



ONLINE



**TEACHERS  
DEVELOPMENT GROUP**

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

# Using Models to Understand Fractions in the Elementary Classroom

## ABOUT THIS ONLINE WORKSHOP

This workshop provides an opportunity for elementary grades educators to explore how mathematical models can be used to promote a deep understanding of fractions and fractional relationships. All too often, students are taught mechanical ways that don't support students in making sense of fractions. This highly interactive workshop:

- is premised on the belief that students can come to understand fractions in a number of different ways

- provides a variety of conceptual models and tools for developing understanding of fractions and fraction operations (e.g., number line, Cuisenaire Rods, pattern blocks, and area with nonstandard and standard shapes)

- includes a variety of professional readings, applets, and videos, combined with weekly on-line discussion forums

A relevant class project will support you in incorporating meaningful models for fractions in your everyday instruction.

## 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

## INSTRUCTOR

**MARIE FRANZOSA** and **DIANNE HART** both teach mathematics at Oregon State University, and have a special interest in mathematics for elementary teachers and the development of online professional community. 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.

## DATES

June 24 - August 12, 2009

## OPTIONAL UNIVERSITY CREDIT

Mth 810, Portland State University, 3 quarter-hours graduate credit. Pay \$165 for optional PSU credit at first workshop session.

## QUESTIONS

Contact Julie Fredericks  
Email, [julie.fredericks@teachersdg.org](mailto: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 June 15, 2009.

\$350 per person for registrations received after June 15, 2009.

Register online, [www.teachersdg.org](http://www.teachersdg.org), prior to June 24, 2009

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.