



University System of Ohio

Learning, Libraries  Technology
CONFERENCE

Program of Events

March 1–3, 2009

Poster Sessions



Monday

9:45 a.m. – 3:30 p.m.

Easton CDE

Preparing Students to Succeed in STEM Disciplines

Discover some great ideas from high school teachers and students on how to engage more students in science, technology, engineering and math; and learn how to better prepare students for successful educational careers and lifelong learning. High school teachers looking for ideas, librarians and faculty interested in information literacy efforts, and college and university administrators wanting tips on recruiting more STEM students should all attend. Many of the posters are a result of *The Igniting Streams of Learning in Science STEM* institute. The institute was funded by the Ohio Board of Regents and supported by Hiram College, Kent State University and The University of Akron.

Using the Social Networking Sites Model to Increase Scientific Literacy in Grades 9–12

John Fisher, Teacher / Champion High School; **Danae Wolfe**, Undergraduate / Hiram College; **Missy Hickman**, Student; **Allie Fisher**, Student; **Landon Nyako**, Student; **Jason Whiting**, Student; **Kristen Trina**, Student; and **Ryan Ohlin**, Student / Champion High School

More instruction time can increase scientific literacy in students, grades 9–12, but how do you add content to an already full day? The answer is a virtual science club using the models of Facebook and MySpace. With the assistance of one or more teachers, students create science content that is of interest to them, and share information through podcasts, videos, blogs and music. Come learn about the science club formed at Champion High School, along with measured outcomes, a timeline and a detailed budget. This model is intended for simple adoption by other districts and even younger age groups.

Lifetime Love of Science Takes a LEAP

Mitch Lambert, Chemistry Teacher; **Brittany Emmert**, Student; **Justin Shreve**, Student; **Beth Howe**, Student; **Stephanie Larrick**, Student; **Lori Ahart**, Student; **Emily Rinear**, Student; **Sean Kretoivics**, Student; **Emily Paulus**, Student; **Abbey Woolverton**, Student; and **Collin Robinson**, Student / Kent Roosevelt High School

A learning community of ten high school students, a high school teacher and two undergraduate mentors is creating a weeklong summer day camp for their eighth grade peers. The program will include visits to local wetlands using technology to engage students in active learning. Our presentation will highlight activities and how to create a sustainable, multi-age learning community focused on local environmental issues. This collaboration attempts to cross traditional P–20 boundaries by involving the local university, the local environmental council, the state department of natural resources, and the community at large with public school students from various grade levels.

Student Developed, Cross-Curricular Environmental Activities & Empowerment of Students in Education

Charles Laurence, Science Teacher; **Samantha Hawkins**, Student; **Jason Hodges**, Student; **Amber Revelt**, Student; and **Ashley Vangilder**, Student / John Marshall High School

The John Marshall learning community of high school students and a teacher will present examples of student-created, cost-effective, cross-curricular activities that engage students in learning science. The presentation will include examples developed by students from this urban school in the Cleveland Metropolitan School District—activities that help students retain knowledge and empower them to take charge of their own education by working with classroom teachers to implement their lessons in the school's curriculum. Participants will engage in activities involving themes on succession of urban environments and environmental indicators that were adapted from the Igniting Streams of Learning STEM Academy.

Preparing 21st Century Ohio Learners for Success: The 12–13 Initiative

Cherie Pandora, Coordinator of Media Education, K-12 / Rocky River High School; **Ken Burhanna**, Head Instructional Services Librarian, Assistant Professor / Kent State University; and **Rob Snyder**, Reference and Instruction Library Assistant / Bowling Green State University

In order to be successful in school, college and the workforce, Ohio's 21st century students must be equipped with the necessary skills to explore and analyze new information. Yet numerous studies confirm that students lack these critical skills. Ohio's school and academic libraries already work to prepare young people for an information-intensive world and are positioned to influence student success. Learn how INFOhio and OhioLINK will enable Ohio's P–20 educators and librarians to better prepare students for successful educational careers and lifelong learning. Discover the goals of the 12-13 Initiative and how they can contribute to achieving your instructional objectives.

Virtual Headwaters: An Innovative Way to Teach Science in the Classroom

Matthew Wilson, Undergraduate / Hiram College; and **Debbie Armbasick**, Science Teacher / Maplewood High School

Science, a process of inquiry and discovery, is often taught as the memorization of facts. We report an alternative that teaches scientific inquiry while still meeting educational standards for proficiency in science. A CD-ROM about watershed ecology engages students in doing science by embracing deductive reasoning, logic, problem solving, discussion and cooperative learning in group settings, following a VARK-like (Visual, Aural, Read/Write and Kinesthetic) pedagogy. This virtual experience in the environment can be adapted in multiple science disciplines. Participants will be engaged in activities that demonstrate the methods used by the students to give participants understanding through hands-on experience.

From Standard Teaching to Interactive Learning – a P-20 Learning Community

Michael Taurasi, Science Teacher; ***Rachael Mathiott***, Student; ***Coty Yandell***, Student; and ***Ashley Ziegler***, Student / West Geauga High School

Standard teaching methods are an ineffective way of preparing students in the field of science, due to lack of engagement of the student. Students who participate in inquiry-based learning, such as visiting a stream to perform a snapshot, are more effective as a result of the natural inclination of young adults to be active. The current pedagogy is insufficient. Our program will incorporate interactive methods that cause students to connect dendrites and expand their total knowledge. This hands-on learning experience appeals to other learning styles. We plan to use these alternative methods and educate other West Geauga students.

Carving a Path into the Future of Science Education

Lisa Andrews, Teacher / Akron Early College High School; ***Anna Derr***, Student; ***Jacob Turley***, Student; ***Lisa Mills***, Student; and ***Kimani Carter***, Student / Akron North High School

My students from Akron North High School have witnessed firsthand the power of science. Being from an urban district, my students had never really done science. By participating in a dual-credit program and completing hands-on inquiry activities with college professors, my students were able to see the benefits of science. By allowing 11th and 12th grade students the opportunity to work with professors on concepts they should master by the time they enter college, it opened the eyes of these students as to how important science is to them. The experience allowed them to look at the opportunity in front of them and posed the question of “how do we get all students to have this kind of opportunity?” We examined how to provide all students with a program like the one they attended. The answer came in a single word: collaboration. We will discuss and evaluate the P-20 education program, its strengths, limitations, how collaboration can and will work, and how effective it could be for districts throughout the state. We would like to show every participant how a P-20 education program might benefit the students in their district.

Trickle Down Learning

Ryan McElyea, Teacher; **Mariah L. Dobies**, Student; **Austin R. Jarvi**, Student; **Nate Frances**, Student; **Alyssa Sherry**, Student; **John Fudella**, Student; **Brittany Pittman**, Student; **Dylan Becker**, Student; and **Nick Rupe**, Student / Crestwood High School

Because global environmental awareness begins with local involvement, our learning community, using methods developed in teaching skills to students in grades 6-12, will educate participants to use several of the methods (pH testing, chemistry, and environmental studies) we've formulated to instruct members of their own communities. Our goals coincide with the P-20 standards. We are applying hands-on teaching methods in our activities with our district because we have found that it is effective.

Empower and Believe What Students Can Achieve

Stephanie Lammlein, Biology Teacher; **Vanessa R. Consolo**, Student; **Tyler L. Williams**, Student; **Samantha Miller**, Student; **Laura Kelsey**, Student; and **Wes Nader**, Student / Rootstown High School

We report implementation of a biotechnology curriculum and environmental stewardship into high school biology courses constructed from partnerships between students, teachers and collegiate personnel. In this presentation, students demonstrate the active role they take in their education and the sense of independence and ownership of their learning in part gained through individual research projects. Using the Ohio curriculum standards, we will present their lessons and activities geared toward elementary 5th grade students. The intention of this outreach program is to expose younger students to different concepts within science.