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K-16 STEM in the NEWS

Alternative Energy Saves Money, Promotes STEM

Three Ohio school districts have leveraged state and federal funds to install a single 750 kw wind turbine on each of their campuses. **Archbold** and **Pettisville** schools in northwest Ohio and Kenston Local in northeast Ohio have simultaneously entered the construction phase of what appear to be the first wind turbines 750 kw or larger to be installed on K-12 campuses in Ohio. The schools are part of a larger state consortium known as Kilowatts 4 Education, which was established to help schools and other public entities to explore energy savings measures across the state. While the districts began the initiatives as cost savings measures to combat declining state revenue, they are now turning their attention to the enhanced education that can be provided to students within their districts, specifically in the areas of science, technology, engineering, and mathematics (STEM). ([read more](#))



Community STEM in the NEWS

STEM in the Park - Hands-On Fun for All Ages

Rockets and Earthquakes and Snakes, oh



my! *STEM in the Park* had that and so much more for families and people of all ages on September 10, 2011 at the Charles E. Perry Field House on the campus of Bowling Green State University. Forty-eight unique exhibitors hosted hands-on STEM activity stations at the event with over 70 tables of activities that kids of all ages enjoyed.



The Northwest Ohio Center for Excellence in STEM Education (NWO) at BGSU organized this free event on the BGSU campus for the entire northwest Ohio and southeast Michigan community. NWO is a partnership among a number of area universities, K-12 schools, businesses, and community partners who all come together at this event to showcase innovation and educational opportunities and promote positive attitudes toward STEM teaching and learning. STEM activity station hosts included Fort Meigs, Challenger Learning Center of Lucas County, PNC Bank, PVS Nolwood Chemicals, University of Toledo, Ohio Northern University, BGSU's Marine Lab, Time Warner Cable, Penta Career Center, and Imagination Station plus myriad other STEM-friendly institutions and organizations. Attendees could register for a free lunch catered by Tony Packo's. ([read more](#))

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STEM Opportunities

NWO STEM Education Inquiry Series 2011-2012

The topic for the October 20, 2011 professional development session for educators sponsored by NWO is *Formative Assessment and Understanding the Newly Revised State Standards in Math and Science* presented by Dr. Debra Gallagher of Ohio Northern University. All monthly sessions take place from 5pm-8pm at Rossford High School. Information and online registration are available at <http://nwocenter.org/inquiryseries>. Online registration ends Friday, September 15, 2011. On-site registration is available.

Ohio Council of Teachers of Mathematics 61st Annual Conference

When: Thursday and Friday, October 13-14, 2011

Where: SeaGate Convention Center, 401 Jefferson Ave., Toledo, OH

The keynote speakers for this year's event include Dr. Phil Daro, who is one of the primary writers of the Common Core State Standards for Mathematics, as well as internationally known storyteller Brian "Fox" Ellis, who will share classroom tested ideas for using stories and humor to engage mathematics students.

Details, including the full program and hotel reservation form, can be found at the OCTM Web site-just point your browser to http://ohioctm.org/conference_2011.

The Leopold Education Project (LEP) Workshops

Northwest Ohio Pheasants Forever presents an innovative, interdisciplinary conservation education curriculum based on the classic writings of Aldo Leopold, a renowned conservationist. For more information visit the website at: <http://www.lep.org>

LEP Facilitator Training Workshop - November 11-13, 2011

Time: Begins 5:30 PM Friday through Noon Sunday

Place: Camp Widewater, 4050 US 24, Liberty Center, OH

Cost: Free!!!! All food, lodging, and education materials provided

Who Should Attend: Educators, naturalists, and curriculum coordinators, non-formal educators, natural resource professionals, and 4-H and Scout leaders. CEU Credits may be available.

LEP Educator Training Workshop - November 12, 2011

Time: 8:00 AM through 5:00 PM

Same location

For registration information, please contact Lou Best at 419-304-1368.

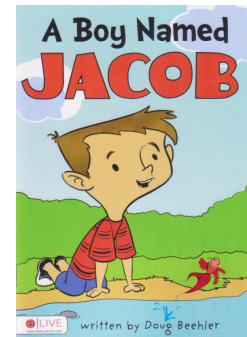
On-Demand Library

Nationwide Children's Hospital of Columbus, Ohio, is offering an exciting and innovative new tool for you and your school to use in the classroom. Their on-demand library of Young Scientist

Education Series presentations includes the following: Interventional Radiology, Genetic Regulation of Early Neural Development, and Bench to Bedside: A Vaccine for Ear Infections. Using the archived material is simple, easy, and convenient. Just log on to their website at <http://www.nationwidechildrens.org/summer-scientist-series> and choose from the list of videos they have to offer.

Bring an Author to Your Classroom

This new book about a young boy and his adventures with nature is being released Sept. 13, 2011. If you wish to host the author in your classroom to read and discuss the book with your preschool or early elementary students, please contact **Doug Beehler at 419-843-8540** to set up an author's visit and story reading. You may also reach Mr. Beehler via email at Dobee5678@aol.com.



School Improvement Grants

The Lowe's Toolbox for Education Grant Program, funded by the Lowe's [Charitable and Educational Foundation](#), provides grant awards of up to \$5,000 to support school improvement projects at public schools throughout the U.S. **The deadline for submitting applications for the fall 2011 grant cycle is October 14, 2011.** To apply, go to: <http://www.toolboxforeducation.com/hta.html>.

Climate Change Survey

The National Earth Science Teachers Association has developed an anonymous survey to gather information about climate change education underway in the K-12 classroom today. Take the survey at <https://www.surveymonkey.com/s/N5ZHKFJ>. **The survey will be available through September 30**, and results will be made available through the NESTA website at <http://www.nestanet.org> in November of this year.

NWO Hands-On STEM Activity

See How IT GROWS: Earth System in a Bottle



What you need:

- 1 rinsed 16 oz to 1 liter used plastic soda or water bottle
- 1 cup potting soil
- Six seeds (fast sprouting are best) or
- Plant for cuttings (hearty plants like mums or lavender, sage, usually work well)
- 1/4 - 1/8 cup water
- Scissors - to cut bottles
- Packing tape
- Ribbon to decorate planted bottle
- Newspaper for easy clean up

What you do:

- Cover your working area with newspaper for easy clean up.
- Ask an adult to help you cut the bottle in half.
- Make "wings" on each side of the top half of the bottle by making two 1 inch cuts (about 2 inches apart) on each side of the bottle top.
- Put about 1 cup of potting soil into the bottom half of the bottle.
- Water the soil by adding between 1/4 - 1/8 cups of water (soil should be moist throughout, but water should not "puddle"). If too much water is added, add more soil as needed.
 - To plant the seeds, make a 1/4 inch deep hole using a pencil eraser. Add two seeds to each hole. Cover the hole with a "dusting" of soil.
 - To plant a cutting, cut a plant stem on an angle at the desired length using sharp scissors. Simply bury the cut end of the plant into the soil about 1/4 inch deep.
 - - Add 3 - 6 seeds and/or a cutting from a hearty plant.
 - Seal the top and bottom half together using packing tape. - Decorate the bottle with

ribbon.

- Put the top of the bottle onto the bottom half of the bottle with the "wings" of the top half inside the bottom and the rest of the top half on the outside of the bottom half of the bottle.
- Seal the top and bottom half together using packing tape.
- Decorate the bottle with ribbon.

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

This activity is brought to you by the BGSU Middle Childhood Science Teachers (Dr. Jodi Haney, Professor)

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STEM Education Updates

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. Please submit to nwo@bgsu.edu. We are always looking for great STEM education stories to feature in upcoming newsletters.

Join us on [Facebook](#)

And please visit our new STEM clearinghouse, nwostemresources.org, for more STEM activities, programs, and information.

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