



**GET**

**INVOLVED**

LIFE-CHANGING SCIENCE EDUCATION

Learning  
Lab

Professional  
Development

High School  
Apprenticeship  
Challenge

BioBuilderClub

# GET IN TOUCH

There are a number of ways for students, teachers, scientists, and companies to get involved with BioBuilder. Here are a few ways that everyone can get involved:

- Sign up for our quarterly newsletters through our [Contact Us](#) page.
- Inquire about a visit to the **BioBuilder Learning Lab** in Cambridge, MA.
- Connect with us through social media on Facebook, Twitter (@SystemsSally), and Instagram (@systems\_sally).



# GET TO KNOW US

## FLAGSHIP PROGRAMS

### [Professional Development Workshops](#)

Our three-day workshops give teachers direct experience with BioBuilder's curriculum and laboratory content. Co-taught by a practicing synthetic biologist and a high school teacher, workshops combine classroom, laboratory, and design activities. Teachers leave with ready-to-teach lessons to bring engineering into biology classrooms, labs or clubs.

### [BioBuilderClub](#)

A 6-month educational enrichment program that engages high school teams around the world to combine engineering approaches and scientific know-how to design/build/test their own project ideas. Teams are provided with a BioBuilder e-textbook and laboratory kit (U.S. teams), and paired with a scientific mentor. Along with the virtual Kick-off event and monthly calls, teams participate in the spring Final Assembly where they may publicly share their progress.

### [Learning Lab](#)

Located inside the entrepreneurial community of LabCentral in Kendall Square, Cambridge, MA, the Learning Lab brings science education into a place where science is happening, and enables us to run year-round programming. We offer programming for local students during the school day, after school, on weekends and during school vacations. It is also a home for our professional development workshops, specialty seminars, and classes for STEM professionals.

### [High School Apprenticeship Challenge](#)

An eight-week lab-readiness training program for economically disadvantaged students from diverse backgrounds and under-resourced schools in the Boston area, held at the Learning Lab. Accepted students commit to learn laboratory and professional skills that prepare them for summer internship opportunities and eventual careers in local academic labs and life science companies.

# GET ONBOARD

## Educators

- Teach our Curriculum:
  - Access the lab materials, videos, and links available through our [Teacher Resources page](#).
  - Attend a "Bio-engineering Essentials" 3-day **Professional Development Workshop** for teachers.
- Become a BioBuilder Master Teacher:
  - Participants who have completed the Bio-engineering Essentials **Professional Development Workshop** are eligible to attend a BioBuilder Master Teacher workshop. Those who complete this training may be eligible to lead future BioBuilder workshops, such as the Bio-engineering Essentials workshops held each summer.
- Sponsor a **BioBuilderClub** team at your school. Teams receive a BioBuilder laboratory kit, are paired with scientific mentors, and have the opportunity to present their work at the BioBuilderClub Final Assembly.
- Plan a visit (or series of visits) for your class to the **BioBuilder Learning Lab** in Cambridge, MA.
- Connect us with your colleagues (other teachers, school administrators, district staff) who may be interested in learning more about how BioBuilder curriculum can be integrated into your classrooms. Customized workshops are also available by request.

[Order Lab Kits](#)

[Get the Textbook](#)

[LabXchange.org](#)

## Students (and Parents)

- Access the student lab materials, videos, and links available through our [Student Resources page](#).
- Tell your science teacher(s) about the **BioBuilder Learning Lab**, and encourage them to reach out for more information on a workshop led by our Teaching Fellows.
- Encourage your science teacher(s) to start a **BioBuilderClub** team at your school. Teams receive a BioBuilder kit, are paired with scientific mentors, and have the opportunity to present their work at the BioBuilderClub Final Assembly.
- If you live in the Greater Boston area, look for applications to open annually in January for the **High School Apprenticeship Challenge**. Accepted students commit to an 8-week program where they learn laboratory and professional skills that prepare them for summer internship opportunities and eventual careers in local academic labs and life science companies.

## Life Sciences Companies and Research Institutions

- If you're located in Greater Boston, [indicate your interest](#) in providing an internship for a high school student completing the **High School Apprenticeship Challenge**.
- Contact us about supporting or sponsoring any of our programs at [info@biobuilder.org](mailto:info@biobuilder.org).

# GET ENGAGED

## VOLUNTEER OPPORTUNITIES

### MENTORS

Mentors can participate in either the BioBuilder online programs, the BioBuilderClub, or both, if they have the time and desire.

- Mentors should be practicing bioengineers, or those in closely-related fields; this can include graduate students and post-docs as well.
- All mentors should be proficient in written and spoken English, however we do have participants around the world, so fluency in additional languages is always welcomed.
- Scientists, Post-Docs and Graduate Students can [sign up to be a mentor here](#).

#### Online Programs:

- Mentors serve as a resource for their assigned teams;
- Typically a 2-3 week commitment of 1 hour per team per week;
- Possibility to join a virtual Office Hour to discuss your career path and current research.

#### BioBuilderClub:

- Mentors serve as a resource for their assigned team(s);
- Mentors are expected to work with their teams at least 2 hours / month (typically virtually) from October through March.
- Mentors should plan to join monthly virtual group calls (November through February), attend the virtual Kick-off event in October, and the Final Assembly in March.
- Mentors may have the opportunity to work with their teams as they prepare to submit their work for publication in a peer-reviewed journal.

### LEARNING LAB VOLUNTEERS

Learning Lab volunteers assist our Teaching Fellows in delivering science education programs at BioBuilder's Cambridge, MA location at LabCentral. Volunteers should be eager to actively work with students throughout the workshops, must be registered and cleared as a volunteer by BioBuilder's staff, and must sign a liability waiver before entering our teaching facility.

- Programs include Educational Sessions offered to middle school, high school, collegiate-level students, and Professional Development Workshops offered to teachers;
- Program length varies from three-hour to multi-day workshops.
- Sign up as a [Learning Lab volunteer here](#).

We look for volunteers to have the following knowledge/skills:

- Required - Knowledge of DNA structure, transcription, translation;
- Required - Familiarity with laboratory setting and skills, including sterile techniques (i.e. streaking and plating bacteria), pipetting, and the use of equipment such as a spectrophotometer, PCR machine, agarose gel equipment, etc.;
- Preferred - Familiarity with all [BioBuilder labs](#).
  - If you meet the first two requirements but are unfamiliar with our curriculum, please submit your information, and review the curriculum on our website; we can offer volunteer training as needed.