



One team, helping
all students realize
their dreams and
aspirations...
We are ESD 123!

HOW TO REGISTER:

E-mail Eric Senner at
eric.senner@pnl.gov to sign
up for the workshops.

Please include all of the
following information:

- Workshop number and workshop name
- Your name
- E-mail address
- Grade level you teach
- School and district
- Phone number

Clock hours will be offered by
the ESD at the rate of \$2 per
contact hour.

An email confirmation will be
sent upon registration, which
will give you additional
information and reminders of
items to bring to each
session.

We look forward to seeing
you!



U.S. DEPARTMENT OF
ENERGY

2011 Winter/Spring Science Content Series: **LINKING SCIENCE CONTENT TO CLASSROOM PRACTICE**

Pacific Northwest National Laboratory is partnering with the ESD 123 and the SE LASER Alliance to offer no-cost professional development designed to enhance the science literacy of teachers who teach science in grades K-8. Teachers have the opportunity to deepen their own science content knowledge, skills, and habits of mind by working directly with local scientists from CBC, PNNL, LIGO and WSU in a risk-free and fun learning environment.



Workshop #1:

Science Notebooks with Peggy Willcuts, PNNL

When: Thursday, March 3, 4:00 pm – 7:15 pm **Where:** PNNL

See how scientists use their “Laboratory Record Book” and examine actual LRBs from a variety of areas of science. Then, bring this knowledge to the classroom by learning how teachers can increase the use of science notebooks with their students and how the notebook can reveal a student’s developing understanding of science.

Workshop #2:

The Nature of Scientific Inquiry with Judy Morrison, WSU-TC

When: Tuesday, March 15, 4:00 pm – 7:15 pm **Where:** WSU-TC

How does the science that students do in school compare to the way scientists conduct science? Is there really no one specific scientific method? What are the essential parts of a scientific investigation and why? Is it true that the creation of scientific knowledge is based on creativity as well as procedure? Explore the characteristics of the nature of science and how these can best be communicated to students.

Workshop #3:

Fossils with Frannie Skomurski, PNNL

When: Thursday, March 24, 4:00 pm. – 7:15 pm **Where:** PNNL

Immerse yourself into the world of fossils as you learn to bring this “dead” subject “alive.” Learn the story fossils can tell as you examine your own set of fossils and the trade books that will enhance your new knowledge. Take home your own fossil set, trade books on fossils, and lesson plans.

Workshop #4:

Get the Dirt on Soil with Shannon Goodwin, PNNL

When: Thursday, April 14, 4:00 pm – 7:15 pm **Where:** PNNL

Dirt is what you find under your fingernails. Soil is what you find under your feet. Soil contains plants, animals, rocks, and mineral particles of varying sizes and shapes. How come there is no soil on Mars or Venus? Without life, there is no soil. Living things haven't just made a home in the soil on our planet—life actually made the soil as we know it. Take home a nifty soil sifting set, a soils identification card and a sedimentator.

Workshop #5:

Simple Machines with Scott Smith, PNNL

When: Thursday, April 28, 4:00 pm – 7:15 pm
Where: PNNL

This workshop will introduce the participants to simple machines and the basic underlying concept of how they work. The workshop will involve demonstrations and hands-on work with simple machines. The focus will be that simple machines are all around us and that we use them everyday. Take homes include simple machines to use in your classroom.



Workshop #6:

Wave Behavior and Science Inquiry with Dale Ingram, LIGO Hanford Observatory

When: Saturday, May 7 - 9:00 am - 12:00 pm **Where:** LIGO Hanford Observatory

Improve your understanding of soundwaves, light waves and other types of waves. Take a look at LIGO's search for gravitational waves. Learn techniques to address wave behavior standards that are based on scientific inquiry. Develop a classroom ready inquiry-based wave activity.

Workshop #7:

Space: What's Out There? with Mike Durst, Columbia Basin College

When: Friday, May 13 - 6:00 pm - 9:00 pm **Where:** Moore Observatory at Columbia Basin College

Astronomy is something many of us teach but few of us know much about. Join us at CBC's Moore Observatory to explore those heavenly bodies that we share space with. Find out more about our star, the Sun, and others, get a close up look at the moon and learn more about phases and eclipses. Use telescopes to explore planets and other space objects and find out more about the characteristics of Earth's neighbors in space.

