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Advancing science, technology, engineering, and mathematics education for people of all ages.

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Science on the Move in Sylvania Schools

Science is "on the move" in Rini Ng's science classroom when it comes to energy and alternative energy resources. Sylvania's Timberstone Junior High 6th grade students are making model solar cars, riding an energy bike powered by their own energy, playing energy-related games, and so much more! A foundation of energy knowledge is established by having students read about the ten sources of energy from **NEED**



([National Energy Education Development](#)) project materials. This knowledge is then tapped throughout the unit as learning experiences arise. Speakers from the community are also invited to share their expertise. Zach Whetstone, a Ph.D. student from the University of Michigan, and Dr. Victor Plotnikov from the University of Toledo gave presentations on nuclear and solar energies. The culminating activity in this class is an energy project that allows students to delve deeper into the sources of energy. Students develop PowerPoint presentations or tri-fold boards focusing on areas such as the source's environmental impact, careers involved, and the trends of usage over time. The projects are then displayed in a fair-type setting to educate the public. Ms. Ng maintains that educating students about energy issues and nurturing an appreciation for preserving and

conserving energy is vital. She believes their understanding will not only impact the decisions students make today but will also impact energy policies for future generations as these students grow to be tomorrow's leaders. Timberstone Junior High is one of three junior high schools in the Sylvania School system.

Community STEM in the NEWS

2012 SATELLITES (4th Annual) Conference at Penta Career Center



Suzan Shalhout, O.W. Holmes School - Water, water in the ground, Who's the cleanest One Around?

Area students will be participating in the OhioView **SATELLITES** (Students and Teachers Exploring Local Landscapes to Interpret the Earth from Space) Geospatial Technology Conference on April 17 from 4:00 p.m. to 8:00 p.m. at Penta Career Center, 9301 Buck Road in Perrysburg, Ohio. Students from K-12 schools and universities throughout the Toledo area and from as far away as Akron and Detroit will present projects that were developed using their own inquiry-based research using geospatial technologies. Student projects will be evaluated for scientific quality. Students will follow Intel Science Fair rules to develop and present their projects. ([read more](#))

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STEM Opportunities

The Community Resources Workshop Returns

Monday-Friday, June 18-22, 2012

Plan to spend a week of your summer vacation on a **fun-filled field trip** for educators while you earn college credit or contact hours! This high-quality professional development program includes:

- Five fun and fast-paced days visiting sites across Northwest Ohio
- Loads of great ways to energize your lesson plans
- Most meals and snacks
- Standards-aligned and classroom-ready lessons, materials, programs and resources
- 40 contact hours from NWO at BGSU or 2 semester graduate credits through Lourdes University

Cost: \$150 includes most meals (breakfast and lunch) as well as entrance fees, materials and 40 contact hours (provided by NWO at BGSU). Credit cards, school purchase orders or checks will be accepted as payment.

[Click here](#) for Registration Form and more information. Graduate credit is only an additional \$200 per credit hour.

**Note: The program is geared toward K-8 classroom and homeschooling educators but all teachers and administrators from preK-12 are very welcome and encouraged to attend.*

Got Inquiry? CLIMATE 21: Investigating Carbon, Weather & Climate, and Land Cover for 21st Century Learning (A GLOBE Mini-workshop)

Looking for **EIGHT** 4th - 12th grade teachers interested in **Global Climate Change and Student Inquiry**.

Join BGSU Professor Jodi Haney for this three session workshop. Learn how to involve your students in scientific inquiry while studying weather, climate, carbon and landcover. These topics are well-suited for the newly revised Ohio Science Content Standards and the Common Core Inquiry Recommendations.

Cost: The program is free. Funding for this workshop was provided through a grant from the **GLOBE** (Global Learning and Observations to Benefit the Environment) Program and **NOAA** (National Oceanographic and Atmospheric Administration).

Each fully participating teacher will receive \$200 for related classroom instructional materials and equipment along with classroom ready lessons and inquiry investigations.

Meeting Dates & Times:

- Thursday March 15th (4 - 8 pm); Rossford High School, Rossford, OH.

- Saturday, March 24th (9 am - 3 pm); BGSU Campus, Bowling Green, OH.
- Thursday, April 19th (4 - 8 pm); Rossford High School, Rossford, OH.

Register online today through NWO at: <http://survey.constantcontact.com/survey/a07e5lqqbe2gyn0eviz/start>

Space is very limited, so please register soon! **Registration closes March 8 at 5pm.**

Questions about registration? Please contact Michelle Klinger at: mklinge@bgsu.edu

Questions about the workshop topics and activities? Please contact Jodi Haney at: jhaney@bgsu.edu

Detailed workshop information (directions, where to park, what to bring, what to wear, etc.) will be sent when your program registration is confirmed.

Duane Bollenbacher's 24th Annual Summer Mathematics Workshops for Teachers Workshops

Location: Bluffton University in Bluffton, OhioDays and

Dates: June 12-14, June 19-21, June 26-28, and Aug 7-9

Cost: \$125 per session with contact hours or 1 Semester Hour Graduate Workshop Credit (Pass/Fail) - \$275

Times: 8:30 AM - 4:30 PM daily

[Click here](#) to download a flyer.

For further information, registration forms, or questions contact Duane Bollenbacher at Bluffton University, Box 54, Bluffton, OH 45817.

Call **419-358-3296** or email bollenbacherd@bluffton.edu

Tree Education & Free Tree Seedling Program

The Lucas Soil and Water Conservation District will again be providing tree education programs and free spruce tree seedlings to classrooms and youth groups in Lucas County. Each program is based on age group and includes info on tree biology, benefits and uses of trees, Emerald Ash Borer update, and more. While supplies last! To schedule this program, call **419-893-1966**.

March NWO STEM Inquiry Series Workshop

Topic: Virtual Field Trips and Technology Tools for your Classroom

Who may attend: Teachers of all grade levels, school administrators, technology coordinators and undergraduate students

Location: Rossford High School, Rossford, OH

Date and Time: March 16 from 5-8pm

Cost: \$15 includes materials, snacks and contact hour certificates

Registration opens Feb. 20. Visit nwocenter.org for information.

Ohio Teachers' Homeroom

Ohio Teachers' Homeroom is a new space for teachers on Facebook. The Ohio Department of Education hopes this Facebook page will be another outlet to give you useful tools and information, and serve as a place to express your opinion, ask questions and communicate with other teachers. Please go to Ohio Teachers' Homeroom <<https://www.facebook.com/pages/Ohio-Teachers-Homeroom/303190473049852?sk=wall>> and "like" us.

Summer Workshop on Sustainable Energy

June 18-20, 2012 in Columbus, Ohio

This two and a half day workshop will consist of five modules, each with a lecture, followed by hands-on activities or tours. Each teacher who completes the workshop will receive a set of Thames & Kosmos Power House experiment kits for his or her classroom, and a certification of attendance. Lunch will be provided.

Location: The Ohio State University Columbus campus

Cost: \$10 per teacher

Schedule: Monday (6/18) - 8:30 a.m. to 5:00 p.m., Tuesday (6/19) - 8:30 a.m. to 5:00 p.m., Wednesday (6/20) - 8:30 a.m. to 12:00 p.m.

Application Deadline: April 30, 2011 Enrollment is limited to 30 teachers. To apply, please

download the application at <http://ece.osu.edu/sustainableworkshop2012>

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NWO Hands-On STEM Activity

Ice Cream in a Bag

Q: What can I do with all this leftover winter rock salt?

A: Make delicious ice cream in a bag, of course!

Experiment # 1

What You Need:

- 2/3 cup of half & half
- 2 4 oz. clear glasses, preferably with an usual shape
- 2/3 cup of sugar
- table or flat surface protected by a table cloth
- paper towels for clean up



What to tell your students:

T: Scientists tell us that a solid is a material in which the atoms or molecules are in a fixed position and can only vibrate in place.

- What does that really mean?
- How can we test whether something is a liquid or a solid? One way for us to comprehend this concept is to understand that solids generally maintain their shape and have a definite volume.
- Then, what makes something a liquid? Liquids can assume the shape of their container and can be poured.

Download a pdf of the complete hands-on activity by [clicking here!](#)

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Share Your Story With Us!

Thank you for your support of NWO, our programs, our activities, and our partners. Please send us updates, press releases, and news of STEM happenings at your school, district, or organization. Submit these to nwo@bgsu.edu. We are always looking for great STEM education stories to feature in upcoming newsletters.

Join NWO on [Facebook](#)

Find Even More Ohio STEM Education Resources

Visit our STEM clearinghouse, nwostemresources.org, for more STEM activities, programs, and information.

[Forward email](#)



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