



Math Forum Professional Development Customized and Online Programs

<http://mathforum.org/pd/>

The Math Forum is a community of mathematicians, teachers, and researchers working together to improve math education. We draw on our strengths in mathematics, technology, and professional collaboration to create high quality mathematical experiences that directly connect to the individual learner's thinking and interests. This starts with ourselves as teachers and educational leaders and then extends through our online programs and resources to our students and their families. We offer both customized programs designed to be delivered face-to-face or online or a combination of the two methods. In addition we are offering a specific set of online courses for individual teachers or a targeted group of teachers from one site.

Customized Professional Development

Our programs are customized for meeting local needs and we seek opportunities for extended collaboration rather than single workshops because of our experience with effective improvement efforts and program implementation that required close collaboration and support over time. We understand that some schools are not ready at the outset to commit to a long-term project, and we might begin with small steps, but at a minimum, we look for a match in approach and an interest in achieving significant results through meaningful commitment of resources. The "menu" of elements from of which our programs are usually built includes:

- interactive programs for student problem-solving development, including preparation for open-ended items on assessments. Our **Problems of the Week** are the main vehicle for this effort through which we can both support student learning and drive professional development in the core knowledge needed for effectively teaching mathematics.
- introductions to mathematics software tools such as *Geometer's Sketchpad* and others found in our **Math Tools** digital library.
- helping teachers to use Internet resources to learn new mathematics, study their students' mathematical thinking, plan classroom interventions, organize supplemental online materials for addressing gaps in the curriculum, and build a resource center for shared lessons and activities across the school or school system.

Online Courses

These moderated courses will be led by professional staff of the Math Forum @ Drexel. They will take place online using Blackboard Vista (formerly WebCT) or Blackboard. The only technical requirements are a web browser and Internet access.

All individuals who successfully complete the course will receive a certificate indicating that they have completed 15 hours of professional development. This is equivalent to 1.5 Continuing Education Units (CEUs) that can be received from the Drexel University School of Education for a fee of \$15 to cover administrative costs.

For a limited time, we are also offering a discounted rate for a Class Membership in the Problems of the Week. Use the links to each course to view more information.

Current Fees:

- \$140 - course (for current members at Class level or higher)
- \$165 - course plus Class Membership through June 12, 2008
- \$205 - course plus Class Membership through June 30, 2009
- \$15 - administrative fee for 1.5 CEUs

Our current offerings include:

April 24—June 4

Teaching Mathematics with the Problems of the Week (FunPoW focus)—led by *Claire Mead*
mathforum.org/pd/funpow/

May 1—June 12

Teaching Mathematics with the Problems of the Week (PreAlgPoW focus)—led by *Suzanne Alejandre*
mathforum.org/pd/prealgpow/

June 21—July 3

Problem Solving Strategies—led by *Stephen Weimar*
mathforum.org/pd/problemsolving/

July 12—July 24

Moving Students from Arithmetic to Algebra—One Step at a Time—led by *Ellen Clay*
mathforum.org/pd/movingstudents/

PEOPLE LEARNING MATH TOGETHER

The Math Forum is a research and educational enterprise of the Drexel University School of Education.

Teaching Mathematics with the Problems of the Week FunPoW focus or PreAlgPoW focus

These courses are designed for current subscribers of the Math Fundamentals (FunPoW) or the Pre-Algebra Problem of the Week (PreAlgPoW) who want to implement problem solving more effectively.

Users of the Algebra Problem of the Week (AlgPoW) and the Geometry Problem of the Week (GeoPoW) are also welcome, although the content will be at the Math Fundamentals or Pre-Algebra level.

Participation requires membership at the Class level or higher. Non-members or Individual Teacher members may purchase the necessary access at a discounted rate.

Goals:

- Develop teachers' own problem solving and communications skills; develop personal resources – strategies, attitudes, habits of mind.
- Develop ability to analyze the math in a problem.
- Learn to assess student work and provide effective response.
- Expand pedagogical repertoire; how to introduce pows and facilitate problem solving, management issues
- Develop understanding of NCTM Process Standards and the role of Problems of the Week in addressing them.
- Build an ongoing community.

Course activities will include:

- Readings from NCTM's Principles and Standards for School Mathematics, websites, and journal articles (all available online)
- Solving PoWs, submitting solutions online, analyzing the math
- Having some of your students solve PoWs and submit solutions online
- Sharing ideas and reflections with classmates through online journals and discussions
- Live online chats via Blackboard Vista

Problem Solving Strategies

Participants will solve challenging middle school and high school algebra, geometry, and probability problems and develop a supplemental curriculum outline supporting the development of mathematical approaches to problems. We will discuss how to support students developing high levels of competence and sophistication with a wide range of mathematical approaches from “guess and check” to “consider a simpler problem” to “analyze in terms of parity.”

Moving Students from Arithmetic to Algebra—One Step at a Time

We will examine a continuum of student work from the Math Forum's Problems of the Week archive. Selected work will include a range of examples from “not knowing how to start” to “It's perfect. What could I possibly say to her?” We will consider specific ways to move students' thinking along this continuum.

We will experience assisting students in:

- Analyzing a problem quantitatively
- Using mathematical representations
- Recognizing generalization in these representations

There will be approximately 15 hours of seat-work involved in this course. Participants will be expected to log in at least twice each day—once with an initial posting, and at least once to respond to your classmates postings. Although a participant can get ahead by doing a chunk of the work on the weekends, responses to postings will be expected daily. We envision that many more hours will be spent ruminating over the experiences throughout the duration of the course and long afterwards.

For each of these courses enrollment is limited.

We accept:

Check
Purchase Order
Credit Card (VISA or MasterCard)

To register, please call

Tracey Perzan, Monday to Friday, 8 am - 6 pm Eastern
215-895-1080

or

1-800-756-7823 (option 2)