

Components of the session

What are the desired results of Mathematics sessions?

Professional development offerings in mathematics provide for educators the opportunity to explore more deeply proven methodology for delivering effective instruction in mathematics. From the National Council of Teachers of Mathematics, we learn that "[those charged with helping students fully understand math] must understand it and implement it, and that change comes from teacher education." The instructional strategies used to present mathematics content and process to young people in our schools is continually evolving as we learn more about how to get students excited about and successfully learning math.

What will participants in Mathematics sessions be able to implement, improve or change?

Given the latest research, these sessions have been created to introduce and help teachers integrate the pedagogy and methodology behind helping students become more proficient, positive and productive about their mathematical abilities. Attendees will

- explore state and national mathematics standards
- experience engaging activities designed to focus on developing a deeper understanding of math
- plan for ways to integrate these new learnings into their daily work.

We use that knowledge to improve students' mathematical aptitude and attitude.

Session outline

Mathematics Curriculum, Instruction and Assessment can be offered as a single- or multi-day session. Follow-up opportunities such as observations, coaching, consultation, etc. are available. Sample agenda items might include:

- Work with state and national learning standards in mathematics
- Explore instructional activities and cooperative strategies (i.e.: Mathenger Hunt, Get it Together...)
- Provide opportunities for the implementation of skills learned through an action planning model

Intended outcomes

What impact will this session will have on teaching and learning?

The mathematics community has spent the last 20 years learning more about how the brain learns math. Supporting that learning in an environment rich with engaging activities that support rigorous mathematics content is crucial. The long term impact of participation in *Mathematics Curriculum, Instruction and Assessment* will be improved student learning. As new techniques are integrated into instruction, learning will be more motivational, more productive and much more enjoyable for students... and adults!

What is the evidence that shows students' or teachers' practices are changing?

When teaching and learning match what we know and what the research supports, achievement results improve. This is directly correlated to teacher efficacy. When students in classrooms engage in rigorous learning, work cooperatively and successfully with their peers, and become excited about math, the rewards for all are self-evident. As teachers compare student work generated using new approaches to instruction with the work they previously obtained through traditional methods, there will be a significant difference in how students respond. Test results bear this out. Teacher and student comments about the positive changes in classroom culture and environment will be evident. And EVERYONE will FINALLY say, "I love Math!"

Flyer format based on the "Logic Model" by Watson (2000). Child Care Partnership Project. Content: Hirst-Loucks and Loucks, 2011.

For more information regarding *Mathematics Curriculum, Instruction and Assessment* and other professional development offerings, please contact <u>Teaching and Learning Connected</u> at 315.729.6476 <u>or</u> teachingandlearningconnected@gmail.com <u>or</u> www.tlconnected.com



