

## Spring Thaw Unfreezes Real World Externships for Teachers of Math and Science

Thanks to an investment by the Iowa Department of Economic Development (IDED) Targeted Industries Career Awareness fund, math and science teachers across Iowa will spend their summer applying theory to practice as *Real World Externs*. A core program of IMSEP, *Real World Externships for Teachers of Mathematics and Science* was put on ice last fall when state funds diminished. As temperatures rise outside, the program is now heating up to match teachers with such leading Iowa companies as Kemin Industries, Hy-Vee, Inc., Monsanto, Rockwell Collins, Clipper Windpower, Pella Corporation, Principal Financial Group, John Deere and the Iowa Department of Natural Resources (DNR). Applications are currently being accepted from teachers, and the interest of additional business partners is welcome. Log on to [www.iowamathscience.org/externships](http://www.iowamathscience.org/externships) to learn more.



Clipper Windpower hosted Extern and high school math teacher Rebecca Thayer in 2009.

## STEM Education: A Component of Iowa's EPSCoR Status

A quiet little conference held last week at the University of Arkansas-Little Rock has profound implications for improving state-level STEM education in 27 U.S. states, including Iowa. Education directors of the National Science Foundation (NSF)-funded Experimental Program to Stimulate Competitive Research (EPSCoR) grants—joined by a slew of federal and state cheerleaders—spent time brainstorming practices of promise for building and diversifying the teacher and professional STEM workforce. Recently designated an EPSCoR-eligible state, Iowa has submitted comprehensive grants to NASA (funded) and to the NSF (still in review) for building research infrastructure, to which education is a key component. IMSEP's role as the Regents collaborative STEM education initiative makes for a natural fit to coordinate the education end of Iowa's EPSCoR, while integrating with programs nationally.

## Legislators Enlightened of STEM Efforts across Iowa



Rep. Kevin Koester (R) pedals his way into green energy via Dr. Reg Pecan's Solar Bike at IMSEP Day.

Over 70 exhibitors displaying teacher and student outreach projects throughout Iowa were on hand at IMSEP Day at the Capitol on March 24. Numerous legislators and Capitol visitors stopped by the Rotunda to check out all things related to math and science education. On March 23, many attending IMSEP Day were on hand for PLTW Day, allowing legislators to see the big picture of math and science education occurring around the state. More events of this nature are planned to showcase the significant efforts by our universities and their public and private sector partners to eliminate math and science illiteracy. For pictures from the event, check out IMSEP's Facebook page by clicking [here](#).

## I-Teach Interns Get a Taste of Teaching at Waterloo's PBD Academy

Rachael Woodley is a fourth year science teacher at Waterloo East's alternative program—the Performance Based Diploma (PBD) Academy. Working alongside Ms. Woodley are *I-Teach* recruits Alex Brown (Hawkeye Community College) and Michelle Royer (University of Northern Iowa), science-teachers-to-be. Both students are receiving valuable classroom time with Ms. Woodley because of the *I-Teach Math and Science Teacher Recruitment* program "Exploring Math and Science Teaching," a seminar offered at both HCC and UNI, as well as Iowa State University and North Iowa Area Community College. "I was in class when my science teacher told us about the *I-Teach* seminar," said Alex, currently a business major. "I've always liked science and thought teaching might be the way to go." Michelle is helping convert handwritten notes into complete inquiry-based labs Ms. Woodley will deliver later this semester. "I think *I-Teach* is a great program because it gives me another chance to work with kids in the classroom before I do my student teaching," said Michelle. Alex agrees, "I get to experiment with my future and check out a career option that interests me to see if I fit with it. It's a great program." For more information about the *I-Teach* program visit <http://www.iowamathscience.org/i-teach/>



From left to right: Hawkeye CC I-Teach intern Alex Brown, PBD Academy science teacher Rachael Woodley and UNI I-Teach Intern Michelle Royer.

## USA Science Festival - A New IMSEP Partner!

What is the universe made of? What do engineers have to do with baseball? What do magic tricks and hip-hop have to do with math? Find out at the first ever USA Science & Engineering Festival Expo on the National Mall in Washington, D.C.! The Iowa Mathematics and Science Education Partnership is proud to be an official partner of the inaugural USA Science & Engineering Festival to be held in the greater D.C. area in October 2010. The Festival, which will be the country's first national science festival, is a collaboration of over 500 of the country's leading science and engineering organizations and aims to reignite the interest of our nation's youth in the sciences. The culmination of the Festival will be a two-day Expo on the National Mall on



October 23-24, 2010, which will give children, teens and adults the opportunity to explore all facets of science and engineering through hundreds of fun, hands-on activities. People across the United States will hold satellite events in their communities the same weekend that hundreds of thousands of people celebrate science on the National Mall. For more information on all Festival events and how you can get involved, visit [www.usasciencefestival.org](http://www.usasciencefestival.org) or to contribute to events scheduled here in Iowa, email us at [imsep@uni.edu](mailto:imsep@uni.edu).

### Friend of Math & Science? Friend Us on Facebook®



Capitalizing on the success of social media to connect STEM entities, IMSEP has a Facebook® page. [Check it out](#) to discover more about events and happenings regarding all things math and science in Iowa!

### Spring Forward Toward Possible Leveraging Opportunities

Leveraging the state's investment is a top priority for IMSEP. In addition to the \$899,260 grant acquired through the National Science Foundation (NSF) last fall and the \$106,000 grant from the Iowa Department of Economic Development (featured in this newsletter), two more applications were recently submitted from the Iowa Mathematics and Science Institute to funding agencies. From the NSF program *Innovative Technology Experiences for Students and Teachers* (ITEST), we seek \$1.2 million to expand *Real World Externships for Teachers of Mathematics and Science* to every community in Iowa that would like to become involved in that project. And, working with the Iowa Space Grant Consortium through Director Ramanathan Sugumaran, Ph.D., and the Center for Excellence in Science, Mathematics and Engineering Education (CESMEE) at ISU, we proposed to the National Aeronautics and Space Administration (NASA) a \$1.3 million grant to create a system of STEM summer camps for middle-school students and workshops for teachers. With a bit of luck, leveraged programming will bloom alongside the bluebells and geraniums this spring.

### Chemical Engineer Graces Fifth STEM Gem Poster

A new addition, by the name of Tess Hindman, has joined the IMSEP information toolbox to inspire Iowa youth to work hard in math and science class and to pursue a degree in the STEM fields. Our fifth in a series of Iowans featured as STEM Gems, Tess is a graduate of Iowa State University and now a chemical engineer who heads up the Fruit Shapes area of General Mills in Cedar Rapids. Tess will join other STEM Gems Kelly Ortberg of Rockwell Collins, UNI grad Amy Carolan of the Minnesota DNR, Albert Wiggins of Waterloo's George Washington Carver Academy, and Bondurant-Farrar's Thor Anderson on the classroom walls of science and mathematics teachers across Iowa. For your copy, send a request to IMSEP's Tonja Richards at [Tonja.Richards@uni.edu](mailto:Tonja.Richards@uni.edu).



### MARK YOUR CALENDAR – Upcoming Events

April 13	<b>Go! Girls STEM Exploration Day</b> – STEM-focused day for girls in fifth, sixth, and seventh grades within Grant Wood AEA. <b>Location:</b> University of Iowa (U of I) Memorial Union – Iowa City, Iowa. <b>Contact:</b> Rebecca Whitaker, U of I's College of Engineering K-12 Outreach Coordinator, <a href="mailto:rebecca-whitaker@uiowa.edu">rebecca-whitaker@uiowa.edu</a> .
April 16-17	<b>Iowa Academy of Science 122<sup>nd</sup> Annual Meeting</b> – Keynote speaker, symposia, field trips and Iowa Junior Academy of Science Competition. <b>Location:</b> Graceland University – Lamoni, Iowa. <b>Contact:</b> Marcy Seavey, Program Director, <a href="mailto:iowawet@sunny.uni.edu">iowawet@sunny.uni.edu</a> . Register online at <a href="http://www.iacad.org">www.iacad.org</a>
April 23-24	<b>IT Olympics</b> – Two-day competition featuring teams of Iowa high school students competing in three different venues: cyber defense, game design and robotics. Plus, students present IT-related community projects. <b>Location:</b> Iowa State University Hilton Coliseum – Ames, Iowa. <b>Contact:</b> Julie Rursch at <a href="mailto:jrursch@iastate.edu">jrursch@iastate.edu</a> . Register online at <a href="http://www.it-adventures.org/php/reg_schools_start.php">http://www.it-adventures.org/php/reg_schools_start.php</a>
April 27-28	<b>Transportation Workforce Development Regional Summit - Preparing Tomorrow's Transportation Workforce: A Midwest Summit</b> is to assess the educational and training needs of the future transportation workforce and identify strategies to address those needs across various career paths. <b>Location:</b> The Hotel at Gateway Center – Ames, Iowa. <b>Contact:</b> Judy Thomas at <a href="mailto:wfdsummit@iastate.edu">wfdsummit@iastate.edu</a> or register on line click <a href="#">here</a> .
April 28	<b>Community College STEM Education Career Day</b> – <i>Teaching Mathematics and Science in the Community College Career Day</i> conducted as part of the IMSEP core program Community College STEM Instructor Preparation & Updates program. Keynote speaker: Barbara Dougherty, CESMEE Director. <b>Location:</b> Western Iowa Tech Community College (WITCC) – Sioux City, Iowa. <b>Contact:</b> Marisa Rivera, CC-STEM Instructor Preparation & Updates Project Coordinator, at <a href="mailto:mrivera@iastate.edu">mrivera@iastate.edu</a>
May 4	<b>3<sup>rd</sup> Annual Student STEM Symposium</b> – New Middle School Focus. <b>Location:</b> University of Iowa – Iowa City, Iowa <b>Contact:</b> Lyn Countryman, Iowa Mathematics and Science Coalition Executive Director, <a href="mailto:Lyn.Countryman@uni.edu">Lyn.Countryman@uni.edu</a> . Registration form can be found at: <a href="http://www.imsconline.org/2010STEMflyer.pdf">http://www.imsconline.org/2010STEMflyer.pdf</a>
May 12	<b>National Lab Day (NLD)</b> – Bringing together exciting hands-on, experiment-based learning for kids from all over the country by encouraging teachers and educators to post projects demonstrating how everyone can lend support to NLD in their own way. <b>Contact:</b> Log on to register at <a href="http://www.nationallabday.org/">http://www.nationallabday.org/</a>
June 13-15	<b>FIRST Tech Challenge (FTC) 3-Day Coaches Workshop</b> – Co-sponsored by U of I's College of Engineering and IMSEP, teachers and coaches from Iowa schools serving students of underrepresented populations in the STEM fields are strongly encouraged to apply. <b>Location:</b> U of I's College of Engineering. <b>Contact:</b> Rebecca Whitaker, U of I's College of Engineering K-12 Outreach Coordinator, at <a href="mailto:ftc.iowa@gmail.com">ftc.iowa@gmail.com</a>
August 3	<b>Second Annual Iowa Mathematics &amp; Science Teacher Educators Summit</b> – More information to come. <b>Location:</b> Grinnell College – Grinnell, Iowa. <b>Contact:</b> Jeff Weld, IMSEP Director, <a href="mailto:jeff.weld@uni.edu">jeff.weld@uni.edu</a>