

WHITMAN COLLEGE

SCIENCE OUTREACH



**Whitman College Science
Outreach Newsletter**
Spring 2010

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Spring and Summer Workshops for Teachers

Whitman's Howard Hughes Medical Institute (HHMI) Science Outreach program sponsored the final workshop of the academic year for area middle school science teachers, titled **Green Energy: Old Ideas, New Technology**, on Saturday, April 10. **Kurt Hoffman**, professor of physics, and **Alazar Yehdego**, physics technician, guided teachers through the mostly hands-on, exploratory morning.

Ten teachers from area schools explored energy concept activities with colleagues. The discussion then expanded to include an overview of energy production, conservation and emerging technologies to improve efficiency.

Teachers made mini-motors, examined the energy of motion using carts and converted energy from pedaling a stationary bike into light energy. Solar powered motor kits were distributed for use in class demonstrations.



(Left to right) Professor Kurt Hoffman, Darin Durand (Sager), Sue Schulz (Garrison) and Lynn Martin (Waitsburg) explore the energy of a magnet.

This year's Summer Institute, the first of three sponsored by HHMI, will be held at Whitman, June 14 to 18, and will focus on the Washington State Learning Standards for earth science, particularly the catastrophic events that have shaped the Earth's crust. Leading the workshop will be **Andrea Dobson**, associate professor of astronomy and general studies; **Kirsten Nicolaysen**, assistant professor of geology; and **Pat Spencer**, professor of geology. The week will also focus on the idea of "inquiry" as a key component of the scientific process.

The aim of the Summer Institute is to create an experience for area teachers that allows them access to faculty specialists to increase subject knowledge, while also encouraging collaboration between colleagues and Whitman faculty.

Earth Lessons for Elementary Schools

Whitman students have been busy teaching about the importance of caring for our Earth in area classrooms.

A student-led program called “Cool the Schools”, which teaches children about our impact on climate change, visited the classrooms



Whitman intern Robin Lewis assists students in the Prospect Point Garden Club.



of **Tammy Baker, Laura Grant** and **Debbie Schade** at Berney Elementary, **Kate VanCleave** and **Greg Pegel** at Prospect Point Elementary and **Corey Hobbs** at Blue Ridge Elementary during the month of April.

Whitman students Katie Hallett and Haverly Brown talk to students in Laura Grant's fifth grade classroom about the importance of our energy use choices.

A Growing Interest in Gardening

As part of their environmental studies internships, students **Carrie Reinhart, Dana Bialek** and **Robin Lewis** have been working with third grade teacher **Lance Longmire** to create a garden curriculum and support gardening activities at Prospect Point Elementary.

The Whitman students have created a series of garden lessons aligned with K-5 state standards in science and math, as well as helping with the Garden Club in planting and garden preparations. Their lessons, along with those collected from other local schools, will be compiled on Whitman's science outreach website so that they will be accessible to area teachers who wish to integrate garden activities into their curriculum.

Campus Visitors Experience Colorful Chemistry

Students from Nixya'awii High School had the opportunity to visit campus on April 14 and spend part of the morning in the lab with **Allison Calhoun**, associate professor of chemistry, and Whitman students **Jackson Kahn, Hyo-Jeong Kim, Matt Goldfogel, Nicole James** and **Johnny Zimmerman**. Two groups of students explored a sequence of copper reactions and were amazed at how colorless liquids were able to create dramatic color changes.

Nixya'awii High School is located on the Umatilla Indian Reservation and focuses on Native American culture, native languages and serving the tribal community. **Kay Fenimore-Smith**, associate professor of education, organized the campus visit.



A “Night Out” at Whitman

Students from the POWER team at Pioneer Middle School paid a visit to Whitman College on Friday, March 5, led by GEAR-UP educator **Margaret Thomas**. As part of their visit for “College Night Out”, students spent time in the lab with **Kurt Hoffman**, professor of physics, **Alazar Yehdego**, physics technician, and physics students **Brittin Borland** and **Tyler Harvey**. Students explored a Stirling engine and Van de Graff generator, twirled on an angular momentum stool, and observed a super-cooled superconductor levitate a magnet.

In the chemistry lab of **Deberah Simon**, senior lecturer of chemistry, students examined the science of polymers by making their own gummy worms and slime while watching expanding polyacrylamide beads and crystals. Professor Simon also modeled a demonstration of water surface tension and answered a myriad of questions from eager students about the chemistry lab.



It is crucial that my generation of scientists interacts with the following generations in a way that is meaningful to them. Relying on the old ways just isn't enough. Informal science education is a vital part of this process, especially when students are able to come to a STEM professional's “home turf” and be part of the action.

—Deberah Simon, senior lecturer in chemistry



Alazar Yehdego, physics technician, prepares a superconductor for students to examine.



A young scientist gets her hands dirty making polymer slime.



Will Liening, a student at Pioneer Middle School and member of the POWER team, creates multi-colored polymer worms.

Inspiration from an Astronaut

Students in Walla Walla and College Place schools had the opportunity to be inspired by NASA astronaut Leland Melvin, whose most recent space flight was in November 2009 to the International Space Station. Melvin showed footage from on board the space shuttle and space station and spoke about the importance of following your dreams and working hard to reach your goals.

Melvin's visit to Whitman was co-sponsored by professor **Andrea Dobson** and the astronomy department.



Astronaut Leland Melvin speaks to area K-8 students at Cordiner Hall, thanks to the efforts of **Mike Lambert**, principal at Green Park.

Get WISE! Applications due May 21

WISE (Whitman Institute for Summer Enrichment) is a three day, all-expenses-paid program at Whitman College, from August 8 to 10, that introduces local middle school students to college life. Students get to make new friends, learn from inspiring faculty, get involved in campus life and have the opportunity to consider new options for their future.

Do you know a student who would benefit from this program? Applications are due May 21. Priority for this program will be given to students from low-income families or who will be first-generation college students. Contact Sonja Aikens in the Intercultural Center at 527-5596 or Mary Burt for more information or an application.

Upcoming Activities:

- May 4: GEAR-UP Day for area seventh graders. Science activities with Kirsten Nicolaysen, Kurt Hoffman, Alazar Yehdego, Michelle Shafer, Karen Smith, Martha Holt and Mary Burt from 9 to 11 a.m.
- May 14: Sign-up deadline for Summer Institute.
- June 14 to 18: Summer Institute for middle school science teachers with Andrea Dobson, Kirsten Nicolaysen and Pat Spencer.
- August 8 to 10: WISE (Whitman Institute for Summer Enrichment). Applications due on May 21.

For more information about our outreach programs:

Contact Mary Burt, HHMI Science Outreach Coordinator
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<http://www.whitman.edu/content/bbmb/hhmi-grant/outreach>