



ONLINE



**TEACHERS
DEVELOPMENT GROUP**

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

Algebraic Thinking in Elementary School

ABOUT THIS ONLINE WORKSHOP

FROM THE TEACHERS DEVELOPMENT GROUP KNOWING MATHEMATICS FOR TEACHING PROFESSIONAL LEARNING CLUSTER

This online workshop provides teachers of grades three through five with an opportunity to explore how activities that foster algebraic thinking can be integrated into the elementary classroom. Algebraic thinking consists of more than just learning how to solve for the variables x and y ; it helps students think about mathematics at an abstract level, and provides them with a way to reason about real-life problems.

As a participant in this course, you will –

- explore three components of algebraic thinking:
 - making generalizations
 - student conceptions about the equals sign – a pivotal idea in elementary mathematics,
 - reasoning about unknown quantities
- stretch your own algebraic reasoning skills
- learn to integrate algebraic tasks into your own classroom instruction.

Readings, video, online discussion boards, engaging mathematics problems, and a relevant class project will support you in incorporating algebraic thinking tasks in your everyday instruction – a practice that is critical to students' future success.

PARTICIPANTS

Grades K–5 teachers, math coaches, curriculum and professional development specialists, special educators, and instructional assistants. Participation by school/district teams is encouraged. To complement the online work, teams may wish to meet face-to-face to explore course math tasks and/or readings and assignments.

SITE

Online

INSTRUCTORS

MIKE GOULD AND DIANE STONE both have over 30 years of experience teaching mathematics, Diane as an elementary grades teacher and Mike across all grades. They have a passion for working with teachers at improving the practice of teaching and the content knowledge needed for teaching mathematics. Both were faculty members for the highly successful Oregon Mathematics Leadership Institute, a 5-year National Science Foundation project to deepen K-12 teachers' knowledge of mathematics and school leadership and currently work as Mathematics Consultants for Teachers Development Group.

DATES

January 13 – March 2, 2010

OPTIONAL UNIVERSITY CREDIT

Three quarter-hours of optional university graduate credit will be available to participants who fulfill all course requirements. MTH 810, Portland State University. The total cost of optional credit is \$165. Credit payment and registration procedures will be provided during the first online session.

QUESTIONS

Contact Julie Fredericks:

Email, julie.fredericks@teachersdg.org
Local Phone, 503-650-1914
Toll-free, 877-650-1914

COST AND REGISTRATION

\$300 per person if registration received on or before December 30, 2009.

\$350 per person for registrations received after December 30, 2009.

Register online, www.teachersdg.org, prior to January 13, 2010.

Cancellations: If you must cancel, a substitute is welcomed. Otherwise, \$50 is nonrefundable; all additional payments are fully refundable prior to the workshop start date, non refundable thereafter.