

Science Education Fellowship in Energy

"I have been a part of many valuable PD programs and activities, but SEF is the only one that has positively impacted my teaching in the classroom almost immediately. And the support and guidance I have been given by my SEF mentor have helped me to identify and prioritize professional goals that I am truly excited about. This program is unique and, in a word, awesome!"

--2009 SEF Fellow

Program Overview

Thank you for your interest in the Science Education Fellowship! We hope that you will consider applying in order to grow professionally as a classroom teacher and as an instructional leader during your term as a Science Education Fellow in Energy.

Included in this packet is a description of the Science Education Fellowship (SEF) in Energy program during the 2011-2012 school year, eligibility requirements, and information on how to request an application. **All application materials must be received via email or mail no later than 11:59 PM on Sunday, April 3, 2011.** All Fellowship recipients will be notified by May 23, 2010. There will be a Welcome Celebration on May 26 from 4:30 PM -6:30 PM at the UMass Club for all Fellows; please make arrangements now to be available at that time in anticipation of your Fellowship acceptance.

The SEF program is designed to foster teacher and leadership skills in those who have three years of teaching experience and are committed to staying in a Boston Public Schools classroom for the next two years. Applicants do not need to have prior leadership experience nor do they have to have participated in other Boston Science Partnership events before. While many teachers may find these skills to be helpful for other avenues of leadership in the district, this program is not designed to facilitate the transition of a classroom teacher to becoming a school-based or district-based leader, such as a principal or superintendent. We will be able to support up to twelve teachers for the third SEF cohort and will consist of a mixture of teachers who are new to SEF and teachers who have been Fellows before. The cohort will consist of teachers from grades K-12 in the areas of biology, chemistry, physics, and earth/environmental science for the September 1, 2011-August 31, 2012 term.

SEF: A Boston Science Partnership Initiative

The Science Education Fellowship is a program sponsored by the National Science Foundation in connection with the Boston Science Partnership (www.bostonscience.org). The Fellowship is a year-long program for experienced teachers that uses a model of teacher support and development to increase the quality of teaching and leadership in science in the Boston Public Schools. This model includes a comprehensive set of activities designed to improve teacher practice, focusing on the outcome of increased achievement in science for all students.

The goals of the program are:

- To create and support a corps of urban teachers and leaders

- To institute a culture of active and reflective instruction
- To improve teacher quality through vertical alignment within content and horizontal alignment within grade bands , meeting in small groups, and professional development in order to increase student achievement

These goals will be met by focusing the professional development in three specific areas:

Thinking about Teaching: Teachers will be involved in structured inquiry into their own teaching and growth using tools developed through educational research. As a cohort they will meet regularly to discuss core topics of teaching and learning of energy using current videotapes of their teaching. Fellows will be asked to tape specific lessons in order to see one another teaching a similar concept across grade levels and content areas. Monthly meetings will support the work Fellows are doing in their Collaborative Coaching and Learning in Science (CCLS) groups and on their individual plans.

Leadership to Peers: Fellows will be asked to identify opportunities for themselves to take a leadership role within the district or with their peers in order to promote the teaching and learning of energy. These opportunities will consist of working with SEF/Boston Energy in Science Teaching (BEST) leaders on Energy Vertical Teaming, leading an Energy CCLS at their school, helping with the Energy I class, helping with the Energy II class, researching learning progressions, or on any other substantial opportunity that a Fellow believes will help transform the teaching and learning of energy. To facilitate this, Fellows will work with experts in adult learning and leadership in order to develop the skills that will allow them to help other teachers to become leaders, to be able to motivate other teachers, and to bring other teachers along the professional continuum.

Individual Growth Opportunities: Each teacher has areas of their professional lives that they hope to grow to meet a need they see in themselves or their students. Each Fellow will identify and pursue opportunities that are anchored in the teaching and learning of energy but take a direction that is interesting and valuable to them. These might include working with a university professor, becoming a mentor to other teachers, or action research in their classroom.

[SEF2011-2012: A Focus on Energy](#)

For the past two years Fellows have anchored their efforts in one of the four core science areas. This year SEF will focus on the energy connections within and across disciplines during its two CCLS cycles, as well as have Fellows connect their individual plans to the teaching and learning of energy in or outside of the classroom. This focus on energy provides a strong link to the BSP Phase II Project, Boston Energy in Science Teaching, and to making connections across classrooms through the thread of energy. Additionally, this focus on energy will provide a different experience to those who have been Fellows in the past and, therefore, prior Fellows are eligible to apply.

Lastly, because of the deep integration of energy into the Fellowship this year, applicants who have not taken Energy I before are encouraged to take Energy I this spring at NEU in order to provide foundational knowledge in energy concepts. Registration information can be found at www.bostonscience.org.

Fellowship Program Description

The Science Education Fellowship year is a one year program for science teachers who are dedicated to learning and growing as a teacher and as a leader. The SEF has a core set of work that all Fellows must participate in during the year.

The Science Education Fellowship Program (250 hours) = \$10,000	
<p style="text-align: center;"><u>Collaborative Work</u></p> <ul style="list-style-type: none">• Develop relationships with teachers across content areas and levels• Participate in the SEF adapted CCLS model based on the group's schedule• Observe other teachers' lessons and give feedback; receive peer feedback on your lessons• Work on an energy PD/research strategy• Anchor feedback and reflections in research• Look at teaching and learning of energy across content areas and levels	<p style="text-align: center;"><u>Individual Work</u></p> <ul style="list-style-type: none">• Develop and carry out an individualized growth plan that has a clear vision, is anchored in the teaching and learning of energy, and has identifiable benchmarks• Meet regularly with your advisor• Reflect weekly• Monthly assignments for each Fellows' meeting• Videotape 3 lessons• Lead and videotape a professional development opportunity

A Fellow's individualized growth plan should consist of a clear vision that will help lead them to where they would like to be at the end of the year and needs to consist of work that they feel like he or she would not have an opportunity to do otherwise. The plan should focus on ways to improve their own science instruction and leadership skills. Accordingly, this work should tie in to what type of professional development the Fellow would like to either develop or lead for other BPS teachers. Fellows will work with an advisor who will help them to develop their own professional growth plan and will meet with their headmaster/principal to determine how to be a leader while still being in the classroom. Examples of professional growth plan electives include taking a graduate level course, presenting at a national conference, piloting and testing an innovative pedagogical technique, developing a pilot education-research project, writing an article, or any other activity that can demonstrate growth as a teacher or as a leader.

In addition to monthly SEF meetings, there are two SEF areas that focus on collaborative work: CCLS and Energy Professional Development/Research Strategies. The CCLS groups determine their own schedule,

course of study, and the lessons they will all be taping and observing. These video observations, research, and student work will anchor the team's conversation in teaching and learning across science content areas and levels. The Energy strategy groups will determine their own schedule but will also need to coordinate with the lead on each strategy for planning or check-in meetings.

Timeline

February 21, 2011	Application process opens
March 2, 2011	SEF Information Session 1 (optional)
March 3, 2011	SEF Information Session 2 (optional)
March 15, 2011	SEF Information Session 3 (optional)
April 3, 2011	Applications Due (11:59 PM)
May 2-May 13, 2011	Observation Drop-Ins
May 23, 2011	Fellows notified
May 26, 2011	SEF Welcome Celebration (4:30 PM – 6:30 PM)
June 7, 2011	SEF Induction
Sept 2011-Aug 2012	Cohort 3 Fellowship Term

Eligibility

All teachers—including those who have been Fellows in the past—of science in grades K-12 who have taught science for at least three years and been employed by the Boston Public Schools for at least two years are invited to apply; teachers must hold a valid license to teach a science subject. Teachers should be able to describe past professional leadership experiences and must be able to demonstrate how they have been successful in the classroom. Teachers also must have the support of their headmaster or principal to apply due to the extra commitments you will have during the school year. Furthermore, teachers who become Fellows are committing to remain in a BPS classroom for at least one year after the Fellowship ends. Please note that SEF is an intensive program that will require 250 hours of your time, and applicants should carefully consider their other teaching and professional obligations before applying.

How to Apply

To apply, complete the BSP Science Education Fellowship Applicant Information Form, Open Response Questions, and submit all supplemental documents. **All materials must be received by 11:59 PM on April 3, 2011.** Please submit completed applications via email to allison.scheff@umb.edu or via mail to COSMIC, UMass Boston, 100 Morrissey Blvd, W-4-181, Boston, MA 02125.

Compensation

Fellows who successfully complete their Fellowship term will receive a \$10,000 stipend. This will be paid in installments during the Fellowship and is dependent on successful completion of requirements.

Contact Information

For more information, please contact Allison Scheff, Associate Project Director for the Boston Science Partnership, via phone at 617.287.5632 or via email at allison.scheff@umb.edu.