SB171

216052-6

By Senators Orr and Melson

RFD: Education Policy

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SYNOPSIS: This bill would establish the Alabama Numeracy Act and would prohibit the use of the curriculum standards, commonly known as the Common Core State Standards, in public K-12 schools.

This bill would provide further for improved mathematics instruction in public schools and would provide a means for increasing grade level proficiency in mathematics for public school students in grades K-5.

This bill would establish and provide for the duties of an Elementary Mathematics Task Force, a Postsecondary Mathematics Task Force, and an Office of Mathematics Improvement within the State Department of Education.

This bill would provide benchmarks, the monitoring of schools, state intervention for low performing schools, an Alabama Summer Mathematics Achievement Program, mathematics intervention services, and funding.

This bill would provide specific instructional practices for elementary school educators, would specify the qualifications of mathematics coaches and require their presence in schools, and would require the State Superintendent of Education to develop a K-5 mathematics coach endorsement program and provide for the award of the endorsement to certain qualified mathematics coaches.

This bill would also require the State Superintendent of Education and the State Board of Education to terminate the flexibility waiver agreement with the United States Department of Education pertaining to the federal Elementary and Secondary Education Act, which includes the adoption of the Common Core State Standards.

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 kindergarten to fifth 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 16, inclusive, shall be known and may be cited as the Alabama Numeracy Act.

Section 2. For the purposes of Sections 1 to 16, 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, 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) LOCAL BOARD OF EDUCATION. A county or city board of education.

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

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

(13) 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.

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

(15) OGAP. The Ongoing Assessment Project is a systematic, intentional, and iterative formative assessment system grounded in the research on how students learn mathematics.

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

(17) 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.

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

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

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

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 Board of Education with vetted and approved recommendations for comprehensive mathematics and mathematics intervention programs and curricula; a state continuum of educator development for approved professional

learning focusing on improving number sense, spatial skills, algebraic reasoning, and mental computations; and an annual list of vetted and approved assessment systems which are valid and reliable mathematics screening, formative, and diagnostic 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 Director of the Office of Mathematics Improvement.

(2) The State Superintendent of Education.

(3) Two public K-5 teachers, with experience in implementing OGAP or AMSTI foundational training, appointed by the Executive Director of the Alabama Education Association.

(4) One public K-5 special education teacher, with experience in implementing OGAP training or AMSTI foundational training, appointed by the State Superintendent of Education.

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

(6) One elementary school-based mathematics coach, with experience in NUMBERS, AMSTI foundational training, or OGAP, or any combination thereof, appointed by the Executive Committee of the Alabama Council of Teachers of Mathematics.

(7) Two public elementary school principals, with experience supporting OGAP or AMSTI foundational training,

appointed by the Board of Directors of 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 in OGAP or AMSTI foundational training, appointed by the Board of Directors of 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 so that diversity of gender, race, and geographical areas is reflective of the makeup of this state. The Governor 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 not receive a salary but 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.

(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 to the State Board of Education in collaboration with 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 shall do all the following:

(1) Provide proven screening and diagnostic capabilities for monitoring student progress.

(2) For grades K-5, measure at a minimum, all of the following:

a. Number sequence.

b. One-to-one correspondence.

c. Cardinality.

d. Oral and written names for numbers based on grade level standards.

e. Subitizing.

f. Number relationships.

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

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

i. Computational fluency with whole numbers, fractions, and decimals based on grade level standards.

j. Spatial reasoning based on grade level standards.

(3) Identify students who have a mathematics deficiency, including identifying students with characteristics of dyscalculia.

(f) In determining which assessment systems to approve for use by local education agencies, the Elementary Mathematics Task Force, in collaboration with 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 of instructional time.

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

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

Section 4. (a) There is created an Office of Mathematics Improvement within the State Department of Education 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. Each region shall have one coordinator who shall be appointed by the director. The director shall have experience in administrative duties, as an elementary mathematics specialist or coach, and teaching mathematics in a public elementary school.

(b) Each of the 11 regional coordinators shall have experience as a K-5 mathematics specialist or coach, with experience in training or supporting OGAP and teaching mathematics in a public school.

(c) Each regional coordinator, with the oversight of the director, shall oversee all of the following:

(1) Commencing with the summer of 2023, the Alabama Summer Mathematics Achievement Program, initially for the lowest six percent performing elementary schools, and thereafter increasing to include an additional one percent annually until the program is administered in the lowest 10 percent performing elementary schools.

(2) The response to instruction process in schools identified for intensive interventions and supports by the Office of Mathematics Improvement.

(3) The implementation of mathematics curricula and intervention programs approved by the Elementary Mathematics Task Force for Tier 1, Tier 2, and Tier 3 instruction in schools identified for intensive interventions and supports by the Office of Mathematics Improvement.

(4) The monitoring and evaluating of data collected from AMSTI and local education agencies to make decisions for improvement to the mathematics coach program as needed to increase student achievement, collaboration, and support.

(5) The implementation of appropriate professional learning approved by the Elementary Mathematics Task Force for Tier 1, Tier 2, and Tier 3 instruction in schools identified

for intensive interventions and supports by the Office of Mathematics Improvement.

(6) The provision of recommendations for improvement to AMSTI and local education agencies based on data collected and analyzed by the Office of Mathematics Improvement.

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

(1) Develop or procure a diagnostic interview tool for grades K-2 to determine key numeracy concepts students have mastered and uncover student misconceptions.

(2) Recommend training and support for educators for the effective implementation and interpretation of the diagnostic tool. The diagnostic tool shall be used with students who have been identified as struggling in mathematics based on benchmark assessments or teacher observation, or both.

(3) Develop screeners to accurately identify students in grades 4-5 who need intervention in fractional reasoning.

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

(5) 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.

(6) Determine the scope and pace of scaling mathematics coaches with the goal of placing a mathematics coach in each school containing any combination of grades K-5 before the 2027-2028 school year.

(7) Develop an intensive professional development series on foundational mathematics content knowledge to include internal and external partners for the lowest 25 percent performing elementary schools.

(8) Monitor the implementation of intensive professional development on foundational mathematics content knowledge for the lowest 25 percent performing elementary schools.

(9) Monitor AMSTI mathematics specialist support in the lowest 10 percent performing elementary schools.

(10) Develop an instructional leadership framework based on research and best practices that identifies the desired essential competencies of a highly effective principal at the following levels:

a. Aspiring. Preparing for principalship.

b. Emerging. Receiving mentoring during the initial two years of practice.

c. Developing. Developing and refining leadership skills.

d. Transformational. Building necessary skills and knowledge to lead schools in ways fully responsive to the needs of students.

(11) Establish a design team to develop training and materials to equip principal trainers in the work of facilitating, coaching, and mentoring principals for each level described in the leadership framework. The design team shall also develop resources to collect evidence of participant reactions, participant learning, organization support and change, participant use of new knowledge or skills, and student learning outcomes. Learning experiences determined by the design team shall include opportunities for in-person learning, virtual collaborations, regional meetings, and professional learning communities. Specific to mathematics leadership, administrators shall learn to do all of the following:

a. Establish a clear and shared vision for mathematics teaching and learning, including all of the following:

1. Measures of success to include continually monitoring the vision.

2. Feedback for educators in meeting the vision and support for quality professional learning for educators, educator leaders, and mathematics coaches.

3. Strategic placement of support structures to strengthen mathematics teacher practices and student performance.

b. Establish norms for participation and collaboration in coaching cycles and professional learning.

c. Identify and support effective mathematics teaching practices and student practices.

d. Develop the ability to identify effective instructional practices in early childhood classrooms to improve numeracy.

(12) Commencing in 2023, develop and implement a formative evaluation for administrators to do all of the following:

a. Establish a clear set of expectations and goals.

b. Adapt to level of experience.

c. Connect to educator and student level outcomes.

d. Provide training and support for school level instructional leaders.

Section 5. (a) The Director of the Office of Mathematics Improvement shall convene and oversee a Postsecondary Mathematics Task Force to develop guidelines for institutions of postsecondary education to train elementary 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 Mathematical Sciences, the United States Department of Education, and the Mathematical Sciences Research Institute. Guidelines shall go into effect August 1, 2023. The membership of the Postsecondary Mathematics Task Force shall include all of the following:

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

(2) The State Superintendent of Education.

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

(4) One department head of elementary education employed by a public two-year or four-year institution of higher education physically located within the 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 public school teacher employed at a school containing grades K-5, with experience mentoring teacher interns, appointed by the State Board of Education.

(7) One public school special education teacher employed at a school containing grades K-5, with experience mentoring teacher interns, 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.

(b) All appointing authorities shall coordinate their appointments so that diversity of gender, race, and geographical areas is reflective of the makeup of this state.

Section 6. (a) The State Board of Education, by rule, shall establish a coherent and sustained system of assistance and support for schools not attaining identified levels of achievement or not showing specified levels of progress as determined by the Office of Mathematics Improvement. The Office of Mathematics Improvement shall specify appropriate academic intervention for those K-5 schools that are in the lowest 10 percent performing schools on the summative assessment system approved by the State Board of Education.

(b) The Office of Mathematics Improvement shall assign a school improvement team to each school identified for academic intervention. A school improvement team shall do all of the following:

(1) Conduct a comprehensive on site evaluation of each low-performing school to determine any causes for the low performance and lack of progress of the school. The evaluation shall include presentations by the local superintendent of education, the chair of the local board of education, the school principal, a parent, and other school personnel.

(2) Present to the local board of education, the Director of the Office of Mathematics Improvement, and the State Superintendent of Education recommendations including, but not limited to, 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 scientifically 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 instruction time for low-performing students, strategies for parental involvement, incorporation of a teacher mentoring program, or other actions the team considers appropriate.

(3) Assist in the development of an intensive school improvement plan focused on student achievement.

(4) Monitor the progress of the school in implementing the intensive school improvement plan focused on student achievement.

(5) If a school is subject to intervention for two consecutive years, the school improvement team shall recommend, and the Director of the Office of Mathematics Improvement shall appoint, a school management team to oversee and direct the duties of the principal of the school, in relation to the school, until school performance improves and the school is released from intervention by the Director of the Office of Mathematics Improvement. If a school is subject to intervention for three of more consecutive years, the local board of education shall do one of the following:

a. On recommendation of the school management team, remove certain school personnel, including the principal, who have not been effective in producing student achievement gains during intervention.

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

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

(c) The Office of Mathematics Improvement shall clearly define the powers and duties of each school improvement team and each school management team appointed to oversee the operations of a school.

(d) Annually, on or before December 31, the Office of Mathematics Improvement shall report to the State Board of Education the status of each intervention imposed during the preceding year and shall recommend whether to end, extend, or upgrade the intervention.

(e) Before an intervention is imposed, the applicable local board of education may examine any data considered by the Office of Mathematics Improvement in support of the intervention and may offer any corrections, explanations, or supplements to that data. The Office of Mathematics Improvement may accept or reject any offers proposed by the local board of education.

(f) A local board of education may request an opportunity for a hearing before the State Board of Education to show cause against the necessity of an intervention. An intervention may not be stayed pending the hearing or the determination of the State Board of Education. A determination by the State Board of Education is final.

(g) The Office of Mathematics Improvement shall adopt rules, pursuant to the Alabama Administrative Procedures Act, as necessary to implement and administer this section.

(h) The State Superintendent of Education shall comply with all requests for data from the Office of Mathematics Improvement and shall make every effort to assist the Office of Mathematics Improvement with implementing and administering this section.

(i) Annually, no later than January 15, the Director of the Office of Mathematics Improvement 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 that details 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.

Section 7. Funds appropriated by the Legislature in support of Sections 1 to 16, inclusive, shall be expended for all of the following:

(1) Local mathematics coaches, teachers in residence, regional mathematics specialists, the operations of the Office of Mathematics Improvement, professional learning activities, and administrative activities.

(2) Administration and analysis of mathematics screening and formative and diagnostic assessments to guide instruction.

(3) Professional learning in evidence-based practices along with an Elementary Mathematics Task Force vetted and approved standards-based curriculum to include the Effective Mathematics Teaching Practices, Student Mathematical Practices, visual representations, multisensory activities, concrete materials, schema instruction, metacognitive strategies, promoting student discourse, and presenting/comparing multiple solutions.

(4) Differentiated mathematics instruction and intensive vetted and approved intervention based on student need, including students exhibiting the characteristics of dyscalculia.

(5) A full time AMSTI regional math specialist to provide support to the schools identified for intensive

interventions and supports by the Office of Mathematics Improvement.

(6) AMSTI mathematics specialists to provide support to local education agencies, whereby the regional mathematics specialists shall support struggling schools until the schools have improved core instruction to the extent that the schools are no longer identified for intensive interventions and supports by the Office of Mathematics Improvement.

(7) An external consultant to provide evaluation of the work of mathematics coaches' implementation and outcomes described in Section 10.

Section 8. (a) Each elementary school teacher, with the full support of their 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) Build fluency with procedures on a foundation of conceptual understanding, strategic reasoning, and problem solving over time.

(3) Provide students access to tools that will support mathematical thinking.

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

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

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

(7) Consistently implement the Effective Mathematics Teaching Practices included on the 2019 Alabama Course of Study: Mathematics and any future derivation thereof.

(8) Use a variety of high-quality print and online resources and curricula approved by the Elementary Mathematics Task Force to carefully plan units and lessons based on the 2019 Alabama Course of Study: Mathematics and any future derivations thereof.

(9) Incorporate mathematical tools and technology as a daily part of the mathematics classroom.

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

Section 9. (a) Each K-5 school shall be assigned one mathematics coach for every 500 students.

(b) A mathematics coach, who shall be employed by the State Superintendent of Education with funds appropriated by the Legislature to support the provisions of Sections 1 to 16, inclusive, shall meet all of the following qualifications on the date of initial employment:

(1) Hold a valid Alabama professional education certificate in elementary education or special education.

(2) Have a minimum of five years of experience as an 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, dyscalculia specific interventions, and early numeracy interventions.

(4) Hold a master's degree and professional development in AMSTI foundational training or OGAP.

(c) The duties and responsibilities of a mathematics coach employed pursuant to Sections 1 to 16, 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 a strategic plan for mathematics coaching to improve student achievement in mathematics.

(3) Facilitating schoolwide mathematics professional learning.

(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 displaying the signs of dyscalculia.

(7) Enhancing mathematics content area professional learning for teachers and interventions for exceptional students, including dyscalculic students.

(8) Monitoring progress of K-5 students in mathematics at least three times per year and making recommendations for modifying instruction based on the individual needs of students and trends in student data.

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

(10) Collaborating with building-level administrators, building-level staff, and district-level personnel to develop and implement mathematics-specific coaching, goals, resources, and strategies to improve student achievement in mathematics.

(11) Collaborating with teachers and grade-level teams of teachers to effectively use appropriate instructional materials, to include concrete materials, necessary to ensure that students understand mathematical concepts.

(12) Collaborating with grade level teams to develop rigorous tasks, lessons, and assessments aligned with the 2019 Alabama Course of Study: Mathematics and any derivation thereof, 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.

(13) Assisting teachers in using formative assessments and analyzing student work to identify students with misconceptions, students displaying signs of dyscalculia, and students needing acceleration.

(14) Assisting teachers administering early numeracy screenings in grades K-2 to identify students in need of a diagnostic assessment to provide prescriptive, intensive intervention and support not to exceed two hours per week.

(15) Assisting teachers with administering fractional reasoning screeners for students in grades 3-5 to identify students in need of a diagnostic assessment to provide prescriptive, intensive intervention and support not to exceed two hours per week.

(16) Advocating, planning, and coordinating opportunities for school-based parent, guardian, or community engagement in mathematics, or any combination thereof.

(17) Developing and facilitating job-embedded and other ongoing professional learning opportunities for teachers, using coaching strategies, including joint preplanning, modeling lessons, coteaching lessons, targeted observation to collect data, and debriefing.

(18) Participating actively and cooperatively in all AMSTI support visits and professional learning to meet agreed upon personal outcomes and all school, state, and district established mathematics goals.

(19) Actively seeking help and support to grow in knowledge, skills, and expertise in mathematics.

(20) Utilizing assessment data in all tiers of mathematics instruction to make decisions that will move students to higher levels of performance in mathematics.

(21) Planning or facilitating, or both, professional learning opportunities that will assist teachers in targeting student deficits; facilitating professional conversations; fostering student engagement; assessing student learning; reflecting on professional practice; and identifying next learning steps to achieve state, district, and school goals in mathematics.

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

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

(d) A mathematics coach employed by the State Superintendent of Education pursuant to Sections 1 to 16, inclusive, may not perform administrative duties, serve in administrative roles, serve as a substitute teacher, serve as a testing coordinator, or serve as an interventionist.

(e) The State Superintendent of Education, or his or her designee, and the Office of Mathematics Improvement, shall certify that each mathematics coach employed pursuant to Sections 1 to 16, inclusive, satisfies the minimum qualifications established in this section.

(f) The State Superintendent of Education shall develop, and the Elementary Mathematics Task Force and Office of Mathematics Improvement shall approve, an evidenced based accountability system for measuring the effectiveness of mathematics coaches employed pursuant to Sections 1 to 16,

inclusive, for improving teacher professional learning and for increasing student growth and proficiency on state approved, criterion referenced formative and summative assessments of mathematics that shall be vetted and approved by the Elementary Mathematics Task Force and Office of Mathematics Improvement.

(g) 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 provide professional learning for the coach.

(h) The Director of the Office of Mathematics Improvement shall submit an empirical report 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, no later than January 15, annually, measuring the influence of mathematics coaches on teacher professional learning and student growth and proficiency on state approved, criterion-referenced formative and summative assessments of K-5 mathematics.

Section 10. (a) The Executive Committee of the Alabama STEM Council shall secure an external consultant to provide evaluation of the work of mathematics coaches

beginning January 15, 2023, and evaluate the implementation and outcomes. The consultant shall be selected through an open request for proposals process written by the executive committee. The proposals 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 the proposals. The membership of the panel shall include all of the following:

(1) An elementary school based math coach.

(2) Two elementary math educators.

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

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

(5) One AMSTI elementary mathematics specialist.

(6) One elementary public school principal.

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

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

(b) 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.

(c) The external evaluation consultant shall submit an annual report on or before January 30 each year. Quarterly reports shall be submitted 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 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, and the Executive Committee of the Alabama STEM Council.

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

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

Section 11. (a) Educator preparation programs at public two-year and four-year institutions of higher education in the state shall incorporate learning specific to the condition known as dyscalculia, including early warning signs, screening, and recommendations for interventions found to be successful.

(b) Guidelines for those institutions of higher education to train elementary teachers, developed by the Postsecondary Mathematics Task Force, shall go into effect August 1, 2024.

(c) A comprehensive, independent review shall be conducted every four years and a report given to the Director of the Office of Mathematics Improvement.

(d) As a requirement of initial licensure, beginning with the 2023-2024 school year, candidates for initial elementary certification shall receive a passing score, as determined by the State Board of Education, which shall base its determination on the national score average during the preceding academic year on a foundational mathematics assessment for entry level teachers of mathematics. Beginning with the graduating class of 2024, teachers seeking an initial elementary certification who have passed the edTPA and a foundational mathematics assessment may no longer be required to pass an additional mathematics assessment.

Section 12. (a) On or before June 30, 2023, 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 education certificate in elementary education or special education and 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 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 to include: 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 how students learn.

(6) 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 students' 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 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) Use a variety of mental computation techniques.

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

(18) Describe and represent mathematical relationships.

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

(1) Prepare candidates who have knowledge of historical developments in mathematics that includes the contributions of underrepresented groups and diverse cultures.

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

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

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

(5) Prepare candidates who 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 community of mathematics educators.

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

(f) Subject to legislative appropriations, 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 13. (a)(1) A kindergarten student or incoming 1-5 grade student identified with a mathematics deficiency, or who demonstrates the signs of dyscalculia, shall be provided intensified mathematics interventions approved by the Elementary Mathematics Task Force to remedy his or her specific mathematics deficiency. A K-5 student who exhibits a mathematics deficiency based on a State Board of Education approved assessment or classroom formative assessment shall receive immediate mathematics intervention.

(2) The mathematics teacher of the student receiving mathematics intervention shall prepare both quarterly and end of year reports detailing any mathematics intervention provided.

a. Quarterly reports, which shall be submitted to the principal, 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 State Board of Education approved mathematics intervention program 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 (b).

6. Any tools used to monitor student progress.

7. Student growth.

b. End of year reports, which shall be provided to the parent or legal guardian of the student and his or her mathematics teacher for the immediately succeeding school year, shall include all of the following:

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

2. Student growth for the school year based on a State Board of Education approved mathematics assessment.

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

(b) Each local education agency shall provide the following mathematics intervention services for K-5 grade students identified with deficiencies:

(1) 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.

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

(3) Mathematics intervention services and supports to correct 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 to include engaging, high quality, rigorous supplemental sessions approved by the Elementary Mathematics Task Force.

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

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

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

e. Utilizing mathematics strategies or programs, or both, which have been vetted and approved by the Elementary Mathematics Task Force, that are evidence-based, and which have demonstrated proven results in accelerating student mathematics achievement within the same school year.

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

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

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

i. Providing supplemental, evidence-based mathematics interventions before or after school, or both, which are approved by the Elementary Mathematics Task Force and delivered by a 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 and providing feedback about mathematics ideas.

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

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

(1) Kindergarten students shall be assessed at the beginning of the year, mid-year, and at the end of the year using the early numeracy screening approved by the Elementary Mathematics Task Force.

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

(3) Any first or second grade student identified with a mathematics deficiency, based on grade level to include counting and recognizing whole numbers, comparing and ordering numbers, composing and decomposing numbers, and operations with whole numbers, shall be provided intensified Elementary Mathematics Task Force approved mathematics interventions to remedy his or her specific needs.

(4) Any incoming third grade student identified as struggling with any of the following shall be provided

intensified Elementary Mathematics Task Force approved mathematics interventions to remedy his or her specific needs:

a. Operations of addition and subtraction.

b. Properties of operations.

c. Counting and recognizing numbers to 1,000.

d. Understanding of 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.

(d) Beginning with the 2023-2024 school year, any incoming fourth or fifth grade student shall be assessed using the fractional reasoning screener approved by the Elementary Mathematics Task Force. Any fourth or fifth grade student identified with a fractional reasoning deficiency shall be provided intensified mathematics interventions approved by the Elementary Mathematics Task Force to remedy his or her specific fractional reasoning deficiency.

(e) Beginning with the 2024-2025 school year, any incoming fourth grade student identified as struggling with any of the following shall be provided intensified Elementary Mathematics Task Force-approved mathematics interventions to remedy his or her specific needs:

(1) Representing unit fractions with area and length models.

(2) Representing equivalent fractions using a variety of objects and pictorial models.

(3) Understanding of multiplication and division and strategies for multiplication and division within 100.

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

(5) 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.

(6) 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.

(f) Beginning with the 2024-2025 school year, any incoming fifth grade student identified as struggling with any of the following shall be provided intensified Elementary Mathematics Task Force approved mathematics interventions to remedy his or her specific needs:

(1) Comparing and ordering whole numbers up to 1,000,000.

(2) Comparing and ordering fractions and decimals to hundredths.

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

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

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

(6) Understanding the relationship between addition and subtraction.

(7) Multiplying a whole number and a fraction.

Section 14. (a) Beginning with the 2023-2024 school year, the State Department of Education Office of School Improvement shall do all of the following:

(1) Participate in mandatory professional learning to know what to look for as evidence of students using Student Mathematical Practices identified in the 2019 Alabama Course of Study: Mathematics and any derivation thereof.

(2) Participate in professional learning to know what to look for as evidence of teachers implementing the Effective Mathematics Teaching Practices from the 2019 Alabama Course of Study: Mathematics.

(3) Add educators experienced in the implementation of teaching elementary mathematics through problem solving to office staff.

(b) Schools performing in the bottom 10 percent of mathematics achievement shall do all of the following:

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

(2) Use approved curricula for intervention programs as approved by the Elementary Mathematics Task Force.

(3) Engage and implement professional learning as determined by the assigned school improvement team.

(4) Use an approved formative assessment selected by the Elementary Mathematics Task Force.

(5) Engage and implement professional learning for principals and assistant principals as determined by the assigned school improvement team.

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

(c) Annually, on or before September 30, each local education agency shall report in writing to the State Superintendent of Education 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 a State Board of Education approved mathematics assessment.

(2) By grade, the number and percentage of students screened for dyscalculia characteristics, 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 and above grade level on a State Board of Education approved mathematics assessment.

(4) The total number and percentage of students starting fifth grade with a mathematics deficiency, including the specific area of mathematics deficiency.

(5) The total number and percentage of fifth grade students who started third grade with a mathematics deficiency and completed fifth grade on grade level as determined by the fifth grade state standardized assessment in mathematics.

(6) By grade, the total number and percentage of eligible K-5 students who attended summer programs that included intensive mathematics instruction.

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

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

(9) By school, the total number, and percentage, of incoming fourth and fifth grade students identified as having fractional reasoning deficiencies.

(d) The State Board of Education, by rule, shall establish a uniform format for local education agencies to use in reporting the information required by subsection (c). The format shall be developed with input from local boards of education and shall be provided to each local board of education no later than 90 days before the annual due date. Annually, on or before November 1, the State Superintendent of

Education shall compile the information received from the local education agencies into state level summary information and report the information to the State Board of Education, the public, the Governor, the Lieutenant Governor, the President Pro Tempore of the Senate, the Speaker of the House of Representatives, and the Director of the Office of Mathematics Improvement.

(e) The State Superintendent of Education shall report annual mathematics growth and proficiency targets for all students and all subgroups based on the state Every Student Succeeds Act plan to the Elementary Mathematics Task Force and the Director of the Office of Mathematics Improvement by the 15th day of January of each year.

Section 15. (a) The Alabama Mathematics Summer Achievement Program is established and shall be available to all K-5 students in public elementary schools that are among the schools identified for intensive interventions and supports by the Office of Mathematics Improvement.

(b) Each local education agency shall provide Alabama Mathematics Summer Achievement Program mathematics camps to all K-5 students identified with a mathematics deficiency.

(c) Summer mathematics camps provided through the Alabama Mathematics Summer Achievement Program 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 determined by the Elementary Mathematics Task Force, and teacher performance evaluations.

(2) Include 60-70 hours of time spent in mathematics problem solving.

(3) Incorporate an Elementary Mathematics Task Force and Office of Mathematics Improvement approved mathematics assessment system that shall be administered at the beginning and end of the summer mathematics camp to measure student progress.

(4) Be held in conjunction with existing summer programs conducted by the local education agency or in partnership with community-based summer programs, designated as effective by the Elementary Mathematics Task Force with the oversight of the Office of Mathematics Improvement.

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

(b) The State Board of Education, in collaboration with the Office of Mathematics Improvement, shall adopt rules as necessary to implement and enforce Sections 1 to 16, inclusive.

Section 17. (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 Elementary and Secondary Education 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 18. This act shall become effective immediately following its passage and approval by the Governor, or its otherwise becoming law.