

***I-Teach* UNI Meets *I-Teach* Hawkeye CC**

In an effort to bring more math and science teachers into the Iowa education fold, IMSEP's *I-Teach Math and Science* teacher recruitment program has expanded from a pilot program at the University of Northern Iowa (UNI) and North Iowa Area Community College (NIACC) to Iowa State University (ISU) and Hawkeye Community College (HCC). Recently, UNI's Jamie Randall and Laura Tucker, students who were drawn to teaching via UNI's *I-Teach* seminar, talked with *I-Teach* seminar students at HCC and NIACC to share stories, talk about what it is like to be a math and science teaching major at UNI and the benefits of the *I-Teach* program in terms of internship opportunities and scholarships. "The students in my class are very excited about this program," said Catharine Freeman, HCC's *I-Teach* coordinator. "Math and science is their main interest and taking the seminar class has really opened their eyes to the world of teaching." This year's HCC *I-Teach* seminar had 17 students interested in learning about the teaching field. This is the second semester HCC has partnered with IMSEP on this seminar. Over the past four semesters, NIACC has had 38 participants in the seminar.



UNI's Jamie Randall and Laura Tucker visit Catharine Freeman's HCC classroom.

All Things NOYCE at IMSEP



The "father of the microchip" Robert Noyce is becoming very familiar to IMSEP. Almost a year ago, IMSEP earned an \$899,260 Robert Noyce Scholarship grant from the National Science Foundation (NSF) to provide scholarships to STEM majors drawn to teaching through programs at one of the Regent universities. Then, an IMSEP team representative and a Noyce Scholar from the University of Northern Iowa attended the NSF-sponsored *Midwest Noyce Regional Conference* at Indiana University Purdue University in Indianapolis, while simultaneously one thousand miles east, IMSEP director Jeff Weld reviewed new Noyce proposals for the NSF in Washington, D.C. The Indiana Noyce conference included informative plenary and break-out sessions focused on advancing the quality of science-technology-engineering-mathematics (STEM) teaching and learning in high needs classrooms. A keynote speaker at the event was Penny Noyce, MD, daughter of the late Robert Noyce, who shared "The Adventurous Life of Robert Noyce." It is only fitting that the upcoming *Iowa Science and Mathematics Teacher Educators Summit* on August 3, 2010, which will be held at the Noyce Science Center at Grinnell College (Robert Noyce's alma mater), feature Penny Noyce once more as a keynote. Please join us for that event.

"Way Cool" Second Annual GO! Girls STEM Day



Learning to extract banana DNA at Go! Girls STEM Day.

One hundred and fifteen middle-school girls from the Grant Wood Area Education Agency district attended **Go! Girls STEM Day** on April 13 at the University of Iowa's College of Engineering. Co-sponsored by IMSEP, professors from across campus engaged students with hands-on activities in biology, biomedical engineering, chemical engineering, electrical/computer engineering, environmental engineering and physics. From learning how to turn river water into drinking water to becoming a human radio wave conductor to extracting DNA from smashed fly larva, these young women were able to learn about many different career choices utilizing math and science. "This is such a great opportunity for our students to realize that a choice in math or science is a cool choice," said Julie Timmons, science teacher at Washington Elementary. "When they go back to school on Monday and tell others what they were able to do here today, it can only boost interest in math and the sciences."

IMSEP Working With Pella Corp's "Explore Engineering" and "Real World Externships"

Area fifth through eighth graders were treated to an evening of exploration and engineering fun, while parents learned about future opportunities for their kids, the importance of math and science and what the three state universities have to offer by way of engineering education. Representatives from all three Regent universities and local industry representatives were on hand for panel discussions regarding how to prepare kids for a future in engineering. IMSEP is also working with Pella again this year on the "Real World Externships for Teachers of Mathematics and Science" program at the corporate headquarters. IMSEP director Jeff Weld states, "Pella Corporation does so much for STEM education in Iowa. IMSEP is proud to partner with them and other business leaders around the state on multiple levels to grow Iowa's talent to compete and succeed in post-secondary education and careers."



Students learning the basics of parachute-making at "Explore Engineering" Day.

IMSA Students STEM Day Trip



IMSA students take a break from a tight STEM-laden schedule on their recent trip to Des Moines.

Each year, the Iowa Mathematics and Science Academy (IMSA) students hit the road to learn about STEM in the real world. The three-day trip throughout Eastern and Central Iowa, sponsored by IMSEP, gave first-generation college bound students the opportunity to see STEM in action around the state. Thirty-six students and IMSA director Angela Francis left Waterloo for their first stop at The University of Iowa, where they visited with STEM faculty and several first-generation college students for a campus and science lab tour, hands-on demonstrations and an impromptu Q & A session giving students a glimpse into a future career in the STEM fields. Next the IMSA crew headed to Des Moines to visit Kemin Industries, Principal Financial Group and Iowa State University. Professionals at these stops answered student questions about their jobs and the educational path they took to their chosen careers. Francis also stressed that, "...the trip proved to be an eye-opening experience to students, showing them the many different opportunities in life that involve math and science."

A Strategic Plan for STEM Education in Iowa

On May 13, leaders from across private and public sectors will join together in central Iowa to embark on the task of developing a unified vision for STEM education. Outstanding programs spanning pre-K through high school to college and beyond pepper our state, though opportunities may not be universally available and sometimes overlap. A planning team representing the Iowa Department of Education, the private industry sector of Iowa and the Iowa Mathematics and Science Education Partnership will convene this kick-off meeting leading to a virtual community doing the bulk of the work online. If you are interested in this work, email imsep@uni.edu.

MARK YOUR CALENDAR –

May 4	3rd Annual Student STEM Symposium. New Middle School Focus. Targeted to middle school teachers, students and community leaders wanting to learn more about STEM. Location: University of Iowa – Iowa City, Iowa, 8:30 AM – 2:30 PM. Contact: Lyn Countryman, Iowa Mathematics and Science Coalition Executive Director, Lyn.Countryman@uni.edu . Registration form can be found at: http://www.imsconline.org/2010STEMFlier.pdf
May 7	Science Education Research Symposium. Highlights recent and ongoing research undertaken by program graduate students and faculty in K-16 school contexts across Iowa and beyond. Location: Lindquist Center - University of Iowa Science Education Program, 2:00 – 4:00 PM. Contact: Cory Forbes at http://www.education.uiowa.edu/people/facstaffs/cforbes.htm or 319 335 5591
May 12	National Lab Day (NLD). Bringing together exciting hands-on, experiment-based learning for kids from all over the country by encouraging teachers and volunteers to post projects demonstrating how everyone can lend support to NLD in their own way. Log on to register at http://www.nationallabday.org/
May 20	CSI End-of-Year Showcase. Corridor STEM Initiative Afterschool STEM program showcase features presentation by area students. Location: Iowa Memorial Union – University of Iowa, 4:30 – 5:30 PM. Contact: RSVP to Yukiko Hill, Grant Wood AEA Teacher-in-Residence, 319.399.6730 or yhill@gwaea.org
June 13-15	FIRST Tech Challenge (FTC) 3-Day Coaches Workshop. 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. Location: U of I's College of Engineering. Contact: Rebecca Whitaker, U of I's College of Engineering K-12 Outreach Coordinator, at ftc.iowa@gmail.com
June 29 - July 2	Experienced Robotics Camp. For students currently enrolled in grades 5-8 who are already familiar with both the LEGO NXT robot and the LEGO Mindstorms programming software. Location: University of Northern Iowa - Cedar Falls, Iowa. Contact: Bill Harwood, Coordinator, bill.harwood@uni.edu or 319.273.2052
July 5-9; July 12	Beginning Robotics Camp. For students currently enrolled in grades 5-8 who have little or no experience with the LEGO NXT robot and Mindstorms programming software. Location: University of Northern Iowa - Cedar Falls, Iowa. Contact: Bill Harwood, Coordinator, bill.harwood@uni.edu or 319.273.2052
July 12-16	Middle School Crime Solvers. Students in grades 7-9 will learn how to secure and protect a crime scene, collect evidence, study evidence using the latest technology and put it all together to solve a crime. Location: University of Northern Iowa - Cedar Falls, Iowa. Contact: Bill Harwood, Coordinator, bill.harwood@uni.edu or 319.273.2052
July 18-30	PLTW Teacher Training. Open to all teachers teaching PLTW courses for Fall 2010. Location: U of I and ISU campuses. Contact: For more information, go to http://www.pltwiowa.org/
August 3	Second Annual Iowa Mathematics & Science Teacher Educators Summit – More information to come. Location: Grinnell College – Grinnell, Iowa. Contact: Jeff Weld, IMSEP Director, jeff.weld@uni.edu

Iowa Mathematics and Science Education Partnership

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