Middle School Mathematics Requires Attention and Examination

The National Council of Teachers of Mathematics calls for dramatic changes to policies and practices that have hampered middle school students for far too long. The status quo is simply unacceptable.

Disparities in learning opportunities based on race, class, language, gender, and perceived mathematical ability are far too prevalent in middle school mathematics in North America.





The mathematics that students learn during middle school includes many of the most useful mathematics concepts that students will use as adults.



Students need to see mathematics as a key component of their everyday life and understand how important being a mathematical thinker and doer is and will continue to be both professionally and personally.

Students undergo significant developmental changes in middle school. Because of this multifaceted transformation, middle school mathematics should intentionally challenge students in meaningful ways, be responsive to students' development, and be respectful of students' needs and interests.



Catalyzing Change in Middle School Mathematics

Catalyzing Change in Middle School Mathematics: Initiating Critical Conversations aims to accelerate progress in the quality of experiences of students, their teachers, and their families to ensure students are well prepared with the mathematical literacy they require and deserve for both their current and future personal and professional lives. Such quality experiences are equitable, just, and inclusive and rightfully position each and every student as human beings empowered and inspired by mathematics.

Catalyzing Change in Middle School Mathematics has proposed four key recommendations that must be enacted to create the highest quality middle school mathematics program for each and every student that recognizes and celebrates young adolescents. The key recommendations for Catalyzing Change in Middle School Mathematics include:

1. Broaden the Purposes of Learning Mathematics.

Each and every student should develop deep mathematical understanding, understand and critique the world through mathematics, and experience the wonder, joy, and beauty of mathematics, which all contribute to a positive mathematical identity.

2. Create Equitable Structures in Mathematics.

Middle school mathematics should dismantle inequitable structures, including tracking teachers as well as the practice of ability grouping and tracking students into qualitatively different courses.

3. Implement Equitable Mathematics Instruction.

Mathematics instruction should be consistent with research-informed and equitable teaching practices that foster students' positive mathematical identities and strong sense of agency.

4. Develop Deep Mathematical Understanding.

Middle schools should offer a common shared pathway grounded in the use of mathematical practices and processes to coherently develop deep mathematical understanding, ensuring the highest quality mathematics education for each and every student.

The National Council of Teachers of Mathematics celebrates 100 years as the public voice of mathematics education, supporting teachers to ensure equitable mathematics learning of the highest quality for each and every student through vision, leadership, professional development and research. With 40,000 members and more than 200 Affiliates, it is the world's largest organization dedicated to improving mathematics education in prekindergarten through grade 12. NCTM is dedicated to ongoing dialogue and constructive discussion with all stakeholders about what is best for students and envisions a world where everyone is enthused about mathematics, sees the value and beauty of mathematics and is empowered by the opportunities mathematics affords.



NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS

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