AMERICAN EDUCATION REACHES OUT

AERO

Moving Learning Forward

AERO is offering a series of online opportunities focused on the NCTM/NCSM ***Moving Forward*** [1] recommendations for instructional practices that support mathematics teaching and learning during the **Covid Era - face to face, hybrid or remote settings**. Three key norms essential to all mathematics classrooms is implementation of **T**asks that promote thinking, prompt discourse, and reveal misconceptions, **Q**uestions that advance understanding and uncover errors, and **E**vidence that informs formative assessment.[2] We will share strategies for addressing the Moving Forward recommendations through the lens of the TQE process.

NOTE: Session 1 will address ***Moving Forward***'s recommendation 1 and 2.

1. Work collaboratively to develop a shared sense of the essential grade-level content that students must learn.
2. Work collaboratively to develop a shared sense of the prerequisite knowledge for that essential grade-level content

Sessions 2, 3, and 4 will address recommendation 3 and 4

3. Use formative assessment strategies to gather evidence of student learning, provide feedback on what students know, and use that feedback to design and facilitate instruction.
4. Focus instructional strategies on effective mathematics teaching practices.

[1] NCTM, NCSM. (June 2020). *Moving Forward: Mathematics Learning in the Era of COVID-19.* https://www.nctm.org/uploadedFiles/Research_and_Advocacy/NCTM_NCSM_Moving_Forward.pdf

[2] Dixon, J. K., Brooks, L. A., & Carli, M. R. (2018). *Making Sense of Mathematics for Teaching the Small Group.* Bloomington, IN: Solution Tree Press.

Sessions will be offered as series for K-5 teachers and as series for 6-12 teachers.

Session 1: Planning the Learning Journey (1 Hour)

Using the priority areas, the session will identify the 'learning intentions' of the priority content and the prerequisite knowledge needed for accessing the priority content. A process for identifying a learning progression, a pathway to successfully achieving the 'learning intention' will be shared.

Session 2: The Task (1 Hour)

To gather evidence of student learning of the priority areas, students need opportunities to engage in problem solving. This session will focus on exploring a variety of rich, student-centered tasks and analyzing the strategies to help students make sense of the tasks and assist them in persevering and engaging in critical thinking.

Session 3: The Questioning (1 Hour)

Effective classroom questioning does more than identify what a student may or may not know. Questions can engage and challenge a student. Effective questioning helps students develop critical thinking skills and is a powerful teaching strategy to open doors at every stage of the learning experience. This session will focus on strategies for crafting important questions and questioning techniques which support visible student thinking and move student learning forward.

Session 4: The Evidence (1 Hour)

To experience success in mathematics, students must be able to construct viable arguments and critique the reasoning of others. They should be able to analyze situations, form plausible arguments and be able to communicate their ideas and conclusions to others. Conversely, students should have the communication skills to understand, analyze and respond to the arguments and conclusions formed by others. This session will focus on the tools and strategies needed to develop these overarching competencies in their students.

If interested and for availability, email
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