

# A Knowing Mathematics for Teaching Seminar

## COGNITIVELY GUIDED INSTRUCTION, GRADES 3-6

June 18-21, 2018

### SITE, DATES & TIMES

Stafford Primary School

19875 SW Stafford Rd  
West Linn, OR

June 18-21, 2018

8:00 a.m. – 3:30 p.m.

### ABOUT THIS SEMINAR

Cognitively Guided Instruction (CGI) is a professional development program based on over 25 years of ongoing research on the development of children's mathematical thinking and relationships to teachers' instructional practices, knowledge, and beliefs. This research has been implemented across diverse populations and suggests that the students of teachers who participate over time in CGI professional development:

- Achieve gains in problem solving and early algebraic thinking without decreased performance on traditional arithmetic tasks
- Increase engagement in problem-solving and improve their ability to communicate mathematical ideas

For over 10 years, TDG has worked closely with CGI researchers while serving as a national dissemination center for CGI professional development. CGI is not a curriculum; rather, knowledge gained during the professional development supports the effective implementation of any curriculum materials.

During this highly interactive seminar, you and colleagues will analyze students' written solution strategies and videos of grades 3-6 students as contexts for increasing your math knowledge for teaching and deepening your understanding of the role of relational thinking as a mathematical strategy. You will also delve deeply into mathematical content, reconsider the relationships among whole number, fraction, and decimal concepts and operations, and use what you learn about student thinking to plan for grades 3-6 instruction. You will learn to:

- Analyze word problems and equations and anticipate responses to assess cognitive demand and align tasks with student development
- Facilitate discussions that provide a window into students' thinking and build their capacity for algebraic and numerical reasoning
- Identify/Enhance tasks to foster fluency with fractions and decimals and to provide a foundation for formal learning of algebra
- Implement research on "problem types" to understand and advance student thinking and to foster student engagement in *Mathematically Productive Habits of Mind & Interaction* (TDG, 2018)
- Anticipate and use purposeful and genuine questions to formatively assess student thinking and plan for responsive instruction
- Enhance student learning by integrating CGI research with your curriculum resources and implementation of *Mathematically Productive Teaching Routines* (TDG, 2018)

Each participant will receive a copy of the book, *Extending Children's Mathematics: Fractions and Decimals* (Empson & Levi, 2011).

### COST & REGISTRATION

\$450 per participant

To register, go to [www.teachersdg.org/institutes.php](http://www.teachersdg.org/institutes.php)

Questions: [tdgregistrar@teachersdg.org](mailto:tdgregistrar@teachersdg.org)



### PARTICIPANTS

Grades 3-6 math teachers, coaches, specialists, & school leaders. Increase impact – attend as a school team!

**Pre-requisite:** Prior participation in a TDG *Best Practices in Teaching Math* seminar.

### INSTRUCTOR

All TDG instructors are accomplished math educators with a deep interest in both mathematics and meaningful teaching. Each brings a rich background of math knowledge, experience, and perspectives to a seminar.



A non-profit organization dedicated to improving all students' mathematical understanding and achievement through meaningful, effective professional development for teachers and school leaders



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