Seeking high school science teachers who want to reinvent biology class!

"Every session increased my excitement to bring these activities into my classroom!"

Reboot your lab activities with new curricula in gene editing, microbiomics, and agriculture!

Join the AceraEI Life Sciences Change Agent Teacher Workshop Series for **FREE** two-day programs based on NGSS-aligned curricula. Participating teachers will learn about new and relevant technologies, how scientists actually conduct lab research and work iteratively, and how to translate these innovations into labs and lessons plans that offer inspiration and a sense of purpose to students.

Sessions will include hands-on lab experiences and access to pilot-tested curricula in gene editing (using CRISPR technology), microbiomics, and agriculture. These areas are among the leading trends in biotechnology, allowing teachers and students to connect their classroom lab activities to innovations and research happening in the world today.

Each session will be held from 8:30am-3:00pm over two days.
Teachers can enroll in one or both sessions.
Register online at aceraschool.org/reinventbiology

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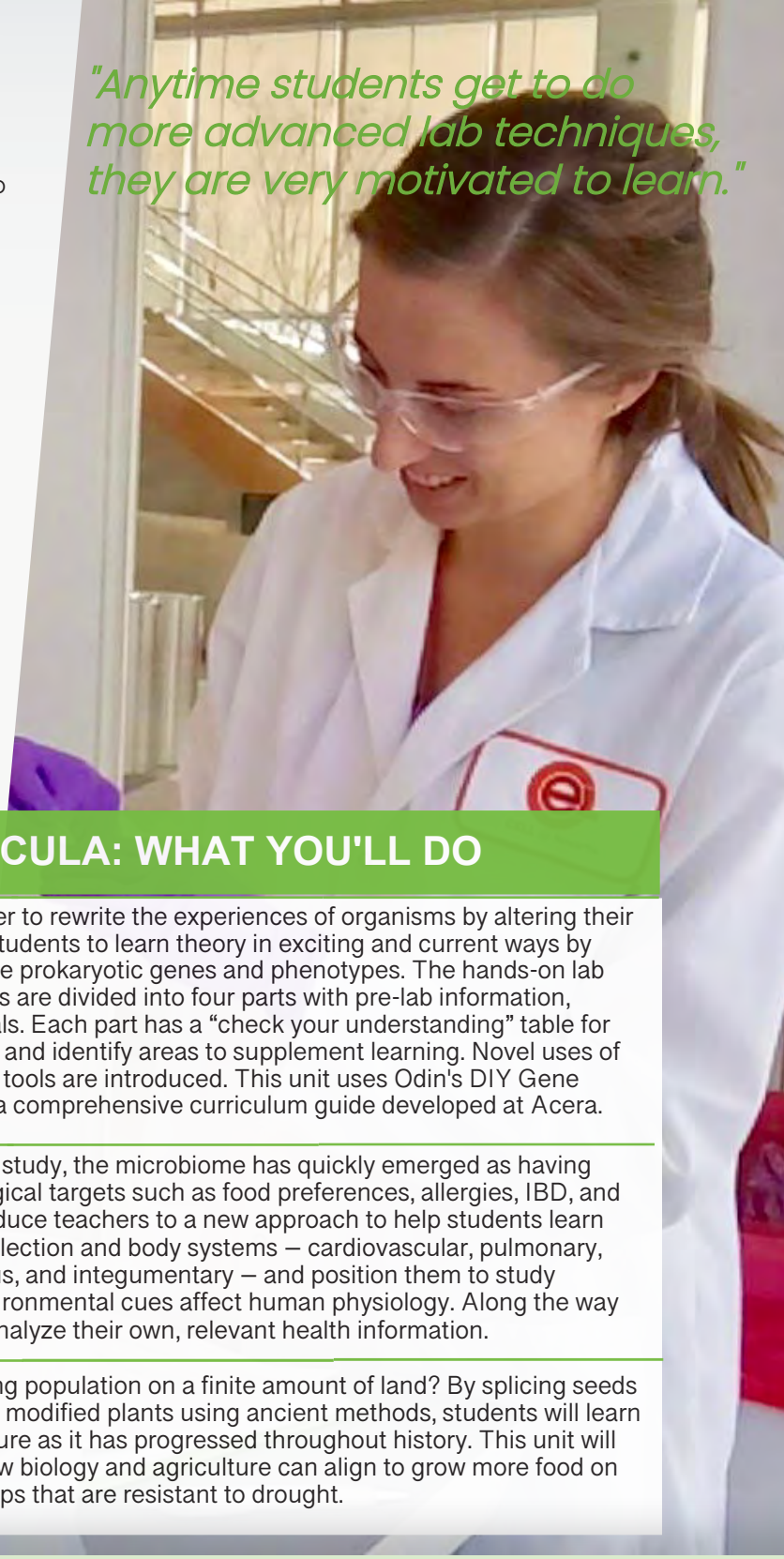
aceraschool.org

Why participate?

- Gain new knowledge and skills in scientific fields, lab practices, and inquiry-based learning techniques
- Receive NGSS-aligned curriculum outlines resource materials for use in the classroom and lab
- Support (virtual office hours) and access to online learning community
- Links/introductions to resources and ordering instructions for lab materials
- Network with similarly-minded educators
- Earn Professional Development Points



Location: Acera School

5 Lowell Ave. Winchester, Mass.

8:30am to 3:00pm

CURRICULA: WHAT YOU'LL DO

Gene editing with CRISPR: **Feb. 7 & Mar. 6** **June 24 & 26**	Gene editing has the power to rewrite the experiences of organisms by altering their DNA. This unit will allow students to learn theory in exciting and current ways by utilizing CRISPR to change prokaryotic genes and phenotypes. The hands-on lab and associated discussions are divided into four parts with pre-lab information, readings, and learning goals. Each part has a “check your understanding” table for students to track progress and identify areas to supplement learning. Novel uses of lab reports as assessment tools are introduced. This unit uses Odin's DIY Gene Editing Kit materials, and a comprehensive curriculum guide developed at Acera.
Human Microbiome: **Jan. 17 & 24** **Feb. 28 & Mar. 20** **June 12 & 22**	A relatively recent area of study, the microbiome has quickly emerged as having important ties to physiological targets such as food preferences, allergies, IBD, and autism. This unit will introduce teachers to a new approach to help students learn about evolution/natural selection and body systems – cardiovascular, pulmonary, digestive, immune, nervous, and integumentary – and position them to study ecology and the ways environmental cues affect human physiology. Along the way students will collect and analyze their own, relevant health information.
Feeding a Growing Population: **Apr. 10 & May 8** **June 23 & 25**	How can we feed a growing population on a finite amount of land? By splicing seeds and producing genetically modified plants using ancient methods, students will learn about botany and agriculture as it has progressed throughout history. This unit will also introduce them to how biology and agriculture can align to grow more food on less space, and create crops that are resistant to drought.

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Acera’s Education Innovation Initiative seeks to transform STEM education to develop the next generation of scientists, innovators, and leaders. Acera’s lab school in Winchester, Mass is a place to create and pilot inquiry-based STEM content that taps into students’ intrinsic motivation to learn, serving as a microcosm of what’s possible for all schools.

For more information on partnering with Acera, contact us at AceraEI@aceraschool.org.