



**Educators Collaboration Event
Poster Session
Thursday, October 2, 2008
9:45-10:45 am**

Would you like fries with that? Learning A La Carte

Jennie Peck

STEM Excellence in Teaching Award Finalist

Burger Middle School, Rush-Henrietta School District

As the necessity for differentiation grows in response to an increasingly diverse student population, this presentation highlights an action research project that investigated the effect of a differentiated "Learning Menu" on student motivation. The "Learning Menu" is a model for differentiated instruction that aligns NYS learning standards with grading practice. This model emphasizes mastery and understanding while minimizing compliance by offering a 'menu' of options from which to choose. Multiple entry points based on student readiness, interest, and learning style affords each student the support and enrichment to be appropriately challenged. A unique way of engaging students, the menu requires the learner to locate resources outside of the teacher, to take responsibility for the direction of their learning, and accordingly become more autonomous. This paradigm shift seats the teacher in the role of coach and mentor as he or she conferences with individual students to provide immediate feedback and encouragement. Your practice won't be the same after you try this out!

Seneca Park Zoo

Ruth Rosenberg

Seneca Park Zoo Society Education Department

The mission of Seneca Park Zoo Society's Education Department is to instill an understanding and appreciation of the Earth's biodiversity and to provide our community members with the skills and the motivation to act on behalf of the environment. With this in mind, we want to provide teachers with the resources to make their curriculums literally come to life at the Zoo. Please visit us and see how we can provide you with the tools to bridge state standards and curriculum with hands on experiences.

Geosciences with the Rochester Academy of Science

John Handley

Rochester Academy of Science Fossil Section

The Rochester Academy of Science is a non-profit organization dedicated to providing its members and the community with a means to study and learn about astronomy, anthropology, the life sciences, minerals, and fossils. The Fossil Section is open to all who have an interest in the collecting, study, preparation and display of fossils. Active participation by members in the program to collect, preserve, and study paleontological material is encouraged. The Section is pledged to work, in cooperation with scientific institutions for the preservation of the geologic record. Members are encouraged to actively participate in the monthly meetings. Several field

trips to fossil collecting sites in New York State are held each year. Talks by professional paleontologists or knowledgeable collectors are coupled with interesting displays of fossil finds. Meetings are followed by a social hour with refreshments and open discussion of fossil and fossil collecting. Events calendar and more information about New York State earth science can be found on our website: rasny.org

Today's Students, Tomorrow's Teachers Math, Science Technology Educator Recruitment (TSTT/MaSTER)

Nidia Montalvo

TSTT Rochester Regional Program

The purpose of Today's Students, Tomorrow's Teachers (TSTT) is to recruit, mentor, and place economically-challenged and culturally-diverse high school students through college to employment as teachers and leaders who will inspire and strengthen their communities. Our collaborative model works with public school districts, partner colleges, and concerned businesses to encourage and prepare high school students for a career in education. The Rochester Area Colleges' Center for Excellence in Math and Science has awarded TSTT a grant under its Math Science Technology Educator Recruitment (MaSTER) program to provide 7 students the opportunity to pursue careers in math or science education. All of these students are provided experiences in the math and science field including tutoring, shadowing, summer internships, workshops and a math or science teacher mentor. Each student will present a poster about their summer internship experience.

Enhancing STEM Instruction through the National Board of Professional Teaching Standards Process

Trudy Bantle

National Board Council of New York

National Board Certification is a nationally researched process in which teachers learn how to analyze and reflect upon their instructional practice in order to will enhance student learning. This poster will help you to understand the depth of the analysis and reflection in this process. Most teachers completing this process state that it is the best professional development they have undertaken in their careers. The National Board process is available to every teacher with at least 3 years of experience.

Rochester STEM Teaching Institutes

Sara Silverstone, Ph.D.

Rochester Area Colleges' Center for Excellence in Math and Science (RAC-CEMS)

This year, ninety-nine Rochester-area teachers are participating in six no-cost high quality professional development opportunities presented by 5 RAC institutions and the RMSC. Learn about our local initiative involving a professional learning community of PD providers in all areas of STEM Education, providing intensive, ongoing PD focusing on hands-on, inquiry-based learning. Overview of pilot program and lessons learned, and a preview of next year's program.

Career Corner

“Wow, I didn’t know they did that!!”

There are so many different kinds of exciting and interesting things that technically trained professionals do that most of us never even thought about. How would a student pursue a career in environmental management? What are some of the more interesting things that mathematicians do? Don’t engineers just sit in offices? Come and learn about career pathways and job options in many technical STEM professions.

Chemistry

Sponsored by the Rochester Section-American Chemical Society

Chemists are engaged in fundamental and applied research and in support of solving real-world problems where a basic understanding of how molecules, atoms and sub-atomic particles interact is essential.

Civil Engineering

Sponsored by the Rochester Section- American Society of Civil Engineers

Civil engineers provide the basic infrastructural services needed for society including water purification and distributions systems, and land and water based transportation systems. They are employed by governmental agencies and public and private firms.

Construction Engineering

Sponsored by the America Council of Engineering Companies

Engineers work at the intersection of society and technology. Professional Engineering Companies support a wide range of public and private clients of all sizes around the world. They design the built environment; support the manufacture of products and materials that enable our basic existence (water, electricity and infrastructure) and the exploration of new frontiers.

Environmental Management

Sponsored by RIT Environmental Management & Safety Programs

Environmental managers work for Fortune 500 companies, regulatory agencies and consulting companies using scientific reasoning and management principles to solve complex environmental problems.

Medicine and Allied Health

Sponsored by Unity Health Systems

Health related careers range from clinical practice in many specialties to basic and applied medical research. They include acute and chronic disease diagnosis, prevention and treatment involving both direct and indirect human interaction.

High School Technical Education

Sponsored by Edison School of Engineering and Manufacturing- Rochester City School District

Edison Technical High School prepares student for entry-level positions in engineering and manufacturing as well as further study at college. "We are the best high school you never hear of!"

Mathematics

Sponsored by SUNY College at Brockport Department of Mathematics

Mathematicians apply their skills in a broad range of theoretical and practical fields in support of all scientific research. They also are engaged in supporting broad business areas such as financial services; actuarial forecasting; manufacturing, distribution, and logistics; and marketing and sales.

Mechanical Engineering

Sponsored by the Rochester and RIT Student Sections- American Society of Mechanical Engineers

Mechanical engineers apply principles of physical science and mathematics to conceive, design, produce and operate the moving parts, components and machinery to solve problems in every aspect of modern life. From rockets, robots and automobiles to power plants, engines, air-conditioning equipment and biomechanical parts, mechanical engineers put energy and machines to work. The spectrum of professional activity for the mechanical engineer runs from research through design and development to manufacturing and sales.

TEAK- Traveling Engineering Activity Kits

Elizabeth DeBartolo

RIT

This poster will introduce the TEAK project (Traveling Engineering Activity Kits), an RIT program that brings engineering into middle school classrooms. The TEAK project is unique in that the activities are developed entirely by engineering students. Graduating engineering students in RIT's Kate Gleason College of Engineering Multidisciplinary Senior Design program develop and pilot the activities, lesson plans, handouts, and assessment materials for each TEAK. Our students have successfully run TEAK workshops for over 100 middle school students and are now piloting a teaching series that will bring engineering students into a local classroom for weekly instruction and activities.

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