

REGISTRATION FOR MITS SUMMER INSTITUTE JULY 7-18, 2008

Please type or print information. Remove this top portion and send with payment (check or purchase order) to MITS, Inc. Checks must be received by June 21. There is no refund after June 21. *Sorry, MITS is unable to accept credit cards at this time.*

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 Summer Institute Region Choice:
 1. _____ 2. _____
 Email: _____

Please make checks payable and mail to: MITS, Inc. 308 Congress St. Ste. 5D Boston, MA 02210-1027
 phone: (617) 695-9771 fax: (617) 695-1829 email: mits@mits.org www.mits.org

JULY 7-11 & 13-18, 2008

9:00 am - 3:30 pm

Plus 4 hours during the school year.

Designed for: PreK-8 Educators in Science, Technology, Math, and Engineering, other educators are welcome.

Costs: \$200 registration fee, two or more teachers from a school = \$175 per teacher. *A one week Summer Institute sessions costs \$125 per teacher.*

Credit and PDP Options:

Receive MITS Certificate of Completion and choose one of the following for completing 2 weeks:

- 60 Professional Development Points
- 90 Professional Development Points
- 90 Professional Development Points and Earn 3-4 Graduate Credits
Graduate credits are an additional cost.
- * One week sessions are 30 PDPs, college credits are not available.

Participating Colleges that offer Graduate credits

Cambridge College- 4 credits Salem State College- 4 credits
 Framingham State College-3 credits Worcester State College- 4 credits
 MCLA (Mass. College of Liberal Arts)- 4 credits

SUMMER INSTITUTES

Berkshire Region

At the **Berkshire Museum** and other local museums, participants will:

- Explore how to encourage students to think critically
- Learn about the history of renewable energy from the Shakers to today
- Experiment with the chemistry of food
- Learn the science behind forensics
- Develop activities that promote a healthier lifestyle for students

Lead Educator: Curtis Asch, casch@berkshireremuseum.org

Boston Region

At **Zoo New England** and other cooperating museums, participants will:

- Examine the connection between environment and human health.
- Learn about the skills critical to the engineering profession
- Investigate climate change, the carbon cycle, and greenhouse gasses.
- Connect "green energy" practices to bioenergy transfers
- Explore *how* we know a species is "endangered"

Lead Educator: Jen Gresham, jgresham@zooneewengland.com

Cape Cod Region (one week option only)

Planning is in progress for the Summer Institute at **OceanQuest**. Please check www.mits.org for updates.

Lead Educator: Kathy Mullin, oceanquest@capecod.net

Springfield Region (one week option only)

Planning is in progress for the Summer Institute at **Children's Museum at Holyoke**. Please check www.mits.org for updates.

Lead Educator: Dayna Abrazinski@childrensmuseumholyoke.org

Essex Region

At **H.O.B.B.E.S (Hands-on, Boat-Based Education and Science)**, and cooperating museums, participants will:

- Understand the ocean's potential as energy source and carbon sink
- Learn how scientists measure and predict the impact of climate change in NewEngland and remote Polar regions.
- Discover when and how non-native species cross the threshold to become invasive species in marine ecosystems
- Build a "sound" understanding of vibrations and waves; understand their applications from music to military sonar.
- Analyze how robotics use has evolved in American manufacturing

Lead Educator: Lisa Wolf, lwolf@hobbesinc.org

Lowell Region

At **Tsongas Industrial History Center** and partner museums, teachers will:

- Learn the science, technology, and engineering of the first American Industrial Revolution and how it continues in the Merrimack Valley today-.simple machines to nanotechnology
- Explore alternative energy sources
- Find out about sustainable practices in our outdoor spaces
- Engage in the engineering design process with a variety of activities
- Integrate science and math with hands-on activities

Lead Educator: Beverly Perna, Beverly_Perna@uml.edu

Metrowest Region

At **NE Wildflower Society/Garden in the Woods** and other museums:

- Investigate insects and the ecology of environmental change
- Examine global concerns through the lens of art
- Explore the geography, ecology, and technology of your food
- Analyze how environmental changes impact different habitats

Lead Educator: Bonnie Drexler, bdrexler@newfs.edu

Southeast Region

At **New Bedford Whaling Museum** and local museums:

- Learn about climate change from the ground up
- Discover how a warming of our climate could impact plant life and diversity in New England
- Learn how energy flows in the natural world and in human-created environments
- Get an insider's look at a modern zoo's role in local, national and international conservation

Lead Educator: Bob Rocha, rocha@whalingmuseum.org

Worcester Region

At **Massachusetts Audubon Broad Meadow Brook** and cooperating museums participants will:

- Examine why biodiversity is important and how new species are "discovered"
- Use schoolyard gardens as a metaphor for global agricultural issues
- Discover how to protect rare native species from invasive, non-native species
- Unlock the secrets of ancient artifacts using technology
- Investigate the challenges of telling "real" from "fake" in the art world
- Explore energy technology alternatives to fossil fuels

Lead Educator: Duke Dawson, dukedawson@charter.net

Course descriptions are subject to change. Stay updated at www.mits.org

MITS Summer Institute 2008: Headline Science: Science, Math, and Literacy Behind the Headlines

Headline Science:

Science, Math, and Literacy Behind the Headlines

Summer Institutes are facilitated by museum educators at museums, nature centers, aquariums, zoos and botanical gardens. There are 8 different regions in Massachusetts, each with 4-7 partners that offer their unique Institute. At all Institutes, you will learn inquiry-based, hands-on, minds-on ways to address science concepts in the news. Activities and teaching in the Summer Institutes will help teachers use science headlines to teach students to question, to analyze, to write about, and to communicate ideas in science.

Read the detailed syllabi on our website www.mits.org/regions.htm to decide which region you would like to attend. This year several regions are offering one-week institutes: for more information visit our website. Contact lead museum educators with questions about activities at a particular Summer Institute region.

"Scientific literacy implies that a person can identify scientific issues underlying national and local decisions and *express positions* that are scientifically and technologically informed."

(National Science Education Standards, National Research Council, 1995)

"Court tells Navy to protect whales from sonar during training." SF Chronicle, Nov. 14, 2007.

"Earth's Climate is now clearly out of balance and is warming." American Geophysical Union, Jan. 24th, 2008.

- Earn PDPs and Graduate Credits
- Learn methods of inquiry-based, hands-on teaching
- Learn scientific inquiry content and process
- Connected to MA Science & Technology/Engineering Framework & National Science Education Standards
- Receive teaching materials valued at \$50
- Learn about educational resources

"Late and Lame on Warming" New York Times Editorial Page, Feb. 4th, 2008.

"The key to solving the climate change crisis is technology" Jeffrey D. Sachs, Scientific American, May 2007.



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MIT Summer Institute
Professional Development
for PreK-8 Educators

July 7-18, 2008