



Massachusetts Biotechnology Education Foundation
One Cambridge Center, 9th Floor, Cambridge, MA 02142 Tel: 617.674.5100 Fax: 617.674.5101

BioTeach 2009-2010 Program and Application

BioTeach is an ambitious teacher professional development program designed to support biotechnology instruction and career awareness activities. Since 2005 BioTeach has provided professional training to educators in Massachusetts' high schools to enable them to access and use biotechnology curricula, expose students and teachers to career awareness activities in the life sciences, and partner with schools, government and local businesses to support scientific curiosity, increase student participation in science and, for some, train for a career in the life sciences.

The BioTeach program goals are to:

- Enable every public high school in Massachusetts to teach biotechnology.
- Engage high school students with hands on lab experiences that inspire scientific curiosity, understanding, and for some, a career in the life sciences.

The MassBioEd Foundation is proud to announce the 2009-2010 BioTeach Program and call for new applicants. Over the last four years, BioTeach has awarded grants to 162 schools and provided biotechnology laboratory training to over 500 science teachers. The program seeks to expand by adding new high schools in 2009.

A BioTeach Program award in year one provides:

- Up to \$7,800 in biotech laboratory equipment/supplies
- Up to \$1,000 in lab consumables
- A three day summer professional development workshop
- Summer workshop stipends (per diem for a minimum of 2 to a maximum 4 faculty)
- PDP certification upon completion
- A one day winter professional development workshop with stipend and PDP certification

The award in years two through six provides support for biennial workshops, stipends, and funding for program supplies and maintenance.

Awards will be announced on April 10, 2009

Summary of Accomplishments

The BioTeach program continues to grow and refine services to Massachusetts public schools:

- 162 high schools have been provided teacher professional development training and equipment.
- Over 500 science teachers received biotechnology laboratory training.
- BioTeach is now at 48% of its goal to reach 335 schools.
- Almost \$2,000,000 in supplies and consumables awarded to 162 schools.
- The enhanced Life Science Career Development Initiative is demonstrating a successful progression towards life science career development education for public high school students.
- Enhanced teacher mentoring opportunities developed in partnership with the Boston University School of Medicine's MobileLab program.
- Customized teacher training opportunities for Boston Public Schools offered through the Museum of Science.

2008 – 2009 School Year

This year has been especially exciting with the addition of the following programmatic enhancements:

- Added 49 schools to the BioTeach system bringing the total number of BioTeach schools to 162.
- Sustained additional teacher support systems by integrating the Boston University School of Medicine's MobileLab into the BioTeach program; teachers received professional development training over the summer and then were partnered with Boston University mentors who work closely with each BioTeach teacher as the MobileLab visits his or her awarded school.

FAQ's about Applying for a BioTeach Grant

What is the main purpose of these awards?

The BioTeach awards provide public high school science teachers with lab equipment, supplies and teacher professional development to incorporate biotechnology into the biology curriculum.

Where does the money come from?

1. An Annual Fundraiser: Golf Classic

Each year the Massachusetts Biotechnology Council (MBC) hosts a "Golf Classic" fundraiser in collaboration with primary suppliers in its Purchasing Consortium. In 2007, over 400 biotech executives and suppliers participated in the 12th Annual Golf Classic, raising over \$100,000.

2. Corporate Sponsorships and Grants

MassBioEd also raises significant funds provided by the Commonwealth of Massachusetts as well as corporate sponsorships and individual donors.

Eligibility & Selection Process:

Massachusetts public high schools that plan to introduce and/or strengthen biotechnology curricula in their biology program are encouraged to apply. Schools are selected on the basis of the thoughtfulness and practicality of their plan, the potential to reach students at all levels, and the plan's sustainability in subsequent years.

Application:

Interested schools must complete an application and submit it by the posted deadline. The application is enclosed at the end of this document.

Can I get help with the application?

Yes! If you have any questions about the awards program, or if you would like help in completing the application, contact the BioTeach Program Administrative Assistant, Lisa O'Connell, at lisa.oconnell@massbio.org or call (617) 674-5142.

Obligations:

Grant recipients shall both provide and allow photographs to be taken in biology classrooms where new equipment and supplies are used, and provide appropriate releases for publicity purposes from students' guardians. Recipients shall also submit a short summary report about student lab activities, participate in evaluative surveys and interviews, send at least two biology teachers to an initial professional development workshop in biotechnology, and participate in ongoing professional development workshops throughout the school year. Technical assistance with the program will also occur within the teacher's classroom. PDPs will be earned with all professional development.



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BioTeach 2009-2010 Application

The following (pages 4-7) comprise the BioTeach 2009-2010 Application. This application may be completed on your computer or filled out by hand. If you have Adobe Acrobat software you will be able to save your completed document for your records. Please answer all questions in order for your application to be considered complete, and please secure all required signatures.

Upon completion, please print two (2) copies of this application. Please keep one (1) copy for your records and **mail** the other copy to:

**BioTeach c/o the MassBioEd Foundation
One Cambridge Center, 9th Floor
Cambridge, MA 02142**

Applicants will be selected based upon the quality and thoughtfulness of their responses, the commitment to incorporate biotechnology within the curriculum, and the availability of funding from MassBioEd.

Applications must be received or postmarked by Friday, March 13, 2009.

School Information

High School Name: _____

School District: _____

School Street Address: _____

City/Town: _____ Zip Code: _____

Telephone _____ Fax: _____

Regional Schools, list of towns served: _____

Principal/ Headmaster:

Name: _____

Email _____ Phone: _____

Science Department Chair/Head:

Name: _____

Email _____ Phone: _____

Designated School Contact: (This will be the person responsible for program oversight and interaction with BioTeach. We prefer this to be a person who participates in the training.)

Name: _____

Email _____ Phone: _____

Science and Biology Program

Number of students enrolled in grades 9 -12: _____

Number of students enrolled in science during the current academic year: _____

Number of students enrolled in biology during the current academic year: _____

Number of biology teachers: Full time _____ Part time _____

Number of years of science required for graduation: _____

Specific science classes required for graduation? Check all that apply.

- None Biology Physics
 Earth Chemistry Other: _____

Types of biology courses offered?

- College Advanced Placement Biotechnology
 Anat. and Phys. Forensics Other _____

Does your school offer vocational technical training? Yes No

If yes, do you offer a biotechnology track? Yes No

Current biotechnology capacity;

1. Please list up to three (if any) biotechnology **laboratories or activities** included in your current science curriculum or in planning for the next academic year?

- _____

- _____

- _____

2. Please list any courses which currently include **concepts** of biotechnology.

3. How many teachers already have formal (College or professional) biotechnology training? _____

4. Please indicate the quantity of each of the following biotech lab equipment items owned and in working condition currently owned by the department.

_____ Microscopes	_____ Balances	_____ Hot plates
_____ Centrifuges	_____ Water baths	_____ Microwaves
_____ Thermometers	_____ pH Meters	_____ Vortex Mixers
_____ Pipettes	_____ Electrophoresis Boxes	_____ Incubators
_____ Spectrophotometers		

Proposed Biotechnology Capacity

5. How many teachers will you commit to training in biotechnology? _____
(We insist that it be a minimum of two teachers.)

Please indicate number of teachers you expect by discipline.

Biology _____ Physics _____
Earth _____ Chemistry _____ Other: _____

6. Please describe your plan for incorporating or expanding biotechnology into your curriculum and school should you be selected to receive a grant.

7. How will your school support the teachers who have been trained by the BioTeach grant? (e.g. time for training, joint planning time, local or additional foundation resources)

8. How will you manage and use the supplies and consumables purchased through the BioTeach grant?

9. Enhancing scientific curiosity and sparking career interest are significant goals for BioTeach. What are your plans to use this award to develop career interest in life sciences careers?

Sustainability

10. Although the BioTeach program provides extensive training and materials support over a period of time eventually your school and biotechnology efforts will be on their own in the future. Please describe your plan for the sustainability of the curricular changes and teacher professional development you have made as a BioTeach school.

Applicant Signatures (Required)

School Principal/Headmaster:

Name Printed: _____

Name Signed: _____ Date _____

Science Department Chair:

Name Printed: _____

Name Signed: _____ Date _____