The Inspiration of the Common Core: Reshaping the Math Classroom Experience
A Saturday Series for K-12 Mathematics Educators

The vision for mathematical proficiency outlined in the CCSS will require changing beliefs about what K-12 mathematics is, then transforming practice to bring that vision to life in our classrooms. This year we will continue to work together to explore the Common Core Standards for Mathematics and support you in your transition to these new standards. In an effort to better meet your needs and those of your students, we will be breaking into 3 different grade level spans for the sessions. K-2 teachers will meet as a group for the entire day, 3rd-7th grade teachers will meet together in the morning and then break into a 3rd-5th grade session and a 6th-7th grade session in the afternoon, and 8th-12th grade teachers will meet as a group for the entire day. This will allow us to focus on some of the broad topics that transition from elementary school to middle school and from middle school to high school. It will also provide opportunities for collaboration around supporting students as they transition.

Each Saturday, we will take a focused look at mathematical problem solving as it relates to “sense making”, modeling and the other standards for mathematical practice. We will then continue to explore and examine a variety of content areas and standards key to the grade levels of each group.

These sessions will be filled with strategies and techniques for engaging students in learning mathematics and will include discussions on planning units and lessons aligned to the CCSS-M. You will have time to examine your current instructional materials as well as time to explore and develop additional resources that can be used to supplement their existing curriculum.

September 20, 2014

K-2nd: Using Centers, Stations, and Group Activities: During this session we will focus on the use of centers, stations and group activities as strategies to engage students in exploring and developing critical concepts, practicing and reviewing key skills, and supporting differentiation in allowing you to meet the needs of all learners. Additionally, we will look how to effectively use the activities presented to assess student progress and look to create formative assessment tools that fit the needs of classroom teachers.

3rd-7th: Using Centers, Stations, and Group Activities: During this session we will focus on the use of centers, stations and group activities as strategies to engage students in exploring and developing critical concepts, practicing and reviewing key skills, and supporting differentiation in allowing you to meet the needs of all learners.

8th-12th: What are some of the problem solving qualities we hope to see in our students by the end of this school year? How can we encourage students to be more flexible in their thinking and persist in their efforts to make sense of a problem situation? These questions will be the catalysts for a series of activities that will clarify the types of activities and routines teachers can incorporate to promote the development of problem solving skills by their students.
November 1, 2014

K-2nd: A Real World Look at Measurement and Estimation
During this session we will focus on estimation and measurement to help students develop an understanding of how to solve problems. The focus will be to help students use prior knowledge and understanding to develop their understanding of measurement and estimation.

3rd-7th: Using Tools in the Real World
During this session we will focus on solving real world measurement and geometry problems, including developing an understanding of and proficiency with the tools and skills that are essential to solving these problems.

8th-12th:
Participants will explore ways to modify the content within their current curriculum in order to incorporate the modeling of real world situations using a problem solving focus. Using student work and the revision process to drive instructional choices will also be explored.

January 24, 2015

K-2nd: A Real World Look at Geometry and Visual Spatial Reasoning
During this session we will focus on geometry and visual spatial reasoning to help students develop an understanding and connection to math in their world. The focus will be to help students “see” the geometry in their environment.

3rd-5th: What does it mean to “model in the real world”?
Participants will explore a variety of prompts and tasks that promote students’ ability to connect the math they are learning to the real world.

6th-12th:
Special guest Dan Meyer (current Stanford PhD student and YouTube sensation) will share his insights about how to redefine what math education looks like in response to the CA Common Core standards. Part of the day’s session will focus on solving real world problems, including developing an understanding of and proficiency with the tools (including technology) and skills that are available to solve these problems.

March 14, 2015

K-2nd: What does it mean to “model in the real world?”
During this session we will examine tasks and projects that require students to use a variety of skills and concepts from different domains.

3rd-7th: Modeling math in the real world, Part 2
During this session we will examine larger tasks and projects that require students to use a variety of skills and concepts from different domains. We will also examine projects that promote integration with other subject areas. (Attendance at the January session is not a requirement for attendance at this session.)
8th-12th:
What does it mean to “model in the real world”? How can modeling and statistical analysis help promote student engagement? These questions will be explored through an assortment of problems, as well as through the process of student revision.

May 2, 2015

K-2nd: “I teach math because__________”
In the session we will explore why we do math. Our focus will be on why we build a foundation in counting and number sense to solve problems. Are we teaching in a way that helps students see connection to higher mathematical concepts?

3rd-7th: “I teach math so my students can __________”
Why do we teach our students mathematics? Is it only so that they can “pass the test”? During this session, we will explore that question as we examine strategies and techniques for supporting students in making connections between the math they are learning and math in the real world.

8th-12th: “I teach math so my students can __________”
The process of modifying textbook materials to create modeling situations will be explored, with the aim of incorporating these changes during the following school year. Also, participants will be encouraged to reflect on the variety of activities tried in their classroom during this past school year.