

Eyes On IISME

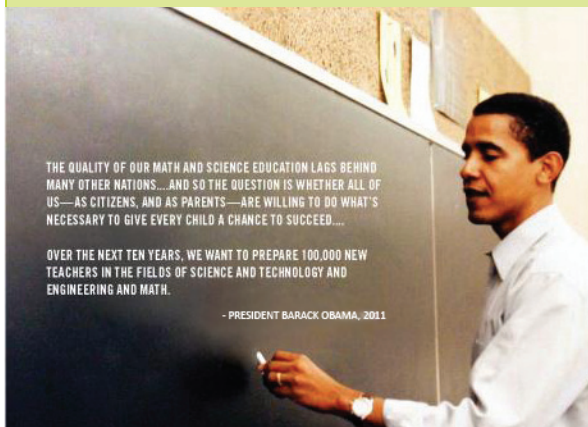
2 Fund for Innovation Recipients

3 IISME Intel Research Collaborative

4 Important 2011-2012 Dates

IISME INVITED TO JOIN NATIONAL MOVEMENT

MEETING THE NEED FOR 100,000 EXCELLENT MATH AND SCIENCE TEACHERS IN 10 YEARS



100Kin10

ANSWERING THE NATION'S STEM CHALLENGE



Industry Initiatives for Science and Math Education (IISME) has joined a growing multi-sector movement currently composed of more than 80 partners committed to working to recruit, develop, and retain 100,000 excellent STEM teachers over the next 10 years. IISME was nominated by the S.D. Bechtel, Jr. Foundation to contribute to this important national initiative, which began with President Obama's call to action during the 2011 State of the Union Address. The movement is being led by Carnegie Corporation of New York and the Opportunity Equation.

100Kin10 is a multi-sector mobilization that invites corporations, school districts, museums, institutions of higher education, foundations, federal agencies, professional associations, states, and nonprofit organizations, to apply their particular assets to creatively and strategically address the challenges of increasing the supply of and retaining excellent STEM educators. Other partner organizations include NASA, Google and the California State University system.

"[Our future] demands that we give every child the skills and education they need to succeed," President Obama said at the announcement of the 100Kin10 initiative and the Clinton Global Initiative (CGI) America Meeting in Chicago in June 2011. "And I thank you for the commitment that you made to recruit and train tens of thousands of new science, technology, engineering and math teachers. Nothing could be more important."

IISME will leverage over 27 years of experience providing industry and research-based professional development opportunities. Specifically, IISME has committed to revitalizing and enhancing the content knowledge and practices of more than 500 California STEM teachers through eight-week IISME Summer Fellowships in companies, universities, and research laboratories over the next three years.

"At IISME we recognize the critical need for a highly skilled workforce and see teachers as the agents of change," IISME's Executive Director Jennifer Bruckner said. "We are excited to join 100Kin10 to increase the number of educators who will experience current, 'real-world' STEM applications and bring relevance and excitement back to the classroom."

Photos courtesy of 100Kin10 website www.100Kin10.org.

2011 IISME FUND FOR INNOVATION



Over \$18,000 in Fund for Innovation (FFI) Grants was awarded to twenty-two very deserving IISME Fellows at a celebration on December 14, 2011. This competitive grant program is open to all IISME Fellows and is designed to inspire and enable them to implement innovative technologies, hands-on experiences and new teaching strategies into their classrooms. IISME is proud to offer the FFI program and support educators in their never-ending quest to enhance instruction.

With the generous support of a number of Fellowship sponsors and other funders, IISME's Fund for Innovation has been able to award over \$327,000 for innovative educational projects since 1993.



2011 IISME FFI Recipients:

Christina Cagliostro, Hyde Middle School
 Steve Carpenter, Piner High School
 Melanie Davenport, Hyde Middle School
 Debra Dimas, Santa Theresa High School
 Sarah Foster, Learning in an Urban Community with High Achievement (L.U.C.H.A.)
 Lynn Freret, Silver Creek High School
 Cary Hellman, College Park High School
 Blanca Herrera, Ida Jew Academies Charter School

Karen Horwitz, Sylvandale Middle School
 Elliot Hu-Au, Realm Charter School
 JoAnn Knecht, Abraham Lincoln High School
 Jeffry Larson, Balboa High School
 Valery Lynn, Irvington High School
 Jason Murphy-Thomas, George Washington High School
 Gregory Punkar, Westmoor High School

Jeff Simon, Carlsbad High School
 Alma Torres, Linda Vista Elementary School
 Theresa Tran, Mission College
 Gregg Witkin, Boynton Continuation High School
 Deborah Yager, Castro Valley High School
 Virginia Young, Sheppard Middle School
 Elizabeth Wiemels, Castlemont Business and Information Technology School

THE IISME IMPACT

After Fellows complete their Summer Fellowships, they provide feedback on all aspect of IISME's program. This allows us to continuously improve our programming to meet the changing needs of today's teachers and provide the high quality teacher professional development that our teachers deserve. The results for 2011 Fellows are in and IISME is proud to report the following results.

IISME Fellows reported . . .

I would recommend the IISME Summer Fellowship Program to my peers.	100%
I gained a greater understanding of the applications of science, math or technology in every day life.	99%
My IISME Summer Fellowship Experience stimulated my thinking on ways to improve my teaching.	99%
My IISME Summer Fellowship Experience elevated my enthusiasm for teaching.	99%
I gained ideas for making my curriculum more relevant to today's workplace.	98%
IISME was either The Best or in The Top 10% of all professional development programs in which I have participated.	93%

IISME INTEL RESEARCH COLLABORATIVE: EXPANDING INQUIRY-BASED SCIENCE

IISME and the Intel Corporation have a long standing partnership to enhance STEM education in local schools. Since 1986 Intel has hosted 299 Fellowships and provided numerous grants to help fund various IISME projects. In 2010, IISME and Intel joined forces on another project to support science teachers. The IISME Intel Research Collaborative (IIRC) was formed to research, develop, implement and evaluate a variety of strategies to incentivize and support high school teachers interested in increasing the amount of research and inquiry-based science activities offered in their classrooms, schools and districts.

The IIRC meets the needs of science teachers wanting to learn new skills to encourage their students. According to Wilcox High School physics and integrated science teacher and current IIRC member Craig Young, “I signed up for the IIRC because I am the coordinator for student research at my school, and I wanted to collaborate with other science teachers on how to promote student research and mentor students who take on independent research projects.”

The IIRC has developed a comprehensive support system for the teachers which includes not only resources and expertise, but also funding to overcome the financial barriers to the implementation of more effective science teaching.

Julie Dunkle, US Education Project Manager for Intel Corporation, expresses why Intel is so passionate about helping local teachers, “Our future depends upon innovation – we must *Educate to Innovate*; but we must also *Innovate to Educate*. We need well educated graduates who know how to identify a problem, know how to select from a myriad of problem-solving strategies, know how to test their own thinking and incorporate others’ input, use mistakes as an opportunity to learn, and finally, to apply the new knowledge gained to new situations.”

The first year, with funding support from Intel, IISME provided consulting and modest teacher stipends and supply budgets for ten high school science teachers in four school districts to increase the rigor and frequency of inquiry and research projects in their classrooms. In 2011, IISME added a second cohort of teachers from the East Side Union High School District and the Research Collaborative is now supporting two cohorts comprised of 22 high school science teachers from 13 schools in five districts.

In addition to the stipends and supply funding, the teachers in the IIRC have access to expertise and experienced consulting including well-facilitated IIRC meetings held at convenient locations. The



Craig Young addresses IIRC participants.

teachers are also connected through the *Intel Engage: IISME Intel Research Collaborative Online Community* which allows participants to readily share tested resources with each other and conduct virtual discussions on science inquiry topics and resources.

“I have gained some great ideas for promoting participation in student research competitions – science fairs, science talent searches, etc. I’ve also gained lots of practical tips for guiding students through the rough patches in their research, and how to encourage them to continue when the inevitable setbacks and frustrations set in,” said Young.

The participating teachers have grown as educators over their time in the IIRC. They have increased their understanding of the importance of research and inquiry-based science teaching, enriched their curriculum and provided many new opportunities and support to hundreds of students. They are effectively changing the way science is taught in their classrooms and schools.

“The dedicated teacher members of this collaborative work hard to challenge their own thinking and to improve their teaching practice. Intel Foundation is proud to support these teachers and their innovative work to improve education,” said Dunkle.

In 2012 IISME hopes to develop a third cohort of teachers from economically disadvantaged schools in Alameda County.

MEET IISME’S NEW BUSINESS DEVELOPMENT MANAGER



IISME welcomed new Business Development Manager, Laura Henderson, in October 2011. Laura has raised funds for a number of science and math education-related organizations and most recently was Senior Director of Development for the Davidson College of Engineering at San Jose State University. Laura is thrilled to join IISME and continue supporting science, technology, engineering and math education efforts!

Laura began her development career at The Tech Museum of Innovation and is proud to have helped open the “big mango box” in 1998. She went on to work for the Computer History Museum in Mountain View and City Year San Jose/Silicon Valley. A life-long Silicon Valley resident, Laura and her husband are very involved in the San Jose community and have served on a number of nonprofit committees and boards. Laura looks forward to growing IISME’s Summer Fellowship Program, allowing more teachers to gain first-hand experience with math and science applications in industry.

IISME APPLICANT WORKSHOPS

Register today to attend an Applicant Workshop! Learn more about the IISME Summer Fellowship Program and receive valuable tips to increase your chances of being selected for a Fellowship. Workshops will be held from 4:30 PM to 6:00 PM throughout the San Francisco Bay Area and online. Encourage your colleagues to attend!

- Thursday, January 5, 2012 - Krause Center for Innovation (KCI), Los Altos
- Wednesday, January 11, 2012 - Webinar
- Tuesday, January 24, 2012 - Webinar
- Thursday, February 2, 2012 - Resource Area for Teaching (RAFT), San Jose
- Wednesday, February 8, 2012 - Oakland Technical High School, Oakland
- Thursday, February 16, 2012 - Webinar
- Tuesday, March 6, 2012 - Piedmont Hills High School, San Jose
- Thursday, March 15, 2012 - San Francisco Unified School District (SFUSD) Office, San Francisco

For more information and to register, please visit: iisme.org/PublicCalendar.cfm?requestlimit=workshop

IMPORTANT SUMMER FELLOWSHIP PROGRAM DATES

We are now accepting applications!

- November - March:** Teachers complete an application at www.iisme.org
- February - May:** Sponsors submit project descriptions, review resumes, interview applicants, and extend Fellowship offers
- March - May:** Teachers can view project descriptions online and are highly encouraged to express interest in specific Fellowships
- June 18:** Summer Fellowships begin
- Aug 10:** Summer Fellowships end



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ABOUT IISME

Industry Initiatives for Science and Math Education (IISME) exists to address the critical need for a strong, highly skilled workforce in mathematics, science, and technological fields. This industry-education partnership focuses on teachers as the primary agents for effecting meaningful change in mathematics and science education.

IISME leverages the resources of California's high performance corporate workplaces and research institutions – especially the expertise of their scientists, engineers and technologists – and involves them in the process of improving education, one teacher at a time.

IISME's Summer Fellowship Program provides paid, challenging summer work opportunities for teachers in California corporations, universities, and research labs. These Fellowships remove teachers for an extended period from the culture of education to immerse them in the culture of industry and research and to allow them to become contributors in these new environments. IISME Fellowships revitalize and equip teachers with new knowledge and strategies for preparing tomorrow's employees. This is key to the transformational nature of IISME's unique type of professional development.