematics coaches, appointed by the Alabama STEM Council.

(6) One elementary school-based mathematics coach, with experience in facilitating professional development, appointed by the Alabama Council of Teachers of Mathematics.

(7) Two public elementary school principals, with experience supporting mathematics coaching, appointed by the Council for Leaders in Alabama Schools.

(8) One instructor employed by a public institution of higher education, with experience teaching elementary mathematics methods, appointed by the Alabama Commission on Higher Education.

(9) One local superintendent of education, with experience supporting schools with mathematics coaches, appointed by the School Superintendents of Alabama.

(10) One local board of education member, appointed by the Alabama Association of School Boards.

(11) One AMSTI Director or assistant director, with experience teaching and supporting grades K-5 mathematics, appointed by the State Superintendent of Education.

(12) One member of business and industry, with experience in employing individuals in occupations that are STEM focused and in demand, appointed by the Governor.

(13) Three additional members, appointed by the Governor.

(c) Members appointed to the Elementary Mathematics Task Force pursuant to subdivisions (3) through (7) of subsection (b) shall serve an initial term of one year and may be reappointed to serve one additional two-year term. Members appointed to the Elementary Mathematics Task Force pursuant to subdivisions (8) through (13) of subsection (b) shall serve an initial term of two years and may be reappointed to serve one additional two-year term. Thereafter, each member of the Elementary Mathematics Task Force shall be appointed to serve a two-year term and may be reappointed to serve one additional two-year term. All appointing authorities shall coordinate their appointments to ensure the Elementary Mathematics Task Force membership is inclusive and reflects the racial, gender, geographic, urban, rural, and economic diversity of the state. The appointing authorities shall fill vacancies by appointment for the unexpired terms according to the process outlined in this section.

(d) The members of the Elementary Mathematics Task Force shall be reimbursed through the department for expenses incurred in the performance of their duties for the Elementary Mathematics Task Force in the same manner and at the same rate as is provided for state employees. Subject to appropriations, nothing herein shall limit payment for their service.

(1) The Director of the Office of Mathematics Improvement shall serve as chair, and a vice chair shall be

elected by the membership of the Elementary Mathematics Task Force. If the position of director is vacant, the vice chair shall serve as chair until the State Superintendent of Education appoints a new director.

(2) The Elementary Mathematics Task Force shall meet in regular session at least four times a year. The Elementary Mathematics Task Force shall set meeting dates and times, set agendas, vote, and develop recommendations for the State Board of Education in collaboration with the department, through the Office of Mathematics Improvement. A majority of the members of the Elementary Mathematics Task Force shall constitute a quorum for the transaction of business. Should a quorum not be present on the day appointed for any meeting, those present may adjourn from day to day until a quorum is established.

(e) Each approved assessment system for grades K-5 shall measure, at a minimum, all of the following:

(1) Number sequence.

(2) One-to-one correspondence.

(3) Cardinality.

(4) Oral and written names for numbers based on grade level standards.

(5) Subitizing.

(6) Number relationships.

(7) Addition, subtraction, multiplication, and division in word problems with a variety of problem types and structures based on grade level standards.

(8) Connecting addition, subtraction, multiplication, and division to place value based on grade level standards.

(9) Computational fluency with whole numbers, fractions, and decimals based on grade level standards.

(10) Spatial reasoning based on grade level standards.

(f) In determining which assessment systems to recommend for use by local education agencies, the Elementary Mathematics Task Force, in collaboration with the department, through the Office of Mathematics Improvement, at a minimum, shall also consider all of the following factors:

(1) The time required to conduct each assessment with the intention of minimizing the impact on instructional time.

(2) The level of integration of assessment results with instructional support for educators and students.

(3) The time lines in reporting assessment results for educators, administrators, and parents.

(4) The ability of the formative assessment system to produce automatic reports for teachers, administrators, and parents as required in Section 6.

Section 4. (a) There is created in the department an Office of Mathematics Improvement, that shall be formed no later than 90 days after the effective date of this act. The State Superintendent of Education shall appoint a Director of the Office of Mathematics Improvement whose exclusive focus is

K-5 mathematics. The director shall have experience in administrative duties, as an elementary mathematics specialist or coach, and in teaching mathematics in a public elementary school. Each AMSTI region of the state shall have at least one Office of Mathematics Improvement regional coordinator, based on needs of the region, who has experience in training, supporting, coaching, and teaching mathematics in elementary public schools focused on mathematics data analysis and mathematics improvement.

(b) The Director of the Office of Mathematics Improvement, in collaboration with the Elementary Mathematics Task Force, shall do all of the following:

(1) Determine the scope and pace of scaling mathematics coaches with the goal of placing one mathematics coach for every 500 students before the 2027-2028 school year.

(2) Monitor the implementation of intensive professional development on foundational mathematics content knowledge, as recommended by the Elementary Mathematics Task Force, for all full support and limited support schools.

(3) Monitor the implementation of screener assessments, diagnostic assessments, and formative assessments for grades K-2 and grades four and five to identify students in need of support for key numeracy concepts. Implementation shall begin with the 2023-2024 school year.

(4) Recommend training and support for educators for the effective implementation and interpretation of diagnostic tools. The diagnostic tool shall be used with students who

have been identified as struggling in mathematics based on screeners, diagnostic assessments, benchmark assessments, teacher observation, or any combination of the forgoing.

(5) Designate a team of educators to explore the connection between difficulties with number sense and dyscalculia, as well as possible effective screeners.

(6) Commit necessary resources to understanding the needs of students struggling with number sense or dyscalculia, or both, before implementing instructional practices or assessments that could adversely affect student learning.

(7) Monitor AMSTI mathematics specialist support in all full support and limited support schools.

(8) Monitor the implementation and progress of the Alabama Summer Mathematics Achievement Program in full support schools.

(9) Recommend changes and improvements to AMSTI, any professional learning providers, and local education agencies based on data collected and analyzed by the Office of Mathematics Improvement.

(10) Participate in the development of the Alabama Instructional Leadership framework.

(c) Each Office of Mathematics Improvement regional coordinator shall have experience as a K-5 mathematics specialist or coach and experience teaching mathematics in a public school.

(d) Office of Mathematics Improvement regional coordinators, with the oversight of the director, shall

perform all of the following duties in full support and limited support schools:

(1) Monitor the implementation of comprehensive mathematics curricula for core instruction and intervention programs or curricula, or both, approved by the Elementary Mathematics Task Force.

(2) Monitor the implementation of a multi-tiered system of support, including response to intervention to monitor progress of struggling students, continually evaluate the effectiveness of instruction, and make more informed instructional decisions.

(3) Monitor the implementation of the intensive professional development series on foundational mathematics content knowledge.

(4) Support the Director of the Office of Mathematics Improvement in monitoring the implementation of approved formative assessments, screening assessments, and diagnostic assessments recommended by the Elementary Mathematics Task Force.

(5) Monitor and evaluate data collected from AMSTI and local education agencies to ensure coaching aligns with school needs and make recommendations for improvement to the mathematics coaches as needed to increase student achievement, collaboration, and support.

(6) Monitor the implementation and progress of the Alabama Summer Mathematics Achievement Program in full support schools.

Section 5. (a) Each K-5 teacher, with the full support of his or her principal, shall do all of the following:

(1) Dedicate an average minimum of 60 minutes per day for Tier 1 mathematics 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, in addition to high quality print and online resources to carefully plan units and lessons based on the grade-level mathematics content standards.

(3) Build fluency with procedures on a foundation of conceptual understanding, strategic reasoning, and problem solving over time.

(4) Provide students access to tools, including technology, that support mathematical thinking.

(5) Provide a learning environment that promotes student reasoning, student discourse, and student questioning and critiquing the reasoning of their peers.

(6) Consistently implement the evidence-based mathematics teaching practices as recommended by the Elementary Mathematics Task Force.

(7) Gather evidence of student understanding to inform the planning of next instructional steps.

(8) Provide students with descriptive and timely feedback on assessments to include strengths, weaknesses, and next steps for progress toward learning targets.

(b) An elementary school teacher should not engage in any practice that minimizes sense making and understanding of mathematics concepts.

Section 6. (a)(1) A kindergarten student or incoming grades 1-5 student identified with a mathematics deficiency, or who demonstrates the signs of dyscalculia, shall be provided intensive mathematics interventions recommended by the Elementary Mathematics Task Force to address his or her specific mathematics deficiency. 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.

(2) 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. Reports shall include all of the following:

1. The name of the student.

2. The name of the teacher providing the intervention.

3. The mathematics deficiency or deficiencies addressed.

4. The Elementary Mathematics Task Force recommended mathematics intervention programs or curricula, or both, used to improve the student's deficiency or deficiencies.

5. Mathematics intervention services and supports implemented from the list provided in subsection (c).

6. Any tools used to monitor student progress.

7. Student growth.

b. Reports that coincide with grading periods, and a comprehensive end of year report, shall be provided to the parent or legal guardian of the student and his or her mathematics teacher for the immediately succeeding school year. The reports shall include all of the following:

1. The information provided in the reports under paragraph a.

2. Student growth for the grading period and school year based on Elementary Mathematics Task Force approved formative mathematics assessments and the State Board of Education approved summative mathematics assessment.

3. Mathematics strengths and areas in need of improvement of the student.

(b) Screener or approved assessment system reports may also be included with the grading period and comprehensive end of year reports.

(c) Each local education agency shall provide mathematics intervention services for grades K-5 students identified with mathematics deficiencies. Those services shall include, but not be limited to, any of the following:

(1) Working with an effective or highly effective teacher of mathematics, as demonstrated by student mathematics performance data and teacher performance evaluations.

(2) Effective instructional strategies to accelerate student progress provided by a highly qualified teacher who has training and experience in the implementation of teaching mathematics through problem solving; providing an environment for students to make sense of cognitively demanding tasks; providing justifications for strategies and solutions; making connections with the mathematics; and receiving feedback about mathematics ideas.

(3) Mathematics intervention services and supports to improve any identified area of mathematics deficiency including, but not limited to, any of the following:

a. Additional instructional time devoted to evidence-based mathematics instruction and interventions recommended by the Elementary Mathematics Task Force, including engaging, high quality, and rigorous supplemental sessions.

b. Providing daily targeted small group mathematics intervention based on student needs.

c. Providing supplemental, evidence-based mathematics interventions before or after school, or both, delivered by a highly qualified teacher of mathematics or trained tutor.

d. Frequently monitoring the progress of the mathematics skills of each student throughout the school year and adjusting instruction according to student need.

e. Incorporating material from a previous grade to link understanding to grade level curriculum.

f. Incorporating a concrete, semi-concrete, abstract approach.

g. Incorporating explicit systematic strategy instruction, including summarizing key points and reviewing vocabulary prior to the lesson.

h. Utilizing mathematics strategies or programs, grounded in the science of learning, that accelerate student mathematics achievement.

i. Attending to conceptual understanding as well as procedural fluency.

j. Providing a home based mathematics plan, including participation in family training workshops or regular family-guided home mathematics activities.

(d) Beginning with the 2023-2024 school year:

(1) Kindergarten students shall be assessed by November using an early numeracy screener recommended by the Elementary Mathematics Task Force 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.

(2) Incoming first and second grade students shall be assessed using an early numeracy screener recommended by the Elementary Mathematics Task Force 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.

(3) Incoming fourth and fifth grade students shall be assessed using a fractional reasoning screener approved by the Elementary Mathematics Task Force 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 or skills.

(4) A K-5 student identified with a mathematics deficiency through screeners, diagnostics, or formative assessments shall be provided intensive mathematics interventions recommended by the Elementary Mathematics Task Force to address his or her specific needs.

(e) The Elementary Mathematics Task Force shall recommend to the Office of Mathematics Improvement a guide for developmental benchmarks to be used for determining appropriate mathematics progress for K-5 mathematics progression. The benchmarks shall include, but not be limited to, the following grade level progressions.

(1) The first and second grade level shall include all of the following:

a. Counting and recognizing whole numbers.

b. Comparing and ordering numbers.

c. Composing and decomposing numbers.

d. Operations with whole numbers.

(2) Incoming third grade level shall include all of the following:

a. Operations of addition and subtraction.

b. Properties of operations.

c. Counting and recognizing numbers to 1,000.

d. Understanding models for addition and subtraction within 1,000.

e. Comparing and ordering numbers up to 1,000.

f. Composing and decomposing numbers up to 1,000.

g. Solving one-step and two-step word problems involving addition and subtraction within 100.

h. Using a variety of strategies and algorithms based on place value.

(3) Incoming fourth grade level shall include all of the following:

a. Representing unit fractions with area and length models.

b. Representing equivalent fractions using a variety of objects and pictorial models.

c. Understanding multiplication and division and strategies for multiplication and division within 100.

d. Understanding the meanings of multiplication and division of whole numbers involving equal-sized groups, arrays, and measurement quantities.

e. 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.

f. 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.

(4) Incoming fifth grade level shall include all of the following:

a. Comparing and ordering whole numbers up to 1,000,000.

b. Comparing and ordering fractions and decimals to hundredths.

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

d. Illustrating and explaining the product of two factors using equations, rectangular arrays, and area models.

e. Adding and subtracting fractions and mixed numbers with like denominators using fraction equivalence and properties of operations.

f. Understanding the relationship between addition and subtraction.

g. Multiplying a whole number and a fraction.

Section 7. (a) Subject to the appropriations of the Legislature, each K-5 school shall be assigned one mathematics coach for every 500 students. If a school earns two or more

mathematics coaches, those coaches shall be hired and employed simultaneously to ensure the effectiveness of the coaches. The Director of the Office of Mathematics Improvement shall determine the scope and pace of scaling mathematics coaches with the goal of placing one mathematics coach for every 500 students before the 2027-2028 school year.

(b) A mathematics coach shall be employed by the local education agency with funds appropriated by the Legislature to support Sections 1 to 17, inclusive. Mathematics coaches shall be employed pursuant to 200-day contracts. The extra days beyond the nine-month contract shall be used to train teachers, develop units of instruction and materials to support instruction, as determined by school data, and receive professional learning. Mathematics coaches shall meet all of the following qualifications:

(1) Hold a valid Alabama professional educator certificate in early childhood education, elementary education, or special education.

(2) Have a minimum of five years of experience as an early childhood, elementary, or special education teacher.

(3) Demonstrate expertise, as attested by a current or former employing county or city superintendent of education, in mathematics instruction and intervention and early numeracy interventions, including dyscalculia interventions.

(4) Hold a master's degree or have completed professional development recommended by the Elementary Mathematics Task Force, or both.

(c) The duties and responsibilities of a mathematics coach employed pursuant to Sections 1 to 17, inclusive, shall include all the following:

(1) Supporting the improvement of instruction with an emphasis on Tier 1 instruction to ensure students do not fall behind.

(2) Collaborating with the school principal and faculty to establish and implement a strategic plan for coaching and mathematics instruction to improve student achievement in mathematics.

(3) Facilitating schoolwide mathematics professional learning, including job-embedded assistance using coaching strategies, including joint preplanning, modeling lessons, co-teaching teaching lessons, targeted observation to collect data, and debriefing.

(4) Modeling evidence-based mathematics instructional and intervention strategies for teachers.

(5) Continuously mentoring and coaching teachers.

(6) Assisting teachers in using data to differentiate mathematics instruction and to identify students exhibiting the characteristics of dyscalculia and other exceptionalities.

(7) Monitoring the progress of K-5 students in mathematics through benchmark assessments at least three times

per year and making recommendations for modifying instruction based on the individual needs of students and trends in student data.

(8) Focusing solely as a mathematics coach for schools with elementary grade students.

(9) Collaborating with teachers and grade-level teams of teachers to foster the use of appropriate instructional materials, including concrete materials, necessary to ensure that students understand mathematical concepts.

(10) Collaborating with grade level teams to develop rigorous tasks, lessons, and assessments aligned with grade level mathematics content standards; to facilitate the analysis of student work samples and assessment data; and to work in partnership with teachers to provide real-time feedback and make next-step instructional decisions based on the student evidence.

(11) Assisting teachers in using formative assessments and analyzing student work to identify students with misconceptions, students exhibiting characteristics of dyscalculia, and students needing acceleration.

(12) Assisting teachers in administering early numeracy screeners or diagnostic assessments, or both, in grades K-2. The assistance of a mathematics coach may not exceed two hours per week.

(13) Assisting teachers with administering fractional reasoning screeners or diagnostic assessments, or

both, for students in grades four and five, subject to legislative appropriation. The assistance of a mathematics coach may not exceed two hours per week.

(14) Advocating, planning, and coordinating opportunities, in conjunction with the principal, for school-based family and community engagement in mathematics.

(15) Actively and cooperatively participating in any Office of Mathematics Improvement regional coordinator and AMSTI regional mathematics specialist visits and professional learning to meet agreed upon personal outcomes and all school, district, and state established mathematics goals.

(16) Engaging in ongoing learning opportunities to grow in knowledge, skills, and expertise in mathematics.

(17) Facilitating the use of assessment data in all tiers of mathematics instruction to assist in making decisions that will move students to higher levels of performance in mathematics.

(18) Planning or facilitating, or both, professional learning opportunities that will assist teachers in targeting student deficits; facilitate professional conversations; foster student engagement; assess student learning; reflect on professional practice; and identify next learning steps to achieve state, district, and school goals in mathematics.

(19) Recording job duties and time spent with teachers on a state-specified electronic platform.

(20) Supporting teachers in the authentic integration of computer science and computational thinking concepts within the mathematics classroom.

(d) A mathematics coach shall prioritize coaching in mathematics and may not perform administrative duties, serve in administrative roles, serve as a substitute teacher, serve as a testing coordinator, serve as an interventionist, or perform other school duties not focused on coaching or the mathematics improvement of students.

(e) The State Superintendent of Education and each local superintendent of education shall execute a memorandum of understanding that includes a certification by the local superintendent of education that each mathematics coach employed satisfies the minimum qualifications established by this section.

(f) The State Superintendent of Education, in partnership with the Elementary Mathematics Task Force and the Office of Mathematics Improvement, shall develop an evidenced-based accountability system for measuring the effectiveness of mathematics coaches employed pursuant to Sections 1 to 17, inclusive, for improving teacher professional learning and for increasing student growth and proficiency on formative assessments recommended by the Elementary Mathematics Task Force and the state approved summative assessment.

(g) The State Superintendent of Education shall submit a report to the Governor, the Lieutenant

Governor, the State Board of Education, the Speaker of the House of Representatives, the President Pro Tempore of the Senate, the Chair of the House Ways and Means Education Committee, the Chair of the Senate Finance and Taxation Education Committee, the Chair of the House Education Policy Committee, and the Chair of the Senate Education Policy Committee, no later than December 31, annually, on the status of teacher professional learning and student growth and proficiency based on formative assessments recommended by the Elementary Mathematics Task Force and the state approved summative assessment.

Section 8. (a) Beginning August 1, 2022, to facilitate improvement in mathematics achievement in public elementary schools, the department, through the Office of Mathematics Improvement, shall identify full support and limited support schools based on student proficiency at levels 3 and 4 on the state approved summative assessment.

(b) Initially, full support schools shall consist of the lowest five percent performing public elementary schools as measured by student mathematics proficiency on the state approved summative assessment. Thereafter, the number of full support schools shall be increased by an additional one percent every two years until the lowest 10 percent performing public elementary schools are included. Beginning August 1, 2023, the department, through the Office of Mathematics Improvement, shall require full support schools to do all of the following:

(1) Require all leadership and staff to actively and collaboratively participate in any support provided by the Office of Mathematics Improvement or the Office of School Improvement.

(2) Require principals and assistant principals to engage in and implement professional learning as determined by the Office of Mathematics Improvement and the Office of School Improvement.

(3) Use approved comprehensive mathematics curricula for core instruction as recommended by the Elementary Mathematics Task Force.

(4) Use approved mathematics intervention programs or curricula, or both, for Tier 2 and Tier 3 interventions as recommended by the Elementary Mathematics Task Force.

(5) Require all teachers involved in mathematics instruction to engage in and implement professional learning as determined by the Office of Mathematics Improvement and the Office of School Improvement.

(6) Use approved formative assessments, screening assessments, and diagnostic assessments as recommended by the Elementary Mathematics Task Force.

(7) Implement a multi-tiered system of support, including response to intervention, to monitor the progress of struggling students, continually evaluate the effectiveness of instruction, and improve instructional decisions.

(8) Support and respond to any request of the Office of Mathematics Improvement or the Office of School Improvement.

(c) Initially, limited support schools shall consist of the lowest six to 25 percent performing public elementary schools as measured by student mathematics proficiency on the state approved summative assessment. Thereafter, the number of limited support schools shall be decreased by an additional one percent every two years until the lowest 11 to 25 percent performing public elementary schools are included. Beginning August 1, 2023, the department, through the Office of Mathematics Improvement, shall require limited support schools to do all of the following:

(1) Use approved comprehensive mathematics curricula for core instruction as recommended by the Elementary Mathematics Task Force.

(2) Use approved mathematics intervention programs or curricula, or both, for Tier 2 and Tier 3 interventions as recommended by the Elementary Mathematics Task Force.

(3) Require all teachers involved in mathematics instruction to engage in and implement professional learning as determined by the Office of Mathematics Improvement and the Office of School Improvement.

(4) Use approved formative assessments, screening assessments, and diagnostic assessments as recommended by the Elementary Mathematics Task Force.

(5) Implement a multi-tiered system of support, including response to intervention, to monitor the progress of struggling students, continually evaluate the effectiveness of instruction, and improve instructional decisions.

(6) Support and respond to any request of the Office of Mathematics Improvement.

(d) Beginning in the 2022-2023 school year, annually on or before September 30, each local education agency shall report in writing to the department all of the following information relating to the previous school year:

(1) By grade, the number and percentage of all K-5 students identified with a mathematics deficiency on an Elementary Mathematics Task Force recommended mathematics assessment.

(2) By grade, the number and percentage of students screened for dyscalculia characteristics, the number and percentage of students identified as demonstrating the characteristics of dyscalculia and receiving dyscalculia specific intervention, and the name of the dyscalculia specific intervention being provided.

(3) By grade, the number and percentage of all K-5 students performing on grade level or above grade level; which is defined as scoring level 3 or level 4 on the Alabama Comprehensive Assessment Program, or any derivation thereof.

(4) The number and percentage of students starting fifth grade with a mathematics score below grade level; which

is defined as scoring level 1 or level 2 on the Alabama Comprehensive Assessment Program, or any derivation thereof.

(5) The number and percentage of fifth grade students who started third grade with a mathematics deficiency and completed fifth grade on grade level; which is defined as scoring level 3 or level 4 on the Alabama Comprehensive Assessment Program, or any derivation thereof.

(6) By grade, the number and percentage of eligible students in grades four and five who attended the Alabama Summer Mathematics Achievement Program, that included intensive mathematics instruction.

(7) By grade, the number and percentage of all students retained in grades K-5 based on mathematics deficiencies.

(8) By school, the number of teachers who have earned the K-5 mathematics coach endorsement.

(9) By school, the number and percentage of incoming students in grades one and two identified as having a mathematics deficiency.

(10) By school, the number and percentage of incoming students in grades four and five identified as having a fractional reasoning deficiency.

(e) The State Superintendent of Education shall establish a uniform format for local education agencies to use in reporting the information required by subsection (d). The format shall be developed with input from local boards of education and the Elementary Mathematics Task Force and shall

be provided to each local superintendent of education not later than 90 days before the annual due date, as established by the State Superintendent of Education. On or before November 1, annually, the State Superintendent of Education shall compile the information received from the local education agencies into a state level summary and submit the summary to the Governor, the Lieutenant Governor, the State Board of Education, the President Pro Tempore of the Senate, the Speaker of the House of Representatives, and the Director of the Office of Mathematics Improvement, and shall conspicuously publish the summary on the website of the department.

(f) The State Superintendent of Education shall also report mathematics growth and proficiency targets for all students and all subgroups, as based on the state Every Student Succeeds Act plan, or its successor, to the State Board of Education, the Elementary Mathematics Task Force, and the Director of the Office of Mathematics Improvement by January 15, annually.

Section 9. (a) Each local education agency shall provide the Alabama Mathematics Summer Achievement Program to all students in grades four and five identified with a mathematics deficiency.

(b) The Alabama Mathematics Summer Achievement Program for grades four and five shall satisfy all of the following:

(1) Be staffed with highly effective teachers of mathematics as demonstrated by student mathematics performance data, completion of professional learning as determined by the Elementary Mathematics Task Force, and teacher performance evaluations.

(2) Include not less than 40 hours, nor more than 70 hours of time spent in mathematics problem solving, based on the severity of student need.

(3) Incorporate an Elementary Mathematics Task Force recommended mathematics assessment system, that shall be administered both at the beginning and end of each Alabama Summer Mathematics Achievement Program, to measure student progress.

(4) Coordinate with existing summer programs conducted by the local education agency or in partnership with community-based summer programs for students similarly situated.

Section 10. Beginning January 1, 2023, the State Superintendent of Education shall convene a working group, including regional or national experts, or both, to create the Alabama Multi-Tiered System of Support framework. This framework shall outline the evidence-based best practices of multi-tiered systems of support, which include response to intervention.

Section 11. The department, through the Office of School Improvement, shall do all of the following:

(1) Add educators experienced in the implementation of teaching elementary mathematics through problem solving to the Office of School Improvement.

(2) Add highly qualified staff with experience in elementary school turnaround and improvement, as needed by region, to the Office of School Improvement.

(3) Participate in professional learning relating to reliable forms of evidence of teachers implementing evidence-based mathematics teaching practices.

(4) Ensure that all Office of School Improvement staff are trained and prepared to train local education agency leaders, school leaders, and educators in implementing a high quality multi-tiered system of support, including response to intervention.

Section 12. (a) Beginning August 1, 2025, the department, through the Office of School Improvement, the Office of Mathematics Improvement, and any other sections within the department, shall establish a coherent, sustained, evidence-based system of assistance and support for schools not showing specified levels of academic progress in mathematics, reading, or both.

(b) Any full support school, as defined in this act or the Alabama Literacy Act, that has not attained specified levels of academic progress in mathematics, reading, or both, as determined by the Office of School Improvement, shall qualify for state academic intervention.

(c) The department, through the Office of School Improvement, the Office of Mathematics Improvement, and any other sections within the department shall work in coordination with each local education agency to identify a school improvement team for each full support school that qualifies for state academic intervention, as provided in subsection (b).

(d) The department, through the Office of School Improvement, the Office of Mathematics Improvement, and any other sections within the department shall clearly define the powers and duties of each school improvement team.

(e) A school improvement team shall do all of the following:

(1) Conduct a comprehensive on-site evaluation to determine any causes for low student performance and lack of progress of the school. The evaluation shall include, but not be limited to, consultations with the local superintendent of education, the local board of education, the school principal, parents, other school personnel, and any other individual who possesses pertinent information and knowledge about the school.

(2) Assist in the development of an intensive school turnaround plan focused on student achievement, which may include areas beyond mathematics or reading, to facilitate the imperative of overall school improvement. An intensive school turnaround plan shall include, but not be limited to, all of the following: Recommendations relating to the reallocation of

resources and technical assistance; changes in school procedures or operations; professional learning focused on student achievement for instructional and administrative staff; intervention for individual administrators or teachers; instructional strategies based on evidence based research; waivers from state laws or rules; adoption of policies and practices to ensure all groups of students satisfy the proficiency level established by the state; extended instructional time for low-performing students; strategies for family engagement; incorporation of a teacher mentoring program; and other actions considered appropriate by the school improvement team.

(3) Subject to final approval of the intensive school turnaround plan by the State Superintendent of Education, present the intensive school turnaround plan to the local board of education, the Director of the Office of Mathematics Improvement, and the State Superintendent of Education.

(4) Monitor the progress of the school in implementing the intensive school turnaround plan using formative and summative assessment data.

(f) If a school does not satisfy specified levels of progress, as defined by the Office of School Improvement, after implementing an intensive school turnaround plan for four full academic years, the local board of education shall implement one of the following school turnaround options:

(1) Mandate the complete reconstitution of the school, removing all personnel, appointing a new principal, and hiring new staff. Existing staff may apply for employment at the newly reconstituted school.

(2) Pursue application for public charter school status pursuant to Chapter 6F, Title 16, Code of Alabama 1975.

(g) Nothing in this section shall prohibit the State Superintendent of Education, through the Office of Mathematics Improvement, the Office of School Improvement, or any other section within the department from engaging in strategic planning and making recommendations to the local superintendent of education or local board of education regarding the operation of low performing schools including, but not limited to, structural, governance model, grade configuration, curriculum and instructional materials, and personnel.

(h) For any school under state academic intervention, on or before December 31, annually, the Office of School Improvement, the Office of Mathematics Improvement, and other relevant offices within the department shall report to the Governor, the Lieutenant Governor, the State Board of Education, the Speaker of the House of Representatives, the President Pro Tempore of the Senate, the Chair of the House Ways and Means Education Committee, the Chair of the Senate Finance and Taxation Education Committee, the Chair of the House Education Policy Committee, and the Chair of the Senate

Education Policy Committee on the progress of each full support school under state academic intervention.

Section 13. (a) Beginning August 1, 2022, the State Superintendent of Education, through the Office of Mathematics Improvement, shall convene and oversee a Postsecondary Mathematics Task Force to develop guidelines for institutions of postsecondary education to train early childhood and elementary mathematics teachers based on current research. The guidelines shall include course structure and content based on the recommendations of the National Council of Teachers of Mathematics, the Conference Board of the Mathematics Sciences, the United States Department of Education, and the Mathematics Sciences Research Institute. Guidelines shall go into effect on August 1, 2024. The membership of the Postsecondary Mathematics Task Force shall include all of the following:

(1) The Director of the Office of Mathematics Improvement.

(2) A certification administrator appointed by the State Superintendent of Education.

(3) Two instructors employed by a public four-year institution of higher education physically located within this state, who have experience teaching elementary mathematics methods, appointed by the Alabama Commission on Higher Education.

(4) One department head of elementary education employed by a public four-year institution of higher education

physically located within this state, appointed by the Governor.

(5) One local superintendent of education, appointed by the board of directors of the School Superintendents of Alabama.

(6) One K-5 public school teacher with experience mentoring teacher interns, employed at a school containing grades K-5, appointed by the executive committee of the Alabama Council of Teachers of Mathematics.

(7) One K-5 public school special education teacher, with experience teaching elementary mathematics, appointed by the State Superintendent of Education.

(8) One public school principal employed at a school containing grades K-5, with experience with teacher interns, appointed by the Council for Leaders in Alabama Schools.

(9) Two K-5 school-based mathematics coaches, employed at a public school containing grades K-5, appointed by the Executive Director of the Alabama STEM Council.

(10) Two K-5 mathematics specialists, employed at a school containing grades K-5, appointed by the State Superintendent of Education.

(11) Three additional members, appointed by the Governor.

(b) The appointing authorities shall coordinate their appointments to ensure the Postsecondary Mathematics Task Force membership is inclusive and reflects the racial,

gender, geographic, urban, rural, and economic diversity of the state.

(c) No later than December 31, annually, the Alabama Commission on Higher Education shall submit to the Governor, the Lieutenant Governor, the Speaker of the House of Representatives, the President Pro Tempore of the Senate, the Chair of the House Ways and Means Education Committee, the Chair of the Senate Finance and Taxation Education Committee, the Chair of the House Education Policy Committee, and the Chair of the Senate Education Policy Committee, a report on the status of the implementation and adoption of the mathematics education guidelines for postsecondary institutions, the number of subject matter college level semester hours earned, the status of partnerships between educator preparation faculty and mathematics faculty, and the percentage of passing scores on State Board of Education approved assessments for candidates seeking educator certification in mathematics at any grade level, as well as the mathematics section on State Board of Education approved assessments for those seeking certification in early childhood or elementary education.

(d) Educator preparation programs approved by the State Board of Education shall incorporate learning specific to the condition known as dyscalculia, including early warning signs, screening, and recommendations for interventions found to be successful.

(e) As a requirement of initial licensure candidates for early childhood or elementary mathematics certification, prospective teachers shall receive a passing score, as determined by the State Board of Education, on the appropriate foundational mathematics assessment for the grade band associated with each certificate.

(f) A comprehensive, independent review of the requirements of this section shall be conducted every four years by an external consultant at the direction of the State Superintendent of Education. A report summarizing that review shall be provided by the State Superintendent of Education to the Director of the Office of Mathematics Improvement.

Section 14. (a) On or before June 30, 2024, the State Superintendent of Education shall develop and submit to the State Board of Education for approval, recommendations for the creation of a K-5 mathematics coach endorsement for teachers who hold a valid Alabama professional educator certificate in early childhood education, elementary education, or special education and have at least three years of teaching experience.

(b) The K-5 mathematics coach endorsement shall be offered only as a post baccalaureate program and shall not be included within an initial educator preparation program.

(c) The K-5 mathematics coach endorsement preparation program described in program planning forms, catalogs, and syllabi shall require field experience and a minimum of the following four courses:

(1) One course focused on grades K-2 content knowledge and pedagogical content knowledge.

(2) One course focused on grades 3-5 content knowledge and pedagogical content knowledge.

(3) One course focused on coaching principles.

(4) One course focused on literacy in mathematics education to include analyzing student work for instructional decisions.

(d) The coaching endorsement program shall prepare candidates who demonstrate conceptual understanding and procedural fluency regarding major concepts of mathematics appropriate for grades K-5. Candidates shall satisfy all of the following:

(1) Demonstrate coaching principles including: Goals, principles, and approaches in the Alabama Coaching Framework.

(2) Understand adult learning principles that support collaboration with the ultimate goal of improved student performance.

(3) Possess leadership experience.

(4) Understand the roles of school-based mathematics coaches.

(5) Understand current research on the science of learning.

(6) Be able to translate research findings into effective instruction.

(7) Know what engages students in learning at various stages of growth and development.

(8) Understand the developmental nature of mathematics and the interconnections among mathematical concepts.

(9) Demonstrate knowledge of the phases students move through in developing fluency.

(10) Demonstrate knowledge of common errors and misconceptions about the operations and how to help students.

(11) Demonstrate knowledge of the basic structures and problem types of word problems for all operations and proper sequencing to support student understanding of the meaning of the operations.

(12) Demonstrate understanding of teaching mathematics through problem solving.

(13) Demonstrate understanding of algebra as an established content strand in grades K-5 that supports algebraic thinking in middle school and high school.

(14) Demonstrate understanding of measurement as a continuous quantity with numerical value and its importance to the mathematically literate citizen.

(15) Understand the importance of spatial sense in students and the connection to academic success in STEM fields.

(16) Understand how to use a variety of mental computation techniques.

(17) Model, explain, and develop a variety of computational algorithms.

(18) Describe and represent mathematical relationships.

(19) Practice coaching cycles.

(20) Demonstrate ability to work with adults in an educational setting.

(21) Demonstrate ability to work with school administrators in disaggregating data and developing strategies.

(22) Demonstrate ability to effectively present complex information to and engage with various stakeholders.

(e) The K-5 mathematics coach endorsement program shall do all of the following:

(1) Prepare candidates to have knowledge of historical developments in mathematics, including the contributions of underrepresented groups and diverse cultures.

(2) Prepare candidates to use their knowledge of student diversity to affirm and support full participation and continued study of mathematics by all students. Student diversity includes gender, ethnicity, socioeconomic background, language, special needs, and mathematical learning styles.

(3) Prepare candidates to use appropriate technology to support the learning of mathematics.

(4) Prepare candidates to use appropriate formative and summative assessment methods to assess student learning and program effectiveness.

(5) Prepare candidates to use formative assessments to monitor student learning and to adjust instructional strategies and activities.

(6) Prepare candidates to use summative assessments to determine student achievement and to evaluate the mathematics program.

(7) Prepare candidates to know when and how to use student groupings such as collaborative groups, cooperative learning, and peer teaching.

(8) Prepare candidates to use instructional strategies based on current research.

(9) Prepare candidates to work on an interdisciplinary team and in an interdisciplinary environment.

(10) Prepare candidates to participate actively in the professional learning community of mathematics educators.

(11) Prepare candidates to analyze and organize data for interpretation and application.

(f) Subject to legislative appropriation, the State Superintendent of Education may establish an incentive program to provide a minimum two thousand five hundred dollar ($2,500) annual stipend for any mathematics coach who has earned a K-5 mathematics coach endorsement.

Section 15. (a) Beginning October 1, 2022, the State Superintendent of Education shall convene a working group to create the Alabama Instructional Leadership Framework, applicable to all K-5 administrators. The State Superintendent shall utilize an external partner to facilitate this work. Implementation of the Alabama Instructional Leadership Framework shall begin August 1, 2023.

(b) The framework shall include, but not be limited to, all of the following:

(1) Establishing a clear and shared vision for teaching and learning, including all of the following:

a. Measuring success to include continually monitoring the vision.

b. Providing feedback for school-based academic coaches in meeting the vision and support for quality professional learning.

c. Implementing a multi-tiered system of supports to improve student achievement.

(2) Establishing norms for participation and collaboration in coaching cycles and professional learning to strengthen teacher practices.

(3) Identifying and supporting evidence-based teaching practices for all content areas.

(4) Developing the ability to identify effective instructional practices in early childhood and elementary classrooms.

Section 16. (a) Beginning January 15, 2023, the Executive Committee of the Alabama STEM Council shall employ an external consultant to evaluate this act, the work of mathematics coaches, and the implementation and outcomes. The consultant shall be selected through an open request for proposals process adopted by the executive committee. Each proposal shall be reviewed by a panel of key stakeholders, chosen by the executive committee, and shall be assessed using a defined set of priority indicators. The executive committee shall appoint a panel of 11 stakeholders to review each proposal. The membership of each panel shall include all of the following:

(1) The Director of the Alabama STEM Council.

(2) An elementary public school based mathematics coach.

(3) Two public elementary mathematics educators.

(4) Two parents of students who are enrolled in and attending a public K-5 school.

(5) The Director of AMSTI, or his or her designee.

(6) One AMSTI elementary mathematics specialist.

(7) One elementary public school principal.

(8) One instructor employed by a public two-year or four-year institution of higher education, with experience teaching elementary mathematics methods.

(9) Two additional members appointed by the Executive Director of the Alabama STEM Council.

(b) The appointing authorities shall coordinate their appointments to assure the panel membership is inclusive and reflects the racial, gender, geographic, urban, rural, and economic diversity of the state.

(c) The external evaluation consultant shall design and enact a comprehensive evaluation plan to help with both success and sustainability of the mathematics coaching program. This work shall include, but not be limited to, defining measures, developing instruments, using instruments to collect data, analyzing data, the quarterly and annually reporting of findings, and developing and implementing a measurement sustainability plan. The findings shall be used to determine adjustments to be made for continuous improvement to both quality of implementation and assurance of desired outcomes. The evaluation shall include a cost benefit return on investment study.

(d) The external evaluation consultant shall submit an annual report on or before January 30, and shall submit quarterly reports no later than the last day of the month following each quarter. Quarterly and annual reports shall be submitted to the Governor, the Lieutenant Governor, the State Board of Education, the Speaker of the House of Representatives, the President Pro Tempore of the Senate, the Chair of the House Ways and Means Education Committee, the Chair of the House Education Policy Committee, the Chair of the Senate Education Policy Committee, the Director of the Office of Mathematics Improvement, and the Executive Committee

of the Alabama STEM Council, and shall conspicuously publish the reports on the website of both the Alabama STEM Council and the department.

(e) Continued funding dedicated to elementary mathematics coaches shall be contingent on measurable performance growth, as determined by the external evaluation consultant.

(f) The State Superintendent of Education and the Director of the Office of Mathematics Improvement shall comply with all requests for data and information from the external evaluation consultant and shall make every effort to assist with any recommended improvements.

Section 17. (a) The State Superintendent of Education, through the Office of Mathematics Improvement and other sections of the department, shall provide technical assistance to local education agencies in complying with this section and Sections 1 to 16, inclusive.

(b) The State Board of Education may adopt rules as necessary to implement and enforce this section and Sections 1 to 16, inclusive.

Section 18. Funds appropriated by the Legislature in support of Sections 1 to 17, inclusive, shall be expended for all of the following:

(1) The staff and operations of the Office of Mathematics Improvement, including the director and regional coordinators, local mathematics coaches, teachers in residence, AMSTI regional mathematics specialists,

professional learning activities, and administrative activities.

(2) Administration and analysis of mathematics screening, formative, diagnostic, and summative assessments to guide instruction in full support schools and limited support schools.

(3) Professional development on foundational mathematics content knowledge as recommended by the Elementary Mathematics Task Force.

(4) Any additional staff for school improvement teams for full support schools in state academic intervention.

(5) Additional staff for the Office of School Improvement.

(6) External consultants to evaluate the work of mathematics coaches' implementation and outcomes described in Section 15.

Section 19. (a) The Legislature finds that the State Board of Education, in the fall of 2013, voted to rescind the Memorandum of Agreement that involved the State of Alabama in adopting the Common Core State Standards, which ceded control of Alabama's standards to entities other than the state and local educational agencies.

(b) In order to codify the intent of the State Board of Education, 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.

(c) As part of the termination process, the Legislature directs the State Superintendent of Education, the State Board of Education, and any other public education authority to terminate the flexibility waiver agreement with the United States Department of Education pertaining to the federal Every Students Succeeds Act, which includes the adoption of the Common Core State Standards.

(d) The Legislature further prohibits the adoption or implementation of any national standards or variations of national standards from any source that cede control of Alabama educational standards in any manner.

(e) The state shall retain sole control over the development, establishment, and revision of K-12 course of study standards.

(f) No education entity or any state official shall join any consortium or any other organization when participation in that consortium or organization would cede any measure of control over any aspect of Alabama public education to any such entity.

(g) Nothing in this section shall be construed to affect, prohibit, or inhibit the use of any of the following tools, standards, or certifications in the public K-12 schools, any college entrance examination, workforce skills assessment or examination, advanced placement course, career technical credential, national board certification, academic language therapy certification, Praxis or other core academic

skills for educators test, armed service vocational aptitude test, or International Baccalaureate standard.

Section 20. This act shall become effective immediately following its passage and approval by the Governor, or its otherwise becoming law.

Senate

Read for the first time and referred to the Senate committee on Education Policy.....	02-FEB-22
Read for the second time and placed on the calendar with 1 substitute and.....	01-MAR-22
Read for the third time and passed as amended	02-MAR-22

Yeas 24
Nays 3

Patrick Harris,
Secretary.