

**Making Sense of Mathematics for Teaching**  
**UCDMP Saturday Series 2018-2019**  
**Elementary Series (Kindergarten - 5<sup>th</sup> Grade)**

Have you ever thought “But I didn’t learn math this way!” or “I don’t understand this model/strategy much less why they are asking me to teach it!” The new standards don’t just ask us to teach math differently. They also require us to teach math strategies and models that we were not taught and may not be familiar with.

Teaching mathematics requires teachers to facilitate instruction in ways that empower students to develop a deep understanding of mathematics. Unfortunately, teachers do not always have that “specialized” content knowledge which includes a deeper understanding of the concept as well as knowing and understanding a variety of representations and strategies related to that concept. And, frequently, this specialized knowledge is not something that we, as teachers, have previously learned.

During this series of 6 workshops, we will work together to deepen our own content knowledge and understanding as we continue to explore how we can use tasks, questioning, and evidence to create a shared vision of classrooms where students are engaged in meaningful mathematics experiences.

Throughout the Saturday Series we will be working in both a larger K-5 group and in grade span groups (K-2 and 3-5). In addition to specific content domains for each of the Saturday workshops we will engage in tasks, problem-solving activities as well as explore the use of 3 Act Tasks and STEAM activities as a way to ignite students’ curiosity about all aspects of mathematics. Be sure and bring your teacher materials - you will be provided time to infuse this process and related understanding and strategies into your curriculum. As always, participants are welcome to attend all, a few, or even just one session. Have fun with us as we collaborate on ways to deepen students’ mathematical abilities.

Dates:

Saturday, October 6,, 2018

- During this session we will investigate place value and number sense by doing the mathematics. All too often, exposure to place value and number sense for students is limited to rules and procedures which have little meaning. Number concepts and place value provide the mathematical foundation that all students need for future success in mathematics. We will engage in tasks and problem-solving activities that focus on the development of deep, conceptual understanding of place value and number sense.

Saturday, November 3, 2018

- During this session we will connect your understanding of number concepts with the operations of addition and subtraction using various strategies. You will explore how to use manipulatives to build students’ understanding of how to compose and decompose numbers in order to help with the process of regrouping. We will also include multiple strategies for developing fluency to add and subtract.

Saturday, January 12, 2019

- During this session we continue to explore operations with numbers by focusing on multiplication/division concepts at all grade levels TK-6. Exploring tasks with and without context allows students to consider different reasoning strategies that lead to solutions. You will investigate your understanding of multiplication/division strategies to determine basic facts, using approaches for invented and alternative algorithms.

Saturday, February 2, 2019

- Geometry is the study of space, objects in space, and the movement of objects in space. What we need to know about geometry goes well beyond naming shapes, describing attributes, and memorizing rules that expire as the study of geometry becomes more specific. During this session we will investigate the multiple dimensions of geometry and explore tasks that challenge us to make sense of and apply our understanding of geometry.

Saturday, March 9, 2019

- “Ugh, fractions.” How often have we experienced this response to the study of fractions? When learning and teaching fraction concepts, the ideas of partitioning, unitizing, equivalence, and comparison begin in the primary grades as a foundation to students’ conceptualization of fractions and operations with fractions. During this session

we will show how providing these experiences and carefully building on this conceptual understand to support student learning.

Saturday, May 4, 2019

- “I get it!” As a teacher, when you hear your students utter this phrase you become as excited as they are. As we conclude our series of workshops that focus on deepening our own conceptual understanding of mathematics and examining how to use various instructional strategies, tasks, and materials to provide students with mathematical experiences that propel their thinking we will investigate the concept of measurement.