

20-21 PASADENA Amgen Biotech Experience Materials Request Form PASADENA 20-21
Each teacher at the participating school must complete and return this form for his/her classes

Name of Teacher **AND** Email address: _____
Name of School: _____ Your Phone: _____ School Phone: _____
List other teachers doing the labs during this time block and their email addresses: _____

Reservation/Pick-up Date: _____ Equipment + Supplies _____ Supplies only _____

If you are receiving Supplies Only, do you have MiniOne system electrophoresis boxes? Yes _____ No _____

Select the Pathway your students will be doing and fill in ALL the requested numbers

Complete Genetic Engineering Sequence (Labs 1, 2, 3, 4, 5, and 6)

Description: This laboratory sequence tells the “complete” biotechnology story from moving a gene of interest into an engineered expression vector. Unlike the *Abridged Genetic Engineering sequence*, this sequence involves the digestion of pARA and pKAN-R followed by a ligation lab to produce recombinant plasmids. This represents the most challenging set of protocols. Purifying the Fluorescent Protein (LAB 6) is optional; please indicate **whether you will be doing the protein lab.**

Class Name & Number: _____ # students _____ # Groups _____ Date of Transformation: _____ Protein Lab: Y ___ N ___
Class Name & Number: _____ # students _____ # Groups _____ Date of Transformation: _____ Protein Lab: Y ___ N ___
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Class Name & Number: _____ # students _____ # Groups _____ Date of Transformation: _____ Protein Lab: Y ___ N ___

Abridged Genetic Engineering Sequence (Labs 1, 2a, 4a, 5a, and 6)

Description: This sequence omits the pARA/pKAN-R digestion and ligation of restriction fragments and starts with the *rfp* gene already ligated into the expression vector. Students run a plasmid digest and electrophoresis separating pARA-R restriction fragments. This was written to *shorten* the labs required to get to the protein purification step and to increase the likelihood of students succeeding in producing red transformants. The sequence requires *less* teacher preparation time. Purifying the Fluorescent Protein (LAB 6) is optional; please indicate **whether you will be doing the protein lab.**

Class Name & Number: _____ # students _____ # Groups _____ Date of Transformation: _____ Protein Lab: Y ___ N ___
Class Name & Number: _____ # students _____ # Groups _____ Date of Transformation: _____ Protein Lab: Y ___ N ___
Class Name & Number: _____ # students _____ # Groups _____ Date of Transformation: _____ Protein Lab: Y ___ N ___
Class Name & Number: _____ # students _____ # Groups _____ Date of Transformation: _____ Protein Lab: Y ___ N ___

Focus on Bacteria Sequence (Labs 1, 5b, and 6)

Description: The focus of this sequence is on the importance of plasmids as vectors for use in genetic engineering and the ability of bacteria to utilize the genetic information of the plasmid to produce a protein product. It is not only important to produce the protein, it is equally important that the protein be capable of being collected and purified. Purifying the Fluorescent Protein (LAB 6) is optional; please indicate **whether you will be doing the protein lab.**

Class Name & Number: _____ # students _____ # Groups _____ Date of Transformation: _____ Protein Lab: Y ___ N ___
Class Name & Number: _____ # students _____ # Groups _____ Date of Transformation: _____ Protein Lab: Y ___ N ___
Class Name & Number: _____ # students _____ # Groups _____ Date of Transformation: _____ Protein Lab: Y ___ N ___
Class Name & Number: _____ # students _____ # Groups _____ Date of Transformation: _____ Protein Lab: Y ___ N ___

Introduction to Biotechnology (Lab 1)

Description: The focus of this lab is to enable the students to become proficient in basic biotechnology lab skills. It includes using the micropipette and running a gel electrophoresis.

Class Name and Number: _____ # students _____ # Groups _____
Class Name and Number: _____ # students _____ # Groups _____
Class Name and Number: _____ # students _____ # Groups _____
Class Name and Number: _____ # students _____ # Groups _____

SEE NEXT PAGE

Colony PCR

Description: The purpose of this lab is to confirm the cells producing red fluorescent protein have been transformed with the plasmid carrying the *rfp* gene, pARA-R, using a fundamental molecular biology tool, PCR.

Class Name and Number: _____ # students ____ # Groups ____

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Class Name and Number: _____ # students ____ # Groups ____

Class Name and Number: _____ # students ____ # Groups ____

*Would you prefer to borrow Student Guides? If yes, how many? _____

**Do you have an incubator at your school? Yes _____ NO _____

***If you are requesting "Supplies Only", do you need any additional equipment (e.g., extra pipets, water bath, etc.)?

ADDITIONAL REQUIRED INFORMATION!!!!

1. School District AND Name of School (Spell out the names): _____

2. School Address (Complete including School street address, School city AND Zip): _____

3. Is this YOUR first year doing ABE? If you are returning after a year away from the program, please consider yourself as new. _____

4. Is this your SCHOOL'S first year doing ABE? _____

Important Notes:

The Student Guides and Teacher's Guide (new editions 2019) can be downloaded from the "Curriculum" page at www.amgenbiotechexperience.com. Be sure to download the correct sequence, if not downloading the entire guides.

*******RETURN THIS FORM IMMEDIATELY. YOU WILL BE CONTACTED FOUR TO SIX WEEKS BEFORE YOUR PICK UP DATE AND ASKED TO UPDATE LAB SERIES AND STUDENT NUMBERS.**