BioBuilder Teacher Professional Development
Part 2: What a Colorful World/Teaching BioDesign

Becoming a BioBuilder Pro: Take your skills to the next level in Part 2 of our Professional Development Sequence.

During our two-week module, you'll integrate biology, engineering, and DNA programming to redesign living cells. Finish the workshop with ready to teach lessons for your classroom, and first-hand experience running BioBuilder's What a Colorfull World lab.

Bring modern biotechnology to your school.

BioBuilder's life-changing science curriculum inspires and prepares students for college success and careers in STEM. Our educational resources were co-developed at MIT in partnership with high school teachers. The flexible content meets the needs of educators in comprehensive, magnet, and CTE high schools as well as college instructors leading science and engineering classes. Since 2011, BioBuilder's professional development workshops have directly trained hundreds of teachers each year.

We are thrilled to offer our world-renowned classroom and laboratory activities through a social, online platform. During a two-week window, teachers can participate from anywhere, pacing the lectures, readings, and assignments to fit their learning needs. Even online, teachers can still expect to interact with other teachers, receive feedback from our instructors, and gain hands-on experience with BioBuilder's labs.

Modules (must be taken sequentially):

- **Part 1:** What is Synbio/Eau That Smell
- **Part 2:** What A Colorful World/Teaching BioDesign

Enrollment includes:

- Access to the online training portal housing asynchronous lectures,
- A copy of the BioBuilder textbook,
- Access to all presentation slides,
- One lab kit/school/workshop,
- Access to social platforms for community development,
- Participation in a synchronous demonstration of the lab kit by BioBuilder Instructors via Zoom over two half days, and
- Certificate of completion (requires successful completion of of the course).

Are you ready to bring BioBuilder's life-changing science education to your students?

Find more information, upcoming program dates, and registration information at:

biobuilder.org/program/workshops/

Questions? Email us at info@biobuilder.org.

Who should attend:

- Any educator looking to inspire the young innovators in their classrooms
- High school Biology, Biotechnology, Engineering, and STEM teachers, from intro-level through AP, IB and CTE
- Afterschool science club leaders (Science Olympiad, iGEM, science fair, Genes in Space, BIO, etc)
- College level science and engineering instructors

BioBuilder Educational Foundation

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Bacterial transformation is a process that is fundamental to genetics and inheritance and enables modern biotechnology. In this workshop, two cell types are transformed with two color-generating plasmids, illustrating both the science and engineering questions that must be addressed to build synthetic living systems. Participants will apply these lessons to a system of their own design using a ready-to-teach framework suitable for all levels of high school biology.

Cost: $150/teacher

Discount: $250 for two teachers from one school. In this case, each teacher will receive a copy of the BioBuilder textbook and they will recieve one lab kit to share.

Meet the Instructors

Dr. Natalie Kuldell is the Founder and Executive Director of BioBuilder. Natalie has taught for more than a dozen years in the Department of Biological Engineering at the Massachusetts Institute of Technology. She is a highly regarded educator who develops discovery-based curricula drawn from the current literature to engage students in structured, reasonably authentic laboratory and project-based experiences. She studied Chemistry as an undergraduate at Cornell, completed her doctoral and postdoctoral work at Harvard Medical School, and taught at Wellesley College before joining the faculty at MIT in 2003.

Jo-Anne Purdy has been teaching Biology, Chemistry, and Advanced Placement Biology for the past 25 years and currently teaches at Westborough High School in Westborough, Massachusetts. She has been working with the BioBuilder community since 2011, leading a BioBuilder team and running workshops teaching teachers about the BioBuilder curriculum. She holds a bachelor's and master's degree in biological sciences and is a recipient of the Brenda M. Keegan award for Excellence in Teaching.

If you would like to preview what Part 2: What a Colorful World/Teaching BioDesign has in store, check out our trailer: