

Championship Playbook: Empowering Our Students to Experience the World Through a Mathematical Lens

As educators, our role is to develop a playbook of innovative approaches for empowering all students to experience mathematics as relevant, useful, and engaging, providing them with a lens through which to view our world. Our Championship Playbook provides tools for equitable, engaging, and empowering mathematics education that encourages student voice through purposeful planning, effective practice, and authentic performance. This conference is designed to provide space to build, add to, and share your teaching playbook through enlightening discussions, collaborative workshops, and networking opportunities to champion equitable mathematics education that is engaging, and empowering for every learner.

Purposeful Planning

Expanding Your Instructional Playbook: Cultivating Teacher and Student Content Knowledge

Students enter the classroom imbued with a wealth of mathematical wisdom. Their potential, however, can only be tapped if we plan accordingly for their unique ways of thinking, knowing, and doing mathematics. Grounded in the Standards for Mathematical Practice, this strand invites participants to delve into mathematics from a fresh perspective, broaden their understanding of pedagogies within the content, and plan for richer learning. Sessions in this strand will empower participants to deeply understand students' emerging mathematical reasoning through a detailed examination of student work and engagement in authentic classroom settings. Sessions in this strand might include, but are not limited to, the following:

- Analyzing student thinking
- Planning effective hands-on instruction
- Designing student-led activities
- Embedding relevance and applicability of mathematics beyond the classroom
- Aligning instruction to standards and learning progressions
- Incorporating the study of data and statistics

Purposeful Planning

Strengthening Your Instructional Playbook: Establishing Equitable Learning Communities

Valuing each student as an individual, we celebrate students' assets and identities. This includes developmental variations, neuro-diversities, race and ethnicity, language, gender, sexual orientation, economic class, culture, community, and interests. Diversified learning experiences provide powerful opportunities for students to understand mathematical ideas, build positive mathematical identities, develop agency, make connections, and view the world through a mathematical lens. The more we understand and respect the individual's background and strengths, the more we understand their particular needs and co-create identity-affirming learning environments. How can we understand, celebrate, and utilize the strengths and differences that make our classes unique? Sessions in this strand might include, but are not limited to, the following:

- Improving mathematical identity and agency
- Creating a sense of belonging in the mathematics classroom
- Culturally responsive and relevant pedagogy
- Differentiated instruction
- Multi-tiered systems of support
- Intervention strategies

Effective Practice

Augmenting Your Instructional Playbook: Unveiling the Impact of Effective Teaching Practices

This strand will focus on effective teaching practices educators can add to their playbook. We aim to transcend the traditional boundaries of mathematics education and empower students to become confident learners who can navigate and shape the world using their mathematical skills. These pedagogical approaches can serve as catalysts for providing equitable learning opportunities for all students. Sessions in this strand might include, but are not limited to, the following:

- [Implementing the eight effective mathematics teaching practices](#)
- Mathematics and social-emotional learning
- Project-based learning
- Catalyzing change in mathematics education
- Modernizing the mathematics classroom

Effective Practice

Enhancing Your Instructional Playbook: Maximizing Learning Through Technology Integration

In this strand, sessions will allow educators to discover effective methods for leveraging artificial intelligence (AI)-powered tools to engage students, stimulate their imagination, and uncover profound mathematical insights. Through hands-on exploration, educators will acquire skills and knowledge to effectively integrate technology into their classrooms, transforming them into vibrant, dynamic learning communities characterized by active engagement and collaboration. Sessions in this strand might include, but are not limited to, the following:

- AI in math classrooms
- STEM in mathematics (or mathematics in STEM)
- Math technology tools to enhance instruction
- Gaming and virtual reality in math/ gamifying math instruction

Authentic Performance

Transforming Your Instructional Playbook: Reimagining Your Classroom Assessment Practices

In this strand, we will focus on assessment and feedback strategies to expose the power of student thinking in mathematics and help students make connections as we refine our instructional playbook. Assessment, when embraced as a learning opportunity, can transcend mere grading, and become a catalyst for growth and understanding. Sessions in this strand will help us shift how we think about classroom assessments and incorporate assessment practices that embrace students' unique educational, personal, and cultural experiences. Sessions in this strand might include, but are not limited to, the following:

- Implementing student-centered formative and summative assessment strategies
- Utilizing assessment data as an integral tool to elicit student thinking and guide instruction
- Integrating assessment tools to support students in navigating their learning, promoting a positive mathematical identity, nurturing a growth mindset, and elevating agency
- Dismantling grade-driven motivation and providing asset-based feedback
- Leveraging multiple points of data to support every learner
- Celebrating students' expertise and promoting assessment as a shared community practice
- Incorporating strategies to provide timely, educative, and constructive feedback
- Investigating the impact of labels on student performance
- Analyzing belief systems when it comes to student assessment performance

