



# NCTM 2023 Virtual Conference

Amplify and Activate In and Beyond the Classroom

## **Changing Times: Dynamic Opportunities with Technology and Data**

NCTM advocates for technology as an essential resource to help students learn and make sense of mathematical ideas, reason mathematically, and communicate their mathematical thinking. We are also continually immersed in data in our daily lives. How might we use technology to support deep investigation and analysis of data? How might we leverage the expansions of new technologies and the creative integrations of technology to support the advancement of student learning and data literacy? What are some of the best practices emerging from pandemic teaching and learning?

## **Remixing Assessment: Using Assessment to Build Student Confidence**

Students often have strong reactions, one way or another, to assessments. How can we use assessment, formative and summative, to raise student confidence and highlight powerful learning opportunities? How do we use assessment to build student confidence, to highlight powerful learning opportunities, and to empower students and embrace the richness of their cultural and community experiences they bring into the classroom?

## **Beyond School Walls: Teaching and Learning Mathematics in Multiple Settings**

The teaching and learning of mathematics happen in a variety of settings, including but not limited to formal and informal settings, museums, after-school settings, homeschools, independent, public, virtual, hybrid, face-to-face, and alternative settings. Though these various settings have existed for years, the pandemic helped expose or highlight various ways in which the world engages in mathematics. In what varied ways can teachers and learners engage in mathematical thinking? What are some of the best practices across multiple settings that help support the mathematics learning of each and every student such that the teaching and learning of mathematics is seen more as a community-building rather than a community-isolating process? Finding the best ways to teach each and every student in the setting that best meets students' needs is imperative to ensuring equity across mathematics education.

## **The Power of Unity: Building Partnerships for Collective Voice and Action**

By engaging in advocacy, the NCTM community focuses, raises awareness, and influences policymakers and the public on issues of high-quality mathematics education. Advocacy can also take many forms. How do you work with others to help the teaching and learning of mathematics be more accessible to each and every student? With whom do you partner and how do your visions align to support mathematics learners? What are some of the lessons learned from effective partnerships that work to advocate for more equitable and inclusive mathematics learning spaces? In what ways do we advocate for the teachers and learners of mathematics, both formally and informally?

## **Express Yourself: (Re)engaging Students with Doing and Learning Mathematics**

NCTM's *Catalyzing Change* books advocate for a mathematics program that expands opportunities for all learners and for learners to experience the joy and beauty of mathematics. How can engaging in mathematics provide both pleasure and a sense of achievement for each and every student? In what ways can learning mathematics in a supportive environment create confidence and motivation for students to take on new challenges? How can we help foster a joy for doing mathematics, inspire appreciation for the beauty and utility of mathematics, connect to students' cultures and identities, and provide space for students to express who they are through the mathematics they do?

## **Transformative Power: Engaging in Inclusive Culture-Based Mathematics**

The effective use of inclusive practices can be told through stories that show how intentionality, thoughtfulness, and care ensure that all students are seen and heard in the mathematics classroom. How do we nurture and foster student identity and agency in the mathematics classroom? Culture-based mathematics instructional practices are a vital component of the mathematics classroom; what happens when we ground instruction and student learning in the values, norms, knowledge, beliefs, practices, experiences, and language that are the foundation to students' cultural identity? How do we transform the teaching and learning of mathematics through practices that are anti-racist; nurture students' positive mathematical identities; disrupt systems of oppression by challenging spaces of marginality and privilege within classrooms; and nurture students' mathematical agency, belonging, and joy?