

BioBuilding: Synthetic Biology for Teachers: Bioethics Essay

Essay Topic

Do the potential contributions to society warrant the potential risks inherent in synthetic biology?



Synthetic biology has emerged only recently as an engineering discipline. At this point, the field has more potential than accomplishment. Some people see an incredible potential that includes cures for diseases, biosynthetic fuels and houses that are grown from gourds. Other people question the safety of a process that involves altering genomes.

Students are asked to investigate synthetic biology using the following resources:

[Decoding Synthetic Biology \(YouTube\)](#)

[What is synthetic biology?\(pdf\)](#)

[A Life of Its Own \(pdf\)](#)

[Our Synthetic Futures](#)

[Faking Organisms](#)

[Hand-made biology](#)

[The Risks and Rewards of Synthetic Biology](#)



Some links to older articles:

[How to Make Life](#)

[Life Reinvented](#)

[The Promise and Perils of Synthetic Biology](#)

You may also wish to see the ethics consideration for projects that college synthetic biology students have designed as part of the [iGEM Competition](#).

Other Student-Written BioEthics Essays about Synthetic Biology

["Four suggestions for addressing public concern regarding synthetic biology"](#)

Journal of Biological Engineering 2010, 4:7 (9 June 2010)

["Mapping the moral boundaries of biological engineering"](#) Journal of Biological Engineering 2009, 3:7 (8 May 2009)

["Synthetic biology: enormous possibility, exaggerated perils"](#) Journal of Biological Engineering 2008, 2:7 (25 April 2008)

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Assessment

Grading Rubrics and Scoresheets

Download as ([.doc](#)), ([scoresheet pdf](#)) and ([grading pdf](#))

Survey

To help us improve the labs, you can

1. send the students [here](#), where they can upload their ideas and read the essay topics of other students
2. "join a discussion" from the [BioBuilder homepage](#)
3. email us: "info AT biobuilder DOT org"

Thanks!

Feedback

We're always looking to hear back from you if you've thought about this unit, tried it, or stumbled across it and want to know more. Please email us through [BioBuilder](#), info AT biobuilder DOT org.