

SPRING LAB DAY

Saturday, March 6, 2010

Presented by Eastern STANYS at the College of Saint Rose

- Choose two 90 minute hands-on workshops to attend.
- Participate in a multi-media keynote address, "How the Universe Came to Be"
- Enjoy sharing meals with your colleagues and winning door prizes from publishers.
- Receive a professional development certificate from the Greater Capital Region Teacher Center.

Dr. Heidi Newberg, an astrophysicist from RPI, is the keynote speaker for our twelfth annual Spring Lab Day. She will describe the formation of stars and galaxies billions of years ago in the early universe through lecture, film, images, and a sing-a-long. Get ready to have fun while we think really, really big thoughts.

The College of St. Rose is located at 432 Western Ave. near downtown Albany. Parking is easily available in Lots P1 and P2. For further information see the website: www.strose.edu/visitors

SPRING LAB DAY SCHEDULE

TIME	EVENT	LOCATION
8:45 - 9:15	Registration & Continental Breakfast	St. Joseph Hall
9:15- 10:45	Session I Workshops	Science Center / Albertus Hall
10:45-11:00	Welcome Introductions	St. Joseph Hall
11:00 - 11:45	Keynote Address: Dr. Heidi Newberg	St. Joseph Hall
11:45 - 12:00	Announcements Door Prizes	St. Joseph Hall
12:00 - 12:45	Hot & Cold Luncheon Buffet	Events and Athletic Center
1:00 - 2:30	Session II Workshops	Science Center / Albertus Hall
2:30 - 3:00	Lab Day Evaluations Grand Prize Drawing	St. Joseph Hall

SESSION I 9:15 – 10:45 AM

March 6, 2010

Session code	Workshop title	Workshop Description	Presenters	Subject area	Level
I - A & II - A	<u>Starry, Starry Night</u>	Members of the Dudley Observatory will show you how to navigate the universe through star maps and the hands-on use of a telescope. All participants will be provided with a Planisphere, age appropriate activities for the intermediate and high school level classroom, and receive continual astronomy support. Though the emphasis is on science, the activities support interdisciplinary connections to math, social studies, and language arts standards and skills. This 3 hour activity will be done during Session I and Session II. If you wish to attend Session II, you should also attend Session I.	Dr. Heidi Newberg of RPI Vince Amodeo President of Dudley Observatory Janie Schwab Executive Director of Dudley Observatory Joan Wagner past president of STANYS Sara Fisk CMOST	PS	M, H
I- B & II - B	<u>Kidney Crisis</u>	Participate and learn the newest laboratory lessons from SEPA, Science Education Partnership Award. The four labs are: “Diagnosing Diabetes,” “Kidney Problem,” “Kidney Dialysis,” and “Kidney Donor.” This 3 hour activity will be done during Session I and Session II. If you wish to attend Session II, you should also attend Session I.	Deborah Beam Colleen Hagadorn South Glen Falls HS	LE	H
I - C	<u>Making Soap</u>	Make soap the way Granny did from lard and lye. In this workshop, participants will make soap and analyze it by comparing its emulsifying power with dish detergent.	Dr. Brian Lovelace SUNYAlbany	PS	M, H
I - D	<u>Hands-On Energy Lessons for Elementary Students</u>	Energy, global climate change, energy efficiency, solar, wind, hydropower are all hot topics today, but how do you teach them to elementary school students? Find out at this exciting, hands-on workshop! Receive free materials and experiment with lessons that are easy to manage in a K-6 classroom. Join us to learn more about the free energy education resources and staff development programs offered by NYSERDA.	NYS Energy Research and Development Authority Energy Educator	LE, PS	E, M

PS – Physical Setting (Earth Science, Chemistry, Physics)
LE – Living Environment (Biology)

E - Elementary
M – Middle Level
H – High School

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I – E & II - E	<u>Process Oriented Guided Inquiry Learning (POGIL) for the Chemistry Classroom</u>	Participants will use POGIL hands-on and computer activities, and then discuss their use in the high school chemistry classroom. Activities will be different in sessions I and II. You may choose either or both sessions.	Maria Russo Cohoes HS Chemistry SAR	PS chemistry	H
I - F	<u>Simulated Chemistry</u>	Each participant will have access to a computer. Throughout the session, teachers will be led through a series of laboratory simulations that can be used in both lab and the regular classroom.	Theresa Newkirk Saratoga Springs HS	PS chemistry	M, H
I - G	<u>It Takes “Balls” to Learn Energy Transformations</u>	Participants will see how potential and kinetic energy are related by building foam roller coasters, dropping different sized balls, and collecting data.	Fred Pidgeon SUNY Cobleskill STANYS VP	PS physics	E, M, H
I - H	<u>Fun With Food: Teaching Biology Through the Stomach</u>	Experiment with a variety of food related activities pertaining to enzymes, diffusion, DNA, and cells. Learn great activities to do with students.	Wendy Ausfeld Schenectady HS	LE	M, H
I - J	<u>Discover and Measure Earth’s Layered Interior with Seismic Data</u>	In this unique activity, participants will act as students examine seismic evidence to determine that the Earth must have a layered internal structure and cannot be homogeneous. Following this, they measure the dimensions of the core they have just detected. Using an inquiry approach, students are divided into two teams (theoreticians and seismologists) to test the simplest hypothesis for Earth's internal structure; a homogeneous Earth. Theoreticians create a scale model of a homogeneous Earth and use an average seismic wave velocity to make predictions about when seismic waves should arrive at various points around Earth. Seismologists then interpret actual seismic data from a recent earthquake to determine seismic arrivals at various points around Earth. Following this the two groups then compare and interpret the implications of their data.	Michael Hubenthal SUNY Binghamton NSF sponsored consortium of IRIS (Incorporated Research Institutions for Seismology)	PS Earth science	M, H

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SESSION II 1:00 – 2:30 PM
March 6, 2010

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II - C	<u>Physics Laboratory Using EXCEL</u>	This classic physics laboratory workshop involves using EXCEL to analyze data from a simple pendulum activity. The use of computer skills in this setting demonstrates excellent integration of physics, mathematics, and technology in the classroom.	Dr. Brian Lovelace SUNY Albany	PS physics	M, H
II - D	<u>Hands-on Energy Lessons for Middle and High School Students</u>	Attention earth science, environmental science, chemistry, and physics teachers. Are you looking for new ways to teach energy, global climate change, energy efficiency, solar, wind, hydropower, and hydrogen in your classroom? Find out in this “energizing,” hands-on workshop! Receive free materials and learn how to enrich your lessons and labs with timely energy and environmental content. Join us to learn more about the free energy education resources and staff development programs offered by the New York State Energy Research and Development Authority.	NYSERDA Energy Educator	LE, PS	M, H

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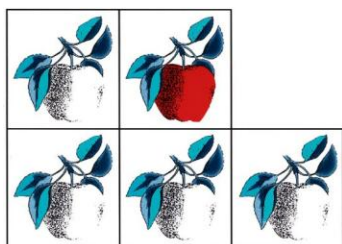
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II - F	<u>Plop, Plop, Fizz, Fizz</u>	What physical science concepts, lab skills, and nature of science ideas can be learned using Alka Seltzer tablets? We provide the materials, you bring the ideas! If you have an activity already, bring copies to share.	Becky Remis Schalmont HS Paul Nooney Tamarack HS	PS	E, M, H
II - G	<u>Connect Four: Physical Activities, Food, Technology, and Mental constructs</u>	Help students create mental constructs of abstract concepts at the intermediate level through the use of physical activities, food, manipulatives, toys, and technology.	Lynn Nardacci Ichabod Crane MS Elisabeth Milot Intermediate Level SAR	LE, PS	E, M, H
II - H	<u>Inquiry Activities for Young Scientists</u>	From working with living organisms to observing nature in the school yard, teachers will be provided with the tools they need to help students learn science through asking questions and investigating. This workshop is ideal for the upper level elementary, middle, or high school teacher teaching a pre Regents' level course. We will introduce a range of activities geared toward building skills such as asking relevant questions, making accurate observations, writing clear procedures, and collecting concise data. Inquiry activities will boost the students' observation and inference skills necessary for success in high school and beyond. Most activities introduced will be quick, taking less than 45 minutes of class time, but will provide students with lifelong memories and lessons to build on.	Danielle Woodard Schenectady HS Leigh Feguer National Board Certified Teacher	LE	E, M, H
II – J	<u>Non-Regents Physics Lab</u>	Teaching middle school or an introductory physics section? Don't just tweak your current Regents' labs. Come; learn some labs that the students will enjoy and could make the Regents' kids jealous!	Paul Federoff Burnt Hills-Ballston Lake HS Physics SAR	PS physics	M, H

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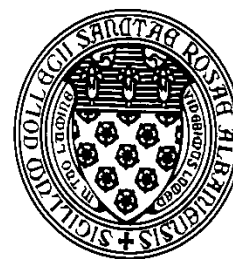
Greater Capital
Region Teacher Center



Science Teachers
of New York State



Schenectady
Teacher Center



College of
Saint Rose

Join Us for Spring Lab Day, March 6, 2010!

Registration Fee: STANYS members and pre-service teachers \$30.00
Non-members: \$40.00

Registration Deadline: Postmarked no later than February 24th.

Please make checks payable to STANYS Eastern Section.

Sorry, no purchase orders accepted.

Mail Registration Form to:

Kelly Ryan 9 Heather Lane Rensselaer, NY 12144 (kellyryan@ncolonie.org)

Questions? Contact: Christine Stankavich at 372-2911 or cegnaczyk@aol.com

In the event of inclement weather, or to see an on-line registration form, check the STANYS Eastern Section website: www.eastern-stanys.org
Look under Eastern Section Activities, Lab Day.

Name: _____ Home Phone: _____

Home Address: _____

Home e-mail: _____ Cell Phone: _____

School e-mail: _____ School Phone: _____

School Address: _____

Session Selection: Please provide a first and second choice. Every effort will be made to schedule your first choice, but some sessions have limited enrollment. Placement will be based on date registration is received. Register Early!

Session I _____
(First Choice)

Session II _____
(First Choice)

Session I _____
(Second Choice)

Session II _____
(Second Choice)