



# NEWS

February 2008

300 Gorham Hill Road Gorham, NH 03581 603-466-5437 Fax 603-466-2907 www.ncedservices.org



## Exploring Science Process Skills

For more than thirty years, the Exploratorium Institute for Inquiry has been educating teachers, administrators, and professional developers about the theory and practice of inquiry-based teaching and learning. We have witnessed firsthand the power of science coming alive and having real meaning for students and teachers when they focus on the questions of science, rather than just the answers.

In the Process Skills workshop, teachers will work to develop their understanding of the central role of the process skills of science in learning scientific concepts. They see what those skills look like in action by trying them out themselves. They will then see how students use them at various developmental levels. Participants will then consider how to make changes in science activities that will help students develop their skills to higher levels. Geared to middle school, but applicable to grades 3 to 9.

**Presenter:** Kim Leeman has taught life science to eighth graders at Southside Middle School in Manchester, NH for twenty years. Her credentials include a BS in Biology and a Master of Science in Biology and in Secondary Education. She has worked extensively on science curriculum revision since 1995 and is currently the Science Curriculum Chair for the district.

**Dates/Time:** April 4, 2008, from 9:00 to 3:00 with registration and refreshments at 8:30

**Cost:** \$25. Lunch is provided.

**Registration:** Contact Becky Ring at 466-5437 or [becky@ncedservices.org](mailto:becky@ncedservices.org)

**More science!**  
See page back for  
**Earth Science by Design**

## Concerns-Based Adoption Model Promoting School Improvement Initiatives

You have done the research, chosen the model that you think has the most chance for success, begun the process of gathering resources for a project that has potential for improving student outcomes. Now how do you lead your staff through implementation of the initiative? How can you measure success in launching a project that has the potential to make a difference to staff, students and parents, and understand what to do when the process is not going well?

You are invited to join us for a day of orientation, information and discussion about the CBAM model. You will leave with an understanding of people's concerns when adopting something new, and information about measuring both personal and organizational progress toward implementation of a new program or practice.

**Presenter:** Deborah Roody, CAGS

**Date/Time:** Tuesday, April 15, 2008, 9:00 to 3:00, 8:30 registration and refreshments at NCES, Gorham, NH

**Cost:** \$100 or \$80 if you register by March 31.

**Registration:** Becky Ring at 466-5437 or [becky@ncedservices.org](mailto:becky@ncedservices.org)

## Differentiated Instruction: Meeting the Needs of Diverse Learners

Teachers will explore ways to provide multiple pathways to learning so that both advanced and struggling learners are challenged yet not frustrated and ways to scaffold instruction for struggling learners, divergent learners, and second language learners. Learn how to:

- Use pre-assessment & task analysis to plan differentiated instruction
- Gather and use on-going assessment data
- Scaffold instruction
- Build in student choice
- Teach students to self-assess and self-adjust

**Instructor:** Louise Thompson

**Dates:** March 11, April 1, May 8 & 28, 2008 from 8:00 - 3:00 at NCES PD Center, Gorham, NH

**Cost reduced:** Members \$260, Associate Members \$310, Non-Members \$360. SAU 36 staff registration fee is covered by a grant.

**Credits:** Two PSU graduate credits. Special pricing: additional \$135 total (in-state).

## CAGS Courses at NCES

### CONTEMPORARY SOCIAL TRENDS

EP7070.NF CRN: 30107

Contemporary social, economical, political, and educational issues are the core of the course. They are identified in a forum that provides opportunities for the students to research current methodology together to address problems that relate to the specific roles of the course participants in their work inside or outside of the educational field. Working collaboratively, course candidates explore short-range and long-range problem solving strategies directed toward increasing their awareness of community perception and expectations, techniques for facilitating institutional change, and responding to the nature and culture of internal and external political systems and environments as they apply to their work sites.

**Instructor:** Richard Ayers

**Location:** NCES, Gorham, NH

**Dates/Times:** Fridays from 5:00 to 9:00 on 3/28, 4/11, ~~4/25/08~~, 5/2 and Saturdays from 9:00 to 3:00 on 3/29, 4/12, ~~4/26/08~~, 5/3 (note dates have changed from original announcement).

**Registration:** Register at [www.plymouth.edu/graduate/](http://www.plymouth.edu/graduate/)

### QUALITATIVE METHODOLOGY & APPLIED RESEARCH

EP7050.NF

This course addresses qualitative research methodologies with a particular emphasis on constructing grounded theory. Candidates will engage in the process, design and critique of qualitative inquiry and research. Organizational and community issues will be explored and discovered through the analysis of patterns of beliefs, attitudes, and behaviors within interpersonal and intercultural contexts. Descriptive analysis of initiating the inquiry, gathering and picturing the data, recording and analyzing data and evaluating the study.

**Instructor:** Dr. Pamela Clark

**Location:** NCES, Gorham, NH

**Dates/Time:** July 22, 23, 24 & 25 from 9:00 to 4:00

**Registration:** Register at [www.plymouth.edu/graduate/](http://www.plymouth.edu/graduate/)

### SCHOOL BUILDINGS AND TRANSPORTATION

AD5750

The role of the school administrator in planning school construction projects, maintaining school facilities and overseeing the transportation of students is the focus of the course. Also emphasizes the relationship of facilities and transportation to the program needs of the students while complying with state and federal regulations.

**Instructor:** Doug MacDonald

**Location:** NCES, Gorham, NH

**Dates/Time:** July 14, 15, 16, 17 & 18 from 9:00 to 3:30

**Graduate Credit:** Three (3) credits from PSU.

**Registration:** Register at [www.plymouth.edu/graduate/](http://www.plymouth.edu/graduate/)

## High School Calculus Graduate Course

### TOPICS IN CALCULUS FOR SECONDARY SCHOOL TEACHERS

MG5870.NF CRN: 30078

This course consists of topics from the study of calculus, advanced calculus and/or the applications of calculus for the purpose of providing some insight into the importance and use of calculus.

**Instructor:** Gregory Superchi

**Location:** NCES, Gorham, NH

**Dates/time:** Mondays 3/3, 3/10, 3/17, 3/24, 3/31, 4/7, 4/14, 4/28, 5/5, 5/12, 5/19 from 4:30 – 8:00

**Graduate Credit:** Three (3) credits from Plymouth State University. With the permission of the Mathematics Department chair, the course may be repeated for credit if the theme and/or topics change.

**Registration:** Register at [www.plymouth.edu/graduate/](http://www.plymouth.edu/graduate/)

## Advising Meetings for PSU's M.Ed. and CAGS Programs

Cheryl Baker will be available to advise potential M.Ed. or CAGS students at NCES on Thursday, March 13. Appointments are typically 20 and 30 minutes and are available from 3:30 – 5:30. Those interested in an advising meeting should call Plymouth State Graduate Studies at 535-2636 to set up an appointment.

## Distinguished Math Educators Series

Co-sponsored by the North Country Education Services Professional Development Center and the Greater Manchester Professional Development Center, this series of math workshops will be led by NH distinguished math educators.

**Graduate credit option:** Graduate credit is available for those who attend the entire series. Additional coursework and fees apply (\$135/credit x 2 times plus \$25 registration fee). Contact [matt@ncedservices.org](mailto:matt@ncedservices.org) for more information.

### Algebra Across the Grades

Presenter: Betty Erickson, Educational Consultant  
Focus: Grades 3-8  
Dates/time: February 7 and 8, 2008 from 9:00-3:00  
Cost: \$75.00

Using the Navigations Series, participants will come away with instructional strategies focusing on repeating and growing patterns, concepts on variable and equality, examine functions and relations, construct growing patterns using the Isosceles triangle, analyze situations with constant or varying rates of change and observe and represent patterns in an array.

### Opening Up

Presenter: Caroline Herold, Educational Consultant  
Focus: Grades 3-8  
Dates/time: March 10 and 11, 2008 from 9:00-3:00  
Cost: \$75.00

Many years of research indicate that most questions that are asked in the mathematics classroom are at a low cognitive level. By solving open-ended problems, students create and adapt solution strategies that better develop and connect their mathematical knowledge. Attendees will look at how to develop open-process and open-ended questions from closed, skill-based problems often found in traditional programs.

### Proportionality: More Than Two Equal Ratios

Presenter: Christine Downing, Math Consultant NH DOE  
Focus: Grades 3-10  
Dates/time: April 1 and 2, 2008 from 9:00-3:00  
Cost: \$75.00

The National Council of Teachers of Mathematics in their Principles and Standards for School Mathematics (2000) proposes an emphasis on proportionality in the middle grades. Proportional reasoning is evident through many areas of the elementary and middle level mathematics curricula, such as percents, similarity, scaling, linear equations, slope, and probability. Several of the GLEs have connections to proportion-

ality. Join in this session and gather materials that you can share with colleagues and use in the classroom to promote proportional reasoning with all students.

### Mathematical Tools & Strategies for Integrating the Process Strands

Presenter: Connie Upschulte, Pennichuck Middle School  
Focus: Grades 3-8  
Dates/time: April 7 and 8, 2008 from 9:00-3:00  
Cost: \$75.00

This session will introduce participants to select tools and strategies that can be used to enhance instruction of the mathematical process strands. Participants will explore mathematical research through a tool called "Curriculum Topic Study Guides." In addition, a protocol for examining student work will be introduced which enables teachers to identify misconceptions and adapt instruction as needed. Based on the research, diagnostic probes emphasizing the mathematical process strands will be shared and designed for use before, during and after classroom instruction. Finally, various formative assessment strategies will be highlighted throughout this session.

### Analyze This!

Presenter: Phil Loud, Former Mathematics Educator  
Focus: Grades 3-8  
Dates/time: May 8 and 9, 2008 from 9:00-3:00  
Cost: \$75.00

Analyze This! Since the inception of the NCTM Standards, probability, statistics, and data analysis have more and more become an integral part of our mathematics curriculum. In this workshop, participants will have the opportunity to take a closer look at probability, statistics, and data analysis with particular emphasis given to their role in and how they span the GLEs. Finally, participants will work together in small groups on several "hands-on" activities including using the Probability Application that comes built-in to the TI-83/84 graphing calculators.

### Location & Registration Information

The presenter for these sessions will be at the GMPDC in Manchester, and participants at NCES in Gorham will attend via video conference on the following dates: February 7 and 8, March 10 and 11, April 7 and 8, May 8 and 9. Christine Downing, NHDOE Math Consultant will be on-site at NCES to facilitate all sessions. The presenter for April 1 and 2 will be at NCES in Gorham, and participants at the GMPDC in Manchester will attend via video conference.

To register for the Gorham site, contact Becky Ring at [becky@ncedservices.org](mailto:becky@ncedservices.org) or 466-5437 or 800-268-5437. To attend and register for the Manchester location, visit [www.gmpdc.org/workshops](http://www.gmpdc.org/workshops).



*Earth Science by Design* is a two-day professional development program to enhance the capacity of middle and high school teachers of Earth science enabling them to:

- Teach for deeper, enduring understanding
- Teach to the big ideas in Earth and Space Science
- Use visualizations and satellite imagery to promote student understanding

*Earth Science by Design* (ESBD) is based on the "Understanding by Design" approach developed by Grant Wiggins and Jay McTighe. Teachers learn the principles of "backward design" and create an Earth science unit they will teach.

Participants will receive a \$75 stipend, *Understanding by Design*, *Understanding by Design Workbook*, along with ESBD handouts.

Instructor: Dr. Mark Turski has been teaching earth system science and science education classes at Plymouth State University for 17 years after six years of teaching earth science and physical science in the South Portland, ME school system. He also serves as the Director of **Preparing Earth System Science Teachers of Tomorrow** grant which is part of The Institute for Global Environmental Strategies (IGES) and Earth System Science Education Alliance (ESSEA) and NSF's *Geo-Teach* project.

**NCES PDC, Gorham:** Saturdays, April 5 and May 3

**Sugar River PDC, Claremont:** March 1 and March 15

**Greater Manchester PDC:** March 8 and March 22

**Southwest Ed Support Center, Keene:** April 19 & May 10

**Time:** 9:00 to 3:00, registration and refreshment 8:30 to 9:00.

Lunch will be provided.

**Registration:** For NCES/Gorham, contact Becky at 466-5437 or [becky@ncedservices.org](mailto:becky@ncedservices.org). For other locations, visit [www.lescn.org](http://www.lescn.org).

## **Peer Mediation Train the Trainers**

**March 25 & 26, 2008**

Contact [lori@ncedservices.org](mailto:lori@ncedservices.org) FMI

## **Lesley University Cohorts**

Coming in March

Informational overviews of Lesley University programs.

A Literacy Cohort and Special Education Cohort will begin soon in Woodsville. Check [www.ncedservices.org](http://www.ncedservices.org) for dates of the informational sessions or contact Bruce Labs for more information at [blabs@sau23.org](mailto:blabs@sau23.org)

## **Attention Middle & High School English Teachers**

If enough interest is shown, there is a chance of this workshop being offered at no cost in the Laconia area this spring. Please contact Lori Langlois if you might be interested in attending at [lori@ncedservices.org](mailto:lori@ncedservices.org).

### **Strategies in English:**

#### **Writing Tactics Using SOAPStone**

The focus of this workshop is on classroom tactics that help students to analyze good writing and to apply this knowledge when creating their own texts. Teachers will learn activities that can benefit their students. Participants will discuss and understand the concepts underlying these activities, such as the writing process, narrative, the persuasive essay, analytical writing, and assessing student writing.

The workshop provides:

- A strategy for students to use in the planning and creation of their compositions
- Skills of successful writers
- Activities for students across grade levels
- Activities to illustrate good pedagogy (instructional approaches, including cooperative learning)
- Explorations with discussion questions
- Opportunities for reflection
- Connections between one activity and another
- Practice in assessing student writing
- Substantial content background for teachers

## **High School Science Student Video Contest**

Can your high school students take an ordinary science idea and turn it into an extraordinary online video? Well, here's your chance to prove it. WIRED Science wants high school students to share their science know-how with the world.

Under your helpful guidance, have students make a short video exploring a cool scientific principle. It could be a math formula, a chemistry equation, a law of physics - anything as long as it's science-related.



A panel of judges will select 20 semi-finalists to be highlighted online. The judges will award cash prizes to the top three winners. Video entries are due by April 1, 2008.

If your students have what it takes to produce a viral science video, join WIRED Science's Student Video Contest...where students become the teacher and the world-wide web becomes their classroom.