

# Math Professional Development



Northwest Educational  
Service District 189

*Together We Can*

## Developing Conceptual Understanding through Productive Routines

This online session has a content focus on quadratic functions and a pedagogical focus on the implementation of instructional routines that promote mathematical reasoning and student discourse. Teachers will explore quadratic functions through rich tasks, and they will have the opportunity to experience, analyze, and learn to implement productive instructional routines and strategies that they can incorporate into their mathematics lessons and units.

**Session ID:** 31531—**Dates:** May 30-June 17, 2016—**Cost:** Free

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## Math Instructional Routines to Promote Differentiation and Discourse

Students' mathematics understanding increases when students are engaged in high level tasks and student discourse. Participants in this class will better understand how to differentiate tasks while engaging students in mathematical discourse. Teachers and para-educators will have an opportunity to deepen their own mathematical understanding while learning effective strategies to increase student conceptual understanding and discourse.

Participants will identify tasks that have a multiple levels of entry for the wide range of mathematics abilities in their classrooms. There will be time for teachers to plan for using these tasks during the upcoming school year while incorporating discourse strategies that engage their students in developing conceptual content understanding.

**Session ID:** 31576—**Date:** June 22 & 23, 2016—**Location:** NWESD—**Cost:** Free

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## How to Make Sense out of Fraction Computation

Understanding fractions is one of the major building blocks of Algebra. Understanding concepts such as unit intervals and fractions as a number are two focuses of the Common Core State Standards. Participants in this course will view fractions through the rules and properties that are associated with rational numbers. We will spend time looking at the importance of the unit fraction and the idea of equivalency as foundational underpinnings for students. We will better understand students development of conceptual understanding and procedural fluency with fractions as they move through grades 3 to 6.

**Session ID:** 31584—**Date:** July 12 & 13, 2016—**Location:** NWESD—**Cost:** Free

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## Number Talks: Thinking with Numbers K-2

During this two-day courses, teachers learn to help students acquire competence in computation using visual models and number relationships to build number sense and to develop numerically powerful strategies that make sense to students. Students work with numbers using strategies that are simple, yet meaningful and powerful. Course time is devoted to helping teachers strengthen their own understanding of mathematics. Participants receive a copy of Number Talks in the Primary Classroom, by Kathy Richardson and Sue Dolphin.

**Session ID:** 31585—**Date:** July 18 & 19, 2016—**Location:** NWESD—**Cost:** \$350.00

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## Number Talks Institute with Ruth Parker

Target audience grades 4-10. Whether you have tried Number Talks with your students before, or are new to Number Talks, this institute will help you learn how to make Number Talks a vibrant and essential part of your everyday classroom practice.

*Learn ways to:*

- \* Connect Number Talks to numerical and algebraic reasoning.
- \* Choose which Number Talks to do to help build important concepts and properties over time.
- \* Get buy-in from students, even at the high school level.
- \* Help students learn to make mathematically convincing arguments.

**Session ID:** 31501—**Date:** August 3 & 4, 2016—**Location:** NWESD—**Cost:** \$225.00

**For further information or to register, check out our website [www.nwesd.org](http://www.nwesd.org)  
Contact Nancy Menard with questions: [nmenard@nwesd.org](mailto:nmenard@nwesd.org) or by phone (360) 299-4020  
Classes may be cancelled if minimum enrollment is not met one week prior to class start date.**