



UNIVERSITY of NEW HAMPSHIRE

TEACHING & LEARNING



Mathematics In Context

An In-Service Program for
Mathematics Teachers
Grades K-8

Cosponsored by the
UNH Department of Mathematics and Statistics, the Joan and James Leitzel Center,
and UNH Professional Development & Training

Teaching & Learning Mathematics In Context is a unique program designed to help teachers meet their individual and curriculum goals as teachers of mathematics. It is unique because it brings teacher education to the site of learning—the teacher's school and classroom

Applying Our Philosophy— What Teachers will Experience

This program will provide practical assistance and support to teachers who are thinking and reflecting on issues related to mathematics teaching and learning. Assistance and support will be given in a number of ways, including:

- ◆ Integrating mathematical investigations into classroom planning;
- ◆ Developing a repertoire of mathematical questions to challenge student thinking;
- ◆ Utilizing resources for mathematics curriculum planning;
- ◆ Working with authentic assessment techniques to evaluate student mathematical progress;
- ◆ Developing effective management systems for using cooperative learning; and
- ◆ Assisting with adoption of a new mathematics program.

Offered On-site and Developed According to Your Needs

A *Teaching & Learning* program will be developed

according to your needs and can be offered at your school or site. Whether you want the program to be for teachers at a particular grade level or across the curriculum, we will develop a variety of learning opportunities for your teachers.

Observation, Feedback, Individualized Learning, and Shared Expertise

Each teacher brings to the classroom a unique set of skills and characteristics that enhances student learning. This program utilizes the strengths of each participant and helps determine areas for further development. Our program faculty will work with the teachers individually and as a group to establish goals and direction. Format will include:

- ◆ Visits and feedback from program faculty;
- ◆ Mathematics-content workshops;
- ◆ Journal writing and special projects;
- ◆ Classroom visits for observation and/or model teaching; and
- ◆ Meetings to discuss classroom experiences.

Program Length and Cost

This program is designed to provide consistent support for teachers during the full academic year, so schools are encouraged to participate for this length of time. Some schools, however, may choose to participate only for half a year, and in this case, specific, achievable goals will be established to work within this timeframe. Typically a consultant from UNH will visit your school

10 times during a semester to work with teachers, assist with planning and teaching, and observe or conduct "discussion lessons." Five times during the school semester, two-hour whole group meetings will be held at the end of the school day. Cost varies depending on the number of participants and length of project, but generally is a minimum of \$7200.

Graduate Credit Earned

Teachers earn 2-4 graduate credits per year, depending on the length of the program.

Program Coordinator and Instructors

Karen J. Graham, Ph.D., is currently a Professor in the UNH Department of Mathematics and Statistics, Director of the Department's Master of Science for Teachers (M.S.T.) Program, and Director of UNH's Joan and James Leitzel Center. Instructors will be drawn from the UNH Department of Mathematics and Statistics and a pool of experts in mathematics education.

The First Step...A Meeting to Explore Your School's Interests

Prior to your school embarking on a *Teaching & Learning* program, a representative from our faculty will meet with individuals from your school to talk about your interests in teacher development and how the *Teaching & Learning* program might be of benefit. There is no cost involved in this initial meeting, since it is a time for your school to explore with us whether or not this program is suited to your needs.

For More Information or an Initial Meeting

If you would like more information or to arrange an initial meeting at your school, please call Kay MacMillan at UNH Professional Development & Training, (603) 862-1739, or email her at Kay.MacMillan@unh.edu.

Some of the Schools that have Participated

Among the schools that have participated in this program since its inception are: Epsom Central School, Hampstead Central School, Hampstead Middle School, Little Harbour School in Portsmouth, and Timberlane Regional School District in Plaistow.

About the UNH Department of Mathematics and Statistics

The UNH Department of Mathematics and Statistics has a long history and commitment to serving New Hampshire teachers in ways that deepen their understanding of mathematics and mathematics pedagogy. The Department has offered numerous programs funded by the New Hampshire State Department of Education, the National Science Foundation, and the U.S. Department of Education. In addition, the Department houses the Master of Science for Teachers (M.S.T.) in Mathematics program. The M.S.T. Program originated in the early 1960s as a National Science Foundation

Summer Institute and has served several hundred mathematics teachers from around the country and internationally. For more information on the M.S.T. and other summer programs write: M.S.T. Program, Department of Mathematics and Statistics, UNH, Durham, NH 03824.

Comment from a Past Participant...

"I've been taking the UNH Math program the last two-and-a-half years. I've really enjoyed being able to share math ideas and activities with my colleagues. I also learned a lot from reading the articles sent to us. The blog was a great way to see other people's thoughts on their math classes. The instructors always had some great ideas for pushing students or for just livening up a math class.

Karen Dunn

5th/6th Grade Math Teacher, Hampstead Middle School

About the UNH Leitzel Center

The Joan and James Leitzel Center for Mathematics, Science, and Engineering Education was established by an endowed gift to UNH in June 2002. The Center serves as a central point for outreach education in the areas of mathematics, science, and engineering. The Center facilitates partnerships and initiates programs and activities with the goal of developing educators' thorough knowledge of science, mathematics, and engineering concepts and human learning strategies; developing learners who experience the joy of discovery and the challenge of understanding; and developing learning environments that support active and rich intellectual engagement. More information on the Center's current programs and activities can be found at: www.leitzelcenter.unh.edu.

About UNH Professional Development & Training

The mission of UNH Professional Development & Training is to provide professional development opportunities to individuals, schools, organizations, and business throughout New Hampshire and the surrounding regions. It does this by offering a variety of learning opportunities including over 200 one-day seminars each semester, short-term Certificate Programs, special conferences and institutes, and customized training. Many seminars and conferences are offered each year geared to teachers, school administrators, guidance counselors, and other education professionals. For more information and to obtain a catalog or brochure, please call (603) 862-4234; send an email to professional.development@unh.edu; log on to www.learn.unh.edu/pcw/; or write UNH Professional Development & Training, 6 Garrison Ave., Durham, NH 03824.

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