

Institute for Inquiry[®] presents

Workshops for Professional Developers

**FUNDAMENTALS
OF INQUIRY**

October 25–29, 2010

and

**ASSESSING FOR
LEARNING**

February 7–9, 2011

expl  ratorium[®]
the museum of science,
art and human perception

San Francisco, California

For more than thirty years, the Institute for Inquiry has served as a professional development center for teachers, administrators, and professional developers interested in exploring the theory and practice of inquiry-based teaching and learning. Our workshops illuminate the power of learning scientific content through inquiry and introduce strategies for providing inquiry experiences in the classroom.

www.exploratorium.edu/ifi

Detail: Magnified Ice Balloon

“Most workshops you go to . . . you get something to take home, but you are the same. Here . . . mostly it was me that changed. . . . Now I am able to see the world through an inquiry lens.”

—Staff Development Coordinator
and Workshop Participant



Our workshops are designed for educators with professional development roles such as:

- Science Specialists
- Curriculum Coordinators
- Teachers on Special Assignment
- Lead Teachers
- Administrators
- Museum Educators
- University Faculty
- Scientists

Though our primary audience is educators who work with elementary classroom teachers, workshop materials and activities can be easily adapted for other audiences, such as middle and high school teachers or preservice educators.

Come with your colleagues.

When you're back home, applying what you've learned to your own program, it's easier if you can work with a teammate who's also experienced the workshop. Workshop activities are best taught in teams of two or more, so we encourage people to attend in teams.

Team discount offered.

LOCATION:

Exploratorium

3601 Lyon Street, San Francisco, CA 94123

COST OF WORKSHOP INCLUDES:

- Daily continental breakfast and lunch
- A dinner reception at the Exploratorium
- Facilitator's Guide on CD-ROM
- Resource notebook and a book
- Access to the museum
- Inclusion in the graduate section of our web site

LODGING AND TRAVEL ARE NOT INCLUDED,

but a group rate is available at a local hotel (approximately \$100/night).

ACADEMIC CREDIT AVAILABLE.

Ask for details.

Payment is due with registration.

You will receive email confirmation of your enrollment.

Questions? (415) 561-0397

www.exploratorium.edu/ifi

FUNDAMENTALS of INQUIRY

In this five-day workshop you will explore ways to support classroom teachers in moving from structured, hands-on science with teacher-prescribed directions to a more inquiry-based approach where students take more responsibility for their learning.

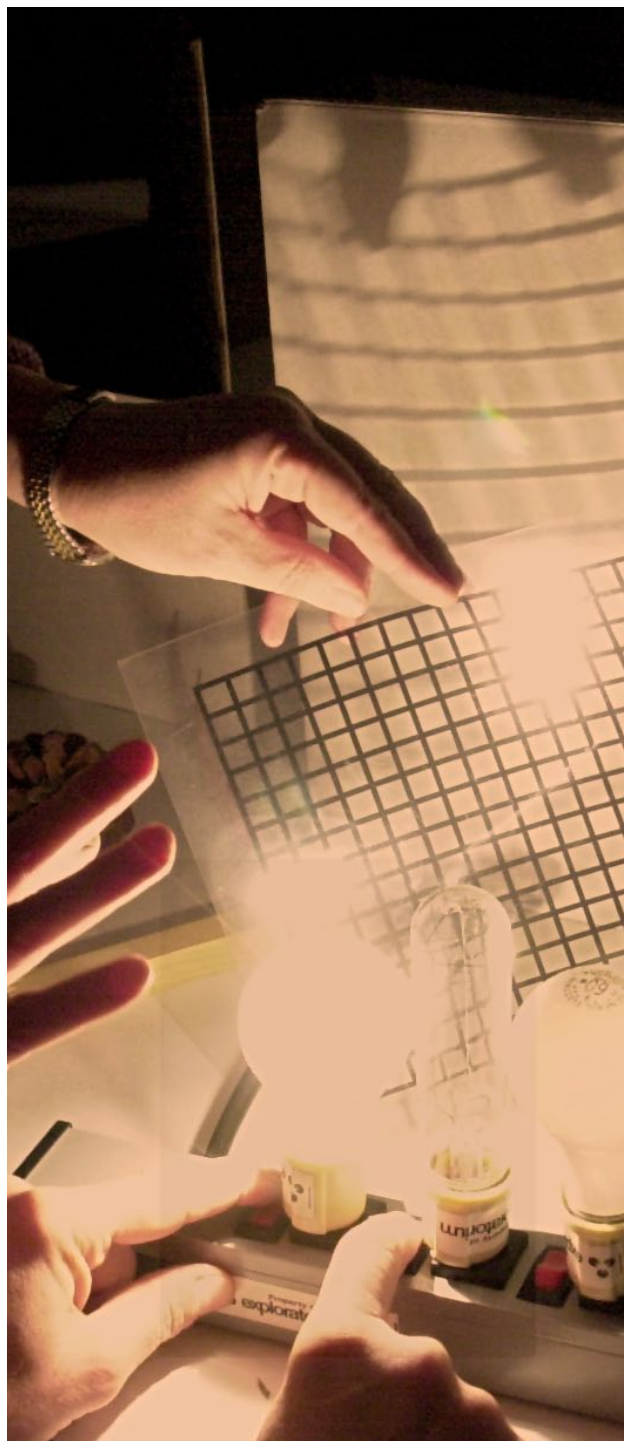
You will

- carry out a series of activities that illuminate the principles of inquiry-based learning;
- learn how to apply these activities in your professional development program; and
- examine techniques of effective professional development design such as how to sequence activities, match activities to learning goals, and facilitate discussions to advance teachers' thinking and practices.

DATE: Monday, October 25 to
Friday, October 29, 2010

TIME: 8:30 a.m. to 4 p.m.

COST: \$1,800
(\$1,650 for teams of two or more)



This workshop is organized into three sections that illuminate the fundamentals of inquiry-based teaching and learning. Throughout the workshop, participants have reflective conversations that allow them to “see into” the professional development design process—from the design of each individual activity to the overall structure of the workshop.

Elements of Inquiry

The experiences in this section focus on hands-on approaches and process skills related to inquiry learning.

- Discover that different approaches to hands-on teaching support different goals for learning.
- Identify the tools needed to carry out inquiry—the process skills—and examine the role of these skills in learning.
- Examine the kinds of questions learners ask about phenomena and find out how to turn “noninvestigable” questions into “investigable” ones.

Immersion in Inquiry

Plan and conduct an investigation that illustrates how science content can be learned through a carefully orchestrated inquiry process. At the same time, the activity illuminates the process of inquiry itself.

Explore questions that are fundamental to designing an inquiry experience, including:

- What are good starting points for investigations?
- What role do materials play?
- How is inquiry learning best facilitated?
- How can conceptual understanding be developed through inquiry?

Connections to the Classroom

Participants make connections between what they have experienced during the workshop and how current classroom activities can be modified to incorporate more science inquiry.

You can preview a workshop activity at
www.exploratorium.edu/ifi/comparing

ASSESSING for LEARNING

Through activities with materials and reflective discussions, this three-day workshop provides an in-depth overview of formative assessment as an integral part of science teaching. Participants experience a variety of ways of assessing students' science process skills and conceptual development. The workshop provides ideas and tools professional developers can use to help teachers apply elements of formative assessment in the classroom.

You will

- examine the characteristics of formative assessment and the role it plays in supporting student learning;
- explore strategies for assessing student learning; and
- practice and critically review formative methods of assessing students' science skills and conceptual understanding "as you go."

DATE: Monday, February 7 to
Wednesday, February 9, 2011

TIME: 8 a.m. to 4 p.m.

COST: \$1,400
(\$1,250 for teams of two or more)

This workshop explores formative assessment as an integral part of learning. Participants experience formative assessment activities that support science teaching.

The Formative Assessment Cycle

Participants are introduced to the formative assessment cycle, a model that can be applied to assess any science teaching goal, including science concepts, science process skills and scientific attitudes. The steps of the formative assessment cycle include eliciting students' current thinking related to the teaching goals and determining the next steps to help students develop their thinking. The differences between formative assessment and summative assessment will be illustrated.

Assessing Understanding of Science Concepts and Process Skills

Two critical aspects of teaching science are developing students understanding of science concepts and their use of science process skills. Participants will explore a variety of approaches for assessing both of these important teaching goals.

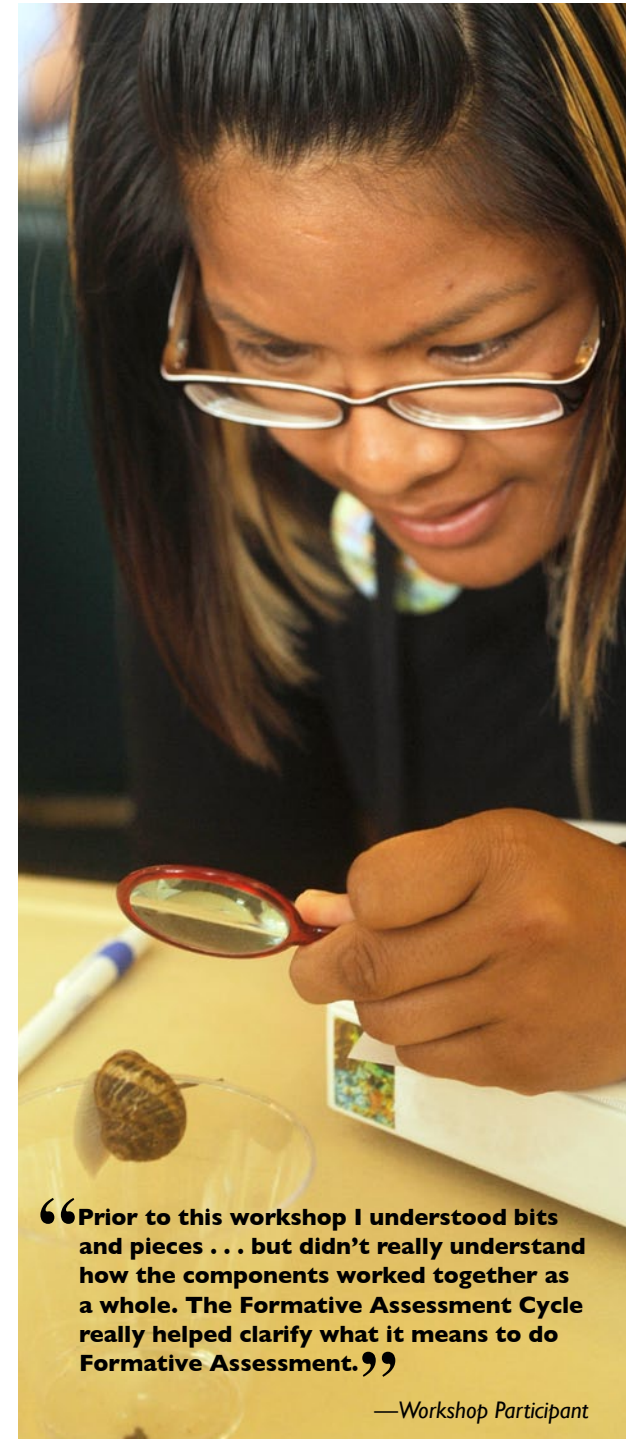
Formative Assessment Practices

Activities will focus on a variety of formative assessment strategies, such as:

- the role of teacher questions in eliciting students' thinking, and
- methods for developing students' abilities to benefit from self-assessment.

To support the implementation of ideas from this workshop, participants have conversations about the professional development design process—from the design of each individual activity to the overall structure of the workshop.

www.exploratorium.edu/ifi



“Prior to this workshop I understood bits and pieces . . . but didn't really understand how the components worked together as a whole. The Formative Assessment Cycle really helped clarify what it means to do Formative Assessment.”

—Workshop Participant

All registrations due by June 30, 2010. *One applicant per registration form, please.*

Name: _____

Organization: _____

Title: _____

Address: _____

Phone: _____

E-mail: _____

If attending with teammates, who are they?

I will attend:

___ **Fundamentals of Inquiry**

October 25–29, 2010

Individual Team*

\$1,800 \$1,650

___ **Assessing for Learning**

February 7–9, 2011

\$1,400 \$1,250

** if attending with one or more teammates*

Payment amount enclosed: _____

Method: Check Visa or MC PO enclosed
(payable to Exploratorium)

Credit card #: _____ Exp. date: _____

Name on credit card: _____

Address of cardholder: _____

Please submit completed form with payment. You can either:

- Download the form to your desktop, complete and resave it, and email to ckoenig@exploratorium.edu
- Or print, complete and mail to: **Exploratorium, Institute for Inquiry**
3601 Lyon Street
San Francisco, CA 94123
- Or fax to (415) 561-0307, attn: Chris Koenig

Please do not make travel arrangements until you receive email confirmation of your enrollment on **July 14, 2010**. If the workshop is full, we will issue a full refund.

If you need to cancel, notification is required by **September 10, 2010** in order to receive a refund (less a 10% processing fee).