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Evaluate the NWO e-newsletter and win \$50!!

Please help us evaluate this e-newsletter. Visit the following internet address to complete a short survey about this newsletter: http://www.research.net/s/eNewsletter_May2011

When you're done, you'll be entered into a drawing to win a \$50 Amazon.com gift card! (Four winners will be chosen.) Your input is greatly valued! Thank you for your support.

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K-16 STEM in the NEWS

Putnam County Schools Are Leading the Way in STEM

A state of Ohio STEM grant of nearly \$1 million is making it possible for northwest Ohio's new STEM hub to hit the ground running. Much of this funding is focused on the creation of a new STEM learning platform in Putnam County, where the Putnam County Educational Service Center has already established a high level of cooperation and collaboration among the districts it serves. Putnam County Superintendent Jan Osborn said money from this grant is being used to provide additional equipment for nine public school districts in addition to more training for teachers.



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Bob Midden, director of NWO - the northwest Ohio STEM Hub at Bowling Green State University, said Putnam County was chosen because their region had already demonstrated the ability to use distance learning and also had expertise in collaboration among schools, teachers, administrators, and business leaders. Since low population density is an issue, "one of the most innovative things they're going to be doing is sharing teachers among their schools using especially interactive video distance learning," Midden says. A class offered at one school can be made available to students in all of Putnam's nine school districts. Initial efforts with this grant funding will be aimed at grades 7-12, and classes will include connections to local industries and focus on hands-on inquiry and problem-based learning. Planned courses of study include those in agricultural sciences, medical sciences, and medical technologies. ([read more](#))

Community STEM in the NEWS

You Be The Chemist Challenge Competition

Chemistry. The word has been celebrated in song, in movies, in the laboratory, and in the kitchen. But on the evening of April 13, 2011, chemistry was celebrated game show style during the very first Ohio You Be The Chemist Challenge Competition at Imagination Station in downtown Toledo, Ohio. Twenty-one fifth through eighth grade students competed for the opportunity to move on to the You Be The Chemist (YBTC) national championship in Philadelphia, Pennsylvania, this June. Nine schools in Toledo Public along with St. Joseph School in Sylvania took part in school level challenges. Top finishers from each of those schools were invited to compete in the state level competition at Imagination Station. Robert Mendenhall of Toledo Public Schools is the state coordinator in Ohio for YBTC and was instrumental in expanding the local competition into a state event this year. ([read more](#))



Photo: Earth Lyons of Harvard Elementary School accepting her 1st place awards from Dr. Robert Midden of NWO.

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STEM Opportunities

LifeStyles and Career Choice Magazine™ Announces Its First Annual STEM Essay Contest and Scholarship for 2012

LifeStyles and Career Choices Magazine™ is inviting high school seniors from public, private, and homeschools to submit essays on the significance of STEM education and what it will mean to the United States over the next decade and beyond. Essays must be original and creative works of less than 1,000 words and the student must be majoring in an area of STEM their freshman year of college.

Three top prizes will be awarded. The Grand Prize winner will receive a **\$1,000** cash scholarship. Please see their website for additional details at: www.careerchoicesmagazine.com and enter to win.

STEM Summer Camps

There are numerous opportunities to dig into STEM this summer via summer camps. Visit the Regional Announcements section on the www.nwocenter.org homepage for information regarding local opportunities available for K-12 students brought to you by area schools, districts, and informal education partners.

Bodies Revealed Coming to Imagination Station

Have you ever wondered what a human bone actually looks like? Maybe a heart? Or a lung? The chance to see for yourself is coming to Toledo, when Bodies Revealed opens at Imagination Station in Downtown Toledo. **The exhibit runs from May 21 through Sept. 18.**

STEM in the Park Family Event

Mark your calendars for this free family event **Saturday, September 10** from 10am-1pm on the campus of Bowling Green State University. Area colleges, universities, businesses, and community partners will host over 50 engaging stations of hands-on, inquiry-based activities that focus on STEM education and opportunities in our 29 county region.

19th Annual Teachers, Industry, and Environment (TIE) Conference

OCTOBER 12-14, 2011

Celebrating the International Year of Chemistry 2011

This year's conference will be held at the Marriott Courtyard in Columbus, Ohio. **There is no charge to attend.** Last year, a group of nearly sixty educators participated in the intensive, hands-on program focused on creative approaches to teaching principles of physics, chemistry, and the life sciences to their students.

For more information visit www.ohiochemistry.org or contact Chris Materni at cmaterni@ohiochemistry.org.

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K-8 Public School Educators Invited to Apply for NEA Foundation-Nickelodeon Big Help Grants

Sponsored by **Nickelodeon** and the **NEA Foundation**, NEA Foundation-Nickelodeon Big Help Grants are available in the form of Student Achievement grants of up to \$5,000 for K-8 public school educators in the United States.

The grants target four concerns (environmental awareness, health and wellness, students' right to a quality public education, and active community involvement) as areas of great promise in helping 21st century students develop a sense of global awareness that encourages and enables them to make a difference in their world. Visit the NEA Foundation website for complete program information. Link to the complete Request For Proposals: <http://www.nea.org/grants/43347.htm>

SATELLITES (Students and Teachers Exploring Local Landscapes to Interpret the Earth from Space)

University of Toledo has received a grant to offer a free science, mathematics, technology, and social studies workshop for teachers in **grades 5-12** in geospatial technologies at the University of Toledo. The workshop runs from 8:30am-4:30pm, **July 11-15**. Teachers receive lesson plans that are standards-based, a free GPS, free GIS software, and many other resources. Contact mikell.hedley@utoledo.edu or **419-304-3473** for more information.

Community Resources Workshop

Monday-Friday, June 20-24 from 8am-4pm

THIS HIGH-QUALITY PROFESSIONAL DEVELOPMENT PROGRAM INCLUDES:

- Five fun and fast-paced days at informal education venues such as Toledo Zoo, Toledo Museum of Art, and Challenger Learning Center
- Loads of great ways to energize your lesson plans
- Meals and snacks
- Standards-aligned, cross-curricular, and classroom-ready lessons, materials, programs, and resources
- 40 contact hours from BGSU or 2 semester graduate credits through Lourdes College

For information visit <http://www.nwocenter.org/CRW/CRWhome.htm>

FREE Technological/Engineering Design Lesson Ideas by Bob Claymier

These lesson ideas are now available for grades preK-6. They are integrated with the new Ohio Academic Standards for Science.

To download them, register at the Ohio Technology and Engineering Educators Association's website, www.stemsite.org. After registration (which is free), you will receive approval through your email in a few days to enter the site. Go to Public News and click on the post, "Technological design lesson ideas for the new Ohio Science Standards." The attachments are PDFs sorted by grade levels.

FPD Opportunity with Johnson's Island to Integrate STEM and Social Studies

Maumee Valley Historical Society is teaming up with Heidelberg University and Johnson's Island to provide a day of archaeology, Civil War history, and educational opportunities for K-12 teachers at the Johnson's Island site near Sandusky, Ohio. This field experience/workshop will be held **Tuesday, July 12, 2011**. The cost for the trip is \$18 and provides 5 contact hours. For information contact Darlene Limmer at 419-666-6632 or email dlimmer@bex.net. Visit wolcotthouse.org/Teacher.html for the registration form.

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NWO Hands-On Activity



Ouch! Sunburn Science

Grade Level: 2-8

What you need:

- UV beads (purchase through stevespanglerscience.com)
- Hand lenses
- Pencil/paper to record data
- Small plastic containers of sunscreen samples (3 different SPF sunscreens for each group labeled A, B, & C)
- Plastic bags, paper plates, trays (e.g., containers to hold beads)
- Markers
- A sunny day

What you do:

1. Divide the students into groups of three or four. Each group receives 12-20 UV beads and 2 hand lenses.
2. Ask each group to use their powers of observation to determine what these objects might be. Have each group record their observations.
3. Have each group share their observations. Write down their collective thoughts on a white board.
4. Now, give each group about 5 minutes to take the beads outside in the sun and observe what happens.
5. Return to the classroom and record the groups' observations alongside their first thoughts on the board (use a T-chart format).
6. Tell the class that these are special photosensitive beads. Ultraviolet rays from the sun turn the beads color.

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

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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. We are always looking for great STEM education stories to feature in upcoming

newsletters.

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