



National Science Resources Center

THE NATIONAL ACADEMIES  Smithsonian Institution



NATIONAL LASER SECONDARY SCHOOL SCIENCE EDUCATION STRATEGIC PLANNING INSTITUTE

*Helping School Districts Develop
Middle and High School Science Education
Programs That Align with
Science Standards*

February 24–28, 2008

Houston, Texas



The LASER Center
Leadership and Assistance for Science Education Reform
nsrconline.org

NATIONAL LASER SECONDARY SCHOOL SCIENCE

In an increasingly knowledge-driven world, all students should emerge from school with at least a basic understanding of science. The college-bound student needs to be prepared for rigorous study; the science-literate citizen evaluates and debates complex issues rationally; the skilled worker thinks critically, asks probing questions, and solves problems.

An effective science education program is the bridge to science literacy for all students—and ultimately for all citizens. Research-based, inquiry-centered science learning and teaching—by promoting students' active involvement in their learning experiences—not only help them develop and retain scientific concepts and skills but also prepare them to be members of the future workforce.

Why secondary school? Although U.S. elementary students' science knowledge compares favorably with that of their peers in other countries, research shows that their interest and achievement in science wane as they move through middle and high school.

Since 1991, more than 800 forward-thinking school districts at the cutting edge of science education reform have participated in one or more of the 60 previous NSRC planning events, and are at various stages of implementing the strategic plans they developed there. Be part of this growing national movement: Participate in the **2008 National LASER Secondary School Science Education Strategic Planning Institute**.

The Program

At the Institute, you will learn about current research, models of reform, and resources for middle and high school science education reform to be used in the development of a strategic plan. Through an intensive program of interactive workshops and discussions, you will:

- Explore current research on how middle and high school students learn;
- Examine exemplary inquiry-centered secondary school science curricula;
- Address the five elements of reform—curriculum, professional development, materials support, assessment, and administrative and community support—through the lens of secondary school science; and
- Receive technical assistance in the strategic planning process and network with experts involved in science education reform.



"This productive, comprehensive, and wonderfully engaging event was a highly professional experience that left us all with much to contemplate and build on. It was a classic example of professional development strategies that work extremely well with educators."

—Jerry Schierloh, consultant for PRISM (Professional Resources for Science and Mathematics) Montclair State University, New Jersey

"Being here has truly reinforced the alliance concept. Our school district will benefit from inclusion in this process as community stakeholders are welcomed aboard."

—Jenny Johnson, North Franklin School District, Washington

EDUCATION STRATEGIC PLANNING INSTITUTE

Focus Questions. The Institute program will focus on five critical questions that school districts must address as they plan for and implement science education reform programs.

Focus Question	Sessions	Faculty
<i>What are the characteristics of an effective secondary school science program?</i>	Vision building, inquiry-based science experiences, videotapes, and discussions	Institute faculty includes teachers, school administrators, scientists, engineers, and science educators. All are nationally recognized experts in science education.
<i>What research informs this way of teaching science?</i>	Research on how people learn and the impact on teaching and learning	
<i>How do we introduce a new instructional program into our school system?</i>	A simulation that informs participants about how to bring change into a school system	
<i>How do we build an infrastructure that supports a high-quality secondary school science program?</i>	Strategies for implementing: <ul style="list-style-type: none"> • Research-based instructional materials • Comprehensive professional development • Effective assessment • Science materials support systems • Administrative and community support 	
<i>How do we create a plan of action to guide and sustain future efforts?</i>	Time and technical assistance for developing a tailored strategic plan	

School District Leadership Teams

Districts that wish to apply for participation in the institute will need to identify a four- to six-person leadership team of administrators, teachers, community leaders, and a scientist or engineer representing a corporation, academic institution, museum, science technology center, foundation, government, or other non-profit organization working to reform science education. Team members must collectively have the skills, commitment, and credibility to lead and sustain a local secondary school science education reform program.



Accommodations and Transportation

Leadership teams should make their own lodging reservations; information on obtaining reservations will be included with notification of acceptance. Participants are responsible for all lodging and transportation expenses. Continental breakfast and full lunch each day plus one evening meal are included for each participant.

For more information, contact Mary Raucci, LASER Program Associate, at (202) 633-2971 or LASER@si.edu.

How to Register

Register online: visit the NSRC Web site, www.nsrconline.org/about_the_nsrc/events.html, and click the “Online Registration” button at the top of the page. Space is limited.

Fee	Payment due date
\$1,000/team member	Two weeks after registration

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The **National Science Resources Center** was established in 1985 by the **Smithsonian Institution** and the **National Academies** to improve the learning and teaching of science for all students in the United States and throughout the world. The prestige and credibility of these two world-renowned institutions provide the NSRC with access to research, scientific expertise, and resources to inform our work. They provide the NSRC with the unique opportunity to catalyze the reform of science education with leaders representing school districts, academic institutions, businesses, museums, foundations, government agencies, scientific and engineering societies, publishers of education resources, and nonprofit organizations working to improve K–16 science education.

The NSRC advances the missions of its parent institutions by expanding and extending their important work in the following ways:

- Translating their research, resources, and best practices into products and services which are disseminated to leaders working to improve K–16 science education;
- Building leadership capacity, especially within the science and engineering communities, to leverage change at the school district and state levels; and
- Educating a broad constituency of leaders about the important work of both institutions in science education.

The National Academies

are composed of three academies—the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine—and their operating arm, the National Research Council. These institutions work outside the framework of government to ensure independent advice to the nation on matters of science, technology, and medicine.



The Smithsonian Institution

was established in 1846 with a mission of increasing and diffusing knowledge. For more than 160 years, the Smithsonian has used its unique, publicly accessible collections, research, and staff to inform, educate, and inspire a diverse public. In doing this, it has become one of the most widely recognized institutions in the world for both its contributions to science and its unparalleled ability to make its research and collections accessible to people of all ages.

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