

Science at Work – Making Science Real for Students

Summer Institute 2008 – for Teachers in Grades 4 and 5

July 7 – 11, 2008

Location: OU Athens, McCracken Hall room 240

Sponsors:

Akron Global Polymer Academy One-Week Summer Institute
Southeast Center for Excellence in Mathematics and Science

Participants receive:

- \$100 gift certificate for instructional supplies
- refreshments/lunch
- \$250 stipend for participating in week-long program
- Optional: 3 grad credits at a reduced fee (pending approval)

Program Focus

The course will focus on the Ohio Science Academic Content Standards

- Physical Science Standard
- Science and Technology Standard
- Scientific Inquiry Standard

Participants will learn by actually doing the hands-on activities during the program allowing for easier implementation in their classroom.

Goals: enrich teachers' pedagogical skills and content knowledge by offering:

- an experiential knowledge of the 5 E's learning cycle model of instruction
- connection of the institute's activities to the standards underlying science instruction in grades 4-5
- classroom ready, engaging units that meet Ohio's Science and Technology Standard
- content updates of core physical science concepts
- ways to make science teaching more student-centered and less teacher-directed
- specific strategies to assess students' learning
- connections of institute activities to other content disciplines (math, social studies, language arts)
- materials to enrich teachers' supplies to assist in implementation of activities experienced in the institute

Daily Agenda (Tentative)

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:30	Introductions, goal setting	<i>Introduction to polymers – physical and chemical properties and changes</i>	<i>Food packaging unit</i>	<i>Sports helmets and impact testing</i>	<i>How are toys made?</i>
9:30	What is science? Why do we teach science?	<i>Introduction to polymers – physical and chemical properties and changes</i>	<i>Food packaging unit</i>	<i>Sports helmets and impact testing</i>	<i>How are toys made?</i>
10:30	Learning cycle – method of teaching science	<i>Introduction to polymers – physical and chemical properties and changes</i>	Discussion: classroom implementation: content integration & assessment	<i>Sports helmets and impact testing</i>	<i>How are toys made?</i>
11:30	Safety issues	Discussion: classroom implementation	Discussion: classroom implementation: content integration & assessment	<i>Sports helmets and impact testing</i>	<i>How are toys made?</i>
Lunch	Noon to 12:45	Noon to 12:45	Noon to 12:45	Noon to 12:45	Noon to 12:45
12:45	<i>Scientific methods – investigations</i>	<i>Food packaging unit</i>	<i>Revisit scientific investigations (from Mon's lab)</i>	<i>Sports helmets and impact testing</i>	Virtual field trip and web resources
2:00	<i>Scientific methods – investigations</i>	<i>Food packaging unit</i>	TBD (based on local needs)	<i>Sports helmets and impact testing</i>	Virtual field trip and web resources
3:00	<i>Engineering problem solving</i>	<i>Food packaging unit</i>	TBD (based on local needs)	Discussion: classroom implementation: content integration & assessment	Discussion: classroom implementation
4:15	Wrap-up; exit slips	Wrap-up; exit slips	Wrap-up; exit slips	Wrap-up; exit slips	Wrap-up; exit slips

Designates episodes of hands-on activities

Science at Work – Making Science Real for Students
Application
July 7 - 11
(deadline: June 30th)

Name: _____

Applicant's School: _____

School Address _____

School District _____ County _____

I am a _____ grade _____ science teacher _____ intervention specialist

Email address: _____

Home Mailing Address: _____

City _____ State _____ ZIP _____

Home Phone _____

School Phone _____



Fax, email or mail applications to Lori Spencer, SEO-CEMS administrative assistant.

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