

Fermilab Education Program E-Alert — Fall 2007

Spread the word to your colleagues.

The Fermilab Education Office E-Alert biannual newsletter shares what we've been doing and what we have planned. We trust you will find opportunities or resources of interest to you. To be added to our mailing list, or if you would like to be removed, send your e-mail address to: sdahl@fnal.gov

For more details on programs:

Go to the **Educators page**, <http://ed.fnal.gov/educators.html>

Use the **search page**, <http://ed.fnal.gov/search.html>

Follow the links listed below.

What we're planning

- Elementary Math Curriculum Workshop – September 19, 2007 *
- Elementary Math Publishers Workshop – September 20, 2007 *
- Hands-on Science for PTAs – September 27, 2007
- ENTICE Spider Workshop – October 6, 2007
- ENTICE Aquatic Workshop – October 13, 2007
- Elementary Science Curriculum Workshop – October 16, 2007 *
- Elementary Science Publishers Workshop – October 17, 2007 *
- ISTA Region 1 – October 18, 2007
- SPARKS Parents Science Workshop – October 27 and November 3, 2007
- Classroom Presentations – 2007-2008
- Fermilab Family Open House – January 27, 2008
- Kagan Higher Level Thinking Workshop – March 6, 2008

Fall 2007 - Early 2008 — *What we're planning*

Elementary Math and Science Curriculum Analysis Workshops and Elementary Math and Science Publishers Workshops – [Teacher Workshops](http://ed.fnal.gov/edworkshops) (ed.fnal.gov/edworkshops)

The **Illinois Textbook Loan Program** covers grades K-4 this year. The searchable database of approved publisher materials will be available from mid-November through March. Link near the bottom of <http://isbe.net>

Open enrollment workshops to help you analyze materials (Mathematics September 19 and Science October 16) will be followed by hands-on publisher workshops (Mathematics September 20 and Science October 17) so you can get to know the programs directly from the publishers.

All days are free and offer CPDUs. Register online. Follow the “Teacher Workshops” link to the event. **Space is limited.**

Hands-on Science for PTAs – [Science Adventures](http://ed.fnal.gov/sciadv) (ed.fnal.gov/sciadv)

Adult volunteers working with students in grades K-5 can qualify to borrow a set of five physical science hands-on activities that demonstrate the concepts of momentum and acceleration. Volunteers use these exhibits for family science nights, enrichment programs or other science day activities.

Send a minimum of two representatives for facilitator training. Fee: \$10.00. Register through [Science Adventures](http://ed.fnal.gov/sciadv).

While on this Science Adventures page also see the classes for children.

SPARKS Parents Workshop

SPARKS (Supporting Parents in Advocacy, Reform and Knowledge in Science) and Fermilab are offering a two-day workshop for parents of children in grades K-6. This program explores methods and activities parents can use to excite their children about science. Space is limited.

The program is free and parents will receive a \$50 stipend for attending the workshop.

[ENTICE Spiders Workshop \(www.ilcf.org/Workshop/Courses.asp\)](http://www.ilcf.org/Workshop/Courses.asp)

Fermilab will host this workshop coordinated by the Illinois Department of Natural Resources. Jim Louderman of the Field Museum will explore the wonderful world of spiders in this workshop for educators of grades 4-6. Learn about Illinois spiders and their habits and habitats through hands-on activities and fieldwork.

[ENTICE Aquatic Resources Workshop \(www.ilcf.org/Workshop/Courses.asp\)](http://www.ilcf.org/Workshop/Courses.asp)

Fermilab will host this workshop coordinated by the Illinois Department of Natural Resources. Judy Fitchett with The Conservation Foundation will explore the components of freshwater environments in this workshop targeted to educators of grades 4-8. Learn about the relationships among aquatic organisms, the physical factors that affect them, and tips on species identification.

Illinois Science Teachers Association – Region 1 Event – <http://www.ista-il.org/>

Hosted by Volo Bog, October 18, 2007, 4:30 p.m. - 7:00 p.m.

Reenergize for a wonderful school year. Meet new colleagues and greet old pals. Be briefed about Building a Presence opportunities and responsibilities. Join ISTA.

In addition to refreshments and conversation, you'll have a wonderful visit to the Bog. Naturalist Stacy Iwanicki will lead a "quickie" tour of Volo Bog, share hands-on nature exploration techniques and discuss some of the 17 environmental education programs and check-out resource trunks this State Natural area offers. For more information on the Volo Bog visit the [Volo Bog web page](#).

Learn what resources and professional learning opportunities are available through the Lake County Regional Office of Education.

Register online at: <http://ed.fnal.gov>, "Teacher Workshops". Fee: \$10.00. Fee may be applied to a new ISTA membership of \$35.00. CPDUs available.

[Classroom Presentations for Schools](#) (Geared toward students from grades 2-12)

Fermilab scientists and engineers visit your class with age-appropriate presentations. From "Light and Color" (grades 2-6) to "Space, Time and Einstein" (grades 7-12), the presentations and presenters have made lasting impressions throughout Fermilab's surrounding school communities. Presentations are free of charge to classrooms, libraries and after-school programs.

Downloadable brochure contains detailed information.

Fermilab Family Open House (grade 3 through adult) (<http://ed.fnal.gov/ffse/openhouse.html>)

A party for children who bring an adult with them to learn about the world of physics. (There's plenty for the grown-ups, too.)

[Kagan Higher Level Thinking Workshop \(www.kaganonline.com\)](http://www.kaganonline.com)

The Teacher Resource Center will be hosting one of the popular Kagan Professional Development workshops next spring. Registration will be directly through Kagan. Check their website later this year for information.

Summer 2007 — *What we've been doing*

Beauty and Charm – <http://ed.fnal.gov/programs/beauty>

Jim Cox and Barb Romack led this year's Beauty and Charm Workshop. Along with the standard activities and tours, participants were treated to a presentation on the history of Fermilab by archivist Adrienne Kolb.

Department of Energy Academies Creating Teacher Scientists (DOE ACTS) – <http://ed.fnal.gov/acts>

Robin Dombek led midlevel teachers in the first of their three summers in the Department of Energy's new ACTS program. This summer, participants' primary work was conducting scientific research in Fermilab's restored prairie under the guidance of Rod Walton. Over the next two summers, they will apply their experiences to their work in the classroom and develop their capacity to become educational leaders in their buildings, districts, and beyond. This program is supported nationally by the DOE Office of Workforce Development for Teachers and Scientists.

Particles and Prairies – <http://ed.fnal.gov/programs/pnp>

The weather cooperated beautifully for this year's *Particles and Prairies* teacher workshop. Instructed by master teacher, Pat Franzen and prairie expert and docent, Mary Jo Murphy, the participants gained knowledge of the prairie and its biodiversity in both the classroom setting and the field. One educator stated, "Outstanding program to implement in the classroom."

The Prairie – Our Heartland – <http://ed.fnal.gov/programs/poh>

On June 26-28, instructors Glenda Peck and Amy Fehrman presented *The Prairie – Our Heartland: An Elementary Prairie Program* for the Stewards of the Next Generation teacher workshop. In its second year, its success continued as the teachers experienced this interdisciplinary ecology program, using observation, inquiry and critical thinking methods.

Pre-Service Teacher Internships – <http://ed.fnal.gov/programs/pst>

Five pre-service teachers completed successful scientific internships this summer under the direction of master teacher Anna Zuccarini. Three students worked with Rod Walton, Tom Peterson, and Peter Kasper to conduct ecology studies in Fermilab's natural areas, and two students conducted physics work: one for CDF, and the other for QuarkNet. This program is supported nationally by the DOE Office of Workforce Development for Teachers and Scientists.

QuarkNet – <http://quarknet.fnal.gov/>

Fifty master teachers gathered this summer for advanced work in physics education. Five teams focused for one week each on: 1) advancing classroom knowledge of the Large Hadron Collider; 2) creating an extended "virtual" QuarkNet center; 3) understanding leadership styles in professional development; 4) becoming experts on the cosmic ray detector and e-Lab; and 5) teaching & learning techniques. These "fellows" become experts to the rest of the QuarkNet collaboration. QuarkNet is funded by the National Science Foundation and Department of Energy Office of Science Office of High Energy Physics.

Summer Secondary Science Institutes (SSSI) - <http://ed.fnal.gov/programs/institutes>

Tom Knutson, John Chamberlain, and Laura Cox led a group of teachers in the two-week Biology Institute, and Paul Madsen and Jason English led four one-week physics sessions, including the new "Intro to Modern Physics and Fermilab" session. Participants in all of the workshops were active and eager, not only to learn from the instructors, but also to share with and learn from each other about what is working in their classrooms.

Contact Program Staff

Marge Bardeen, Education Office Manager, mbardeen@fnal.gov

Susan Dahl, sdahl@fnal.gov

Laura Mengel, lauram@fnal.gov

Spencer Pasero, spasero@fnal.gov

Bob Peterson, rspete@fnal.gov

Elizabeth Quigg, liz@fnal.gov
Sue Sheehan, sheehan@fnal.gov