



# 2017 NCTM Legislative Platform

## What We Believe

A strong foundation in mathematics, for each and every student from pre-K-12, is vital to our nation's economic stability, national security, workforce productivity, and full participation in our democratic society. Mathematical literacy is fundamental for adult numeracy, financial literacy, and everyday life. As the world's largest professional organization dedicated to improving mathematics education for each and every student, the National Council of Teachers of Mathematics (NCTM) believes that teachers and what they do in the classroom are at the heart of producing college-, career-, and citizen-ready high school graduates and making this vision a reality.

NCTM supports investing in teachers at **every stage of their development** and believes that mathematical literacy can be achieved through an increased emphasis from policymakers on early childhood education, family engagement, high-quality standards and assessments, and ensuring the appropriate conditions for learning for each and every student in all the country's schools and classrooms.

To that end, NCTM has identified the following legislative priorities for the 115<sup>th</sup> Congress.

## Faithful Implementation of the Every Student Succeeds Act (ESSA)

- ◆ **Support research on best practices** in preparing and supporting K-12 teachers and classrooms and a prospective consideration of what teachers, parents, students, and the public can expect from federal K-12 education policies.
- ◆ **Support alternative, state-devised accountability systems** that ensure that each and every mathematics student is being educated adequately as the Department of Education oversees the transition from waivers given to states to provide relief from some of the most onerous provisions of the No Child Left Behind Act to the updated law and accountability requirements that will be developed by each state.
- ◆ **Support adequate investments** in the programs authorized by ESSA that serve as the basis of federal support for local education, including specific programs for STEM (science, technology, engineering, and mathematics) education and STEM subjects.
- ◆ **Support adequate appropriation of Title I funds** for the country's poorest students and schools, and other efforts to improve schools nationwide that are inadequately serving their students. More specifically:
  - Increase efforts to make curriculum and assessments coherent and aligned with learning goals, ensuring that assessment data serve as meaningful guides for decision making about schools, programs, and individual students' instruction.
  - For state assessments to effectively support student's learning as intended they must assess all aspects of mathematical knowledge—procedural skills, conceptual understanding, problem solving, reasoning, and the ability to construct and evaluate mathematical arguments—at each grade and in high school. State assessments must include a performance assessment component, and states must allocate adequate test time to allow for the inclusion of performance assessments.

- Emphasize the importance and value of assessments and accountability systems that base critical decisions about students, teachers, and instruction on multiple measures rather than the results of any single summative test. Use ongoing formative and summative assessments that allow students to demonstrate mathematical knowledge in multiple ways and that provide a moving picture of what students know and are able to do.
- Give parents and communities the information they need about the teaching and learning of mathematics to guide decisions about the education of their young people.
- ◆ **Support adequate appropriation of Title II professional development funds** to support teachers, coaches, and school leaders in continually updating their content knowledge, strengthening their skill in teaching mathematics, and deepening their understanding of how mathematics is learned. More specifically:
  - With the elimination of the Math Science Partnership program, state decision makers will require additional support in providing ongoing professional development for mathematics teachers and coaches.
  - Support early-career teachers through mentoring programs, incentives, and ongoing long-term professional development.
- ◆ **Support curricula based on how children and adolescents learn**, especially research-based findings showing that (a) having a strong start gives young children significant advantages, (b) conceptual understanding, procedural fluency, and problem-solving skills mutually reinforce one another, and (c) effort, not simply inherent talent, counts in mathematical achievement. More specifically:
  - Encourage research that brings together the education research community, the mathematics community, and classroom-based mathematics education practitioners in producing research results and building on findings with immediate and long-term applications for teachers and students.
  - Support the development and identification of high-priority mathematics education research and foster the growth of a base of both descriptive and experimental findings that are methodologically sound and balanced.

## Other Federal Investments in Mathematics Educator Preparation and Research

- ◆ **Support investment in Title II of the Higher Education Act** for the preparation of mathematics teachers and the development and expansion of exemplary programs for preservice teacher education as Congress considers how to rewrite the Higher Education Act. More specifically:
  - Advocate for teacher preparation that supports teachers in the transition to implementing revised state standards (such as Common Core State Standards for Mathematics).
  - Ensure that preparation programs are designed to prepare teachers for the challenges of a 21<sup>st</sup> Century mathematics classroom in the United States.
- ◆ **Support legislation targeting middle and high school teachers of mathematics** and their preparation. This includes investments in the preparation and ongoing support of teachers as well as mathematics specialists, coaches, and teacher leaders in elementary and middle schools. More specifically:

- Support for developing strategies that attract those changing careers and capitalizing on the skills that these professionals bring to the classroom.
- Support for community colleges and alternative teacher preparation programs that play a growing role in meeting the demand for effective mathematics educators.
- ◆ **Support adequate funding for the National Science Foundation (NSF)**, with NSF education programs receiving increases that are at least commensurate with those of the overall NSF budget. In particular:
  - Support the STEM + Computing Partnerships (STEM+C) program, intended to support programs in NSF's Directorate for Education and Human Resources, which can help the teachers, schools, and students that need it the most. This funding directly addresses several important issues:
    - The need to recruit and retain highly qualified teachers with strong knowledge of content and pedagogy in the STEM disciplines
    - The need to increase the number of students interested in and educated for careers in STEM fields, as well as to educate a more scientifically literate citizenry
    - The need to educate each and every student in the use of mathematics as scientifically and financially literate citizens.
- ◆ **Leverage federal investments across agencies**, particularly at the Department of Education and the National Science Foundation, to inform and improve instructional practice.
- ◆ **Revise the Education Sciences Reform Act** to reflect the importance of research in improving teacher preparation, classroom practice, and the development of effective mathematics curriculum and assessments that inform and improve classroom instruction for all students.

In summary, Congress should ensure that changes to all federal education laws—the Elementary and Secondary Education Act, the Higher Education Act, the Carl D. Perkins Career and Technical Education Act, the Individuals with Disabilities Education Act, the Education Sciences Reform Act and others—and their implementation, reflect the importance of preparing mathematics teachers who can prepare each and every student for future success.

In addition to requesting the 115<sup>th</sup> Congress act on these legislative priorities, NCTM will do the following to continue to support state and local decision makers.

## Supporting State and Local Level Mathematics Literacy

- ◆ Develop long-term strategies and implement initiatives to effect significant improvement in mathematics education as set forth in NCTM's Principles to Actions: Ensuring Mathematical Success for All. Particular emphasis should be on systemic strategies and initiatives to ensure that each and every student has access to a high-quality mathematics curriculum, effective equitable teaching with high expectations, and a positive learning environment.
- ◆ Support growing efforts to prepare and place more elementary mathematics specialists in classrooms in the early grades.
- ◆ Provide information, guidance, and support to state administrators considering and implementing uniform standards and assessments.



## **NCTM and its members will take these actions to support mathematics education and educators:**

- ◆ Support federal funding for programs dedicated to STEM education and the national priority placed on inspiring students to pursue study in the fields of science, technology, engineering, and mathematics to fill the STEM careers pipeline and satisfy the workforce needs of the future.
- ◆ Ensure that lawmakers' efforts to improve investments in teacher preparation programs and ongoing professional development for educators reflect best practices and focus on the importance of qualified and effective teachers in every mathematics classroom.
- ◆ Advocate for new federal investments in high-quality early childhood education programs and support proposals to provide or strengthen education for the youngest children most at risk for falling behind in pre-K–12 classrooms.
- ◆ Highlight the role of mathematics in major legislation to ensure that citizens develop and apply the mathematical and critical thinking skills necessary to evaluate choices and their effects on their financial, statistical, economic, scientific, and technological literacy.
- ◆ Maximize opportunities presented by ongoing attention to STEM education by collaborating with other organizations with similar priorities and interests, including the STEM Education Coalition.
- ◆ Support efforts to coordinate federal investments in STEM education, as well as efforts to define “STEM education” in legislation and regulation in such a way that all the disciplines reliant on mathematics and important to a vibrant economy are included in efforts to support a robust STEM pipeline.

(Approved by the Board of Directors February 16, 2017)

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The National Council of Teachers of Mathematics is the world's largest professional organization dedicated to improving mathematics education for each and every student. The Council's Principles to Actions: Ensuring Mathematical Success for All (2014) describes the principles and actions, including specific teaching practices, that are essential for a high-quality mathematics education for all students. Principles and Standards for School Mathematics (2000) provides guidelines for excellence in mathematics education. Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics: A Quest for Coherence (2006) outlines the next step in implementing the Standards by identifying the most important mathematical topics that form the foundation for understanding and lasting learning at each grade level. Focus in High School Mathematics: Reasoning and Sense Making (2009) advocates practical changes to the high school mathematics curriculum to refocus learning on reasoning and sense making. The Council is committed to a constructive public dialogue to ensure a mathematics education of the highest quality for each and every student.

