



Teacher Institute 2010 Summer Institute Application

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Applications are now being accepted for the Exploratorium Summer Teacher Institute, a program for middle and high school science and mathematics teachers. Our four Institute sessions will focus on physics, general earth science, general life science or integrated math and science. Descriptions of the workshop offerings are on the reverse of this page.

During the Institute, teachers work with each other and with staff scientists to learn more about science and mathematics teaching. On a typical day we interact with exhibits, engage in hands-on classroom activities, build small versions of Exploratorium exhibits, and share teaching strategies. Each day consists of three and one half-hours of class instruction and two hours of independent project or research time, and a break. Exploratorium resources such as the teacher resource library, teacher machine shop, and museum exhibits will be available for project research.

Participants are required to study at the Exploratorium for five-and-one-half hours each day, Monday through Friday, for four weeks. Each participant will be awarded a stipend of \$1000 after completion. Three units of undergraduate graded credit in physics or 6 units of pass/fail graduate continuing education credit have been earned through the program in the past. Registration and paying for credit takes place during the Institute.

To apply for Summer 2010, complete the attached form and mail it to the above address postmarked on or before **Thursday, April 1, 2010**. If you email it, please write in the subject header "TEACHER INSTITUTE APPLICATION". Alumni of previous Institutes cannot repeat an Institute they have taken in the past. Feel free to share the application with colleagues by making as many photocopies as you need. The application is also available on our web site at www.exploratorium.edu/ti

Notification letters will be e-mailed during the early part of May.

**Teacher Institute
Summer 2010 Schedule**

hands-on general science (note different workshops)

Come explore a variety of science topics as we take an integrated approach to discovering the world around us. We will do hands-on investigations of natural phenomena and highlight how they relate to the fields of human perception, physics, chemistry, earth science, biology, and health science. Using readily accessible materials, we'll engage in inquiry-based activities and build classroom versions of museum exhibits to facilitate discussion of the abstract ideas behind scientific phenomena. Gain important content knowledge and pedagogy skills to help relay these concepts to your life and physical science students. This workshop supports state and national middle school science standards, with an emphasis on life, physical, and health sciences. The National Science Foundation and National Institutes of Health SEPA program provides funding for this session.

There are two different **hands-on general science** sessions offered at the same time. One will have a more “**life sciences**” emphasis and the other will have more of an “**earth and space sciences**” emphasis.

Monday, June 21 – Friday, July 16

12:00 pm - 5:30 pm

- a. **life and physical sciences**
- b. **earth and physical sciences**

exploring high school physics

We will explore the physics of perception, light, color, optics, sound, plus electricity and magnetism. We'll visit many Exploratorium exhibits where we will discover the science behind the exhibits. We'll build small versions of the exhibits, and use them in a classroom; learning how to figure out the world by actively doing inquiry. For a full syllabus go to:
<http://tinyurl.com/cjr7m>

Monday, June 21 – Friday, July 16

8:30 am - 2:00 pm

- c. **physics**

exploring the math and science of our world

Come explore the mathematics that helps explain our world. Using Exploratorium exhibits and hands-on classroom activities, we will study perception, earth, life and physical sciences through a mathematical lens. This class is designed for math and/or science teachers who are interested in strengthening math and science integration through measurement, data collection, graphical analysis, pattern recognition, proportional reasoning, and the connection between algebra and geometry. The math level will focus on algebra readiness and first year algebra (Algebra 1), with some pre- and post- algebra topics. This year we will explore two special topics: the math and science of cycles, and the Geometry Playground exhibition (an Exploratorium-developed traveling exhibition that will be on display at our museum only during Summer, 2010).

Monday, June 21 – Friday, July 16

8:30 am - 2:00 pm

- d. **math and science**

Please complete the attached application form on the next page.



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NOTE: Please print neatly or type your application. Incomplete applications are not reviewed. Please complete both sides of the application.

Name: _____

Home Address: _____

City/State _____ Zip: _____

Home Phone: _____ School Phone: _____

E-Mail: _____

Please complete your school information.

School where you teach: _____

City & State _____

(please ✓) ___ Middle ___ High Other _____

District: _____

If you are not presently teaching, please describe your teaching status.

Which Institute do you prefer? Circle your choices below.
(Choose only 1 institute)

1st Choice: a b c d 2nd Choice: a b c d

1. Credential Information

a. What year did you begin teaching in a formal classroom setting? _____
(please do not include student teaching)

b. Do you have a teaching credential? ___ yes ___ no (please ✓)

If yes, list type(s) _____

If yes, list granting university and year _____

For your answers to questions 2 and 3 you may choose to attach a résumé.

2a. List the courses you taught during the 2009/2010 academic year.

Course	Grade Level

2b. List other relevant courses you have taught in the past.

Course	Grade Level	# Of Yrs. Taught

3. List educational background. Include professional development and other relevant experiences.

University, Prof. Dev., Other Experience	Degree	Subject	Year

**For your answers to questions 4, 5 & 6, please attach a separate sheet.
Please print neatly or type your responses.**

4. What roles have you played in education outside the classroom? For example, mentoring, presenting workshops for teacher colleagues, participating in school curriculum development, publications, etc.

5. Describe your teaching experience. You could include: What are your classes like? What special challenges do you face? What science or math topics do you find most difficult to teach? What science or math topics have you enjoyed studying or teaching recently? Have you ever built things for your classroom?

6. What do you hope to gain from the Exploratorium Summer 2010 Teacher Institute?