



Frequently Asked Questions regarding APPLE program

1. What is APPLE for the Teacher?

The APPLE (Advanced Placement Program for Learning Enhancement) program is a group of scientists, undergraduate, and graduate students, coordinated by Educational Outreach program of HudsonAlpha, who volunteer to bring the equipment, materials, and resources needed to perform two of the required labs on the AP Biology exam.

2. What are the benefits of participation with APPLE?

In addition to having the physical resources necessary to conduct the labs, students gain an opportunity to interact in a 4:1 ration with individuals from both academia, research, and industry. It is our goal, for students to learn not only the content connected to the lab exercise, but also more about STEM related careers.

3. Which labs will be facilitated as part of the APPLE program?

The Enzyme Catalysis Lab

Students will measure the rate of an enzymatically catalyzed reaction and an inhibited reaction. After doing the lab, students understand the effects of changes in temperature, pH, enzyme concentration, and substrate concentration on reaction rates of an enzyme-catalyzed reaction in a controlled experiment, and explain how environmental factors affect the rate of enzyme-catalyzed reactions

Bacterial Transformation with pGLO plasmid

Students will use plasmids as vectors to transform bacteria with the genes for antibiotic resistance and GFP (green fluorescence protein) in a controlled experiment, describe the biological process of transformation in bacteria, calculate transformation efficiency, be able to describe the use of(?) multiple experimental controls, design a procedure to select positively for antibiotic-resistant transformed cells, explain how restriction enzymes are used in genetic engineering, and describe the role of an inducer in gene expression.

4. Who is eligible for APPLE?

AP Biology and PLTW Biomedical courses held during regular school hours in schools within Huntsville City, Madison City, or Madison County school districts. Other life science courses will be considered for inclusion based on

curricular fit and staff capacity. Please contact Ms. Dasi Price, dprice@hudsonalpha.org, if you need additional information.

5. Is there a cost for my school to participate in APPLE?

There is no cost to participate in the APPLE program.

6. How do I schedule an APPLE visit?

APPLE visits are scheduled using an online request form found at <http://hudsonalpha.org/the-apple-program>. Teachers can access the form August 1 –March 1 of each school year to make request(s). Requests are honored on a “first-come, first serve” basis.

7. Can I schedule an APPLE visit for each of my advanced Biology classes?

YES! Teachers can schedule a visit for each class. For example if a teacher has 3 advanced Biology classes, he/she can schedule 3 visits for Enzyme Catalysis and 3 visits for Bacterial Transformation.

8. Can my visits be on different days?

YES! Teachers can schedule a visit according to his/her class scheduling.

9. Who is leading APPLE?

Mrs. Krista Thibeault hold a master’s degree from the Vanderbilt School of Medicine and worked at HudsonAlpha Institute for Biotechnology as a Research Associate for 5 years. Having been a volunteer for APPLE since 2011, she is so excited to be more involved and facilitate the program.

Throughout the labs, students will also interact with other members of the Educational Outreach team and community volunteers.

10. How do I volunteer with the APPLE program?

For more information about volunteering, please contact Dasi Price at dprice@hudsonalpha.org or APPLE Program at apple@hudsonalpha.org

For more information about HudsonAlpha Institute for Biotechnology and the Educational Outreach department please visit <http://www.hudsonalpha.org>.

Have a question that’s not answered here?

Please contact:

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