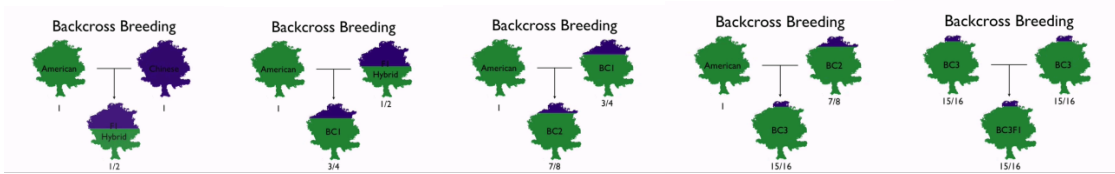


Restoring the American Chestnut

How do we help the American chestnut tree?

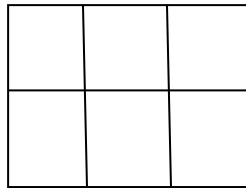
Two methods are currently being used to restore the American chestnut tree. One method is backcrossing. This is where the offspring of two different parents are pollinated with trees from the line of a single parent for one or more generations to reinforce the traits of one parent yet obtaining one or more desirable traits from the other parent. (As shown in the diagram)



The second method will be our focus for the remaining lessons in this unit. It uses biotechnology to create a transgenic tree. Transgenic trees have genes from another species inserted into their own DNA. In order to find the gene that codes for resistance to the fungus, scientists must use a variety of genetic and biotechnology techniques. Techniques we will learn about include:

linkage mapping, DNA extraction, PCR, gel electrophoresis, genome sequencing, and creation of transgenic organisms

You will create a poster that briefly explains the purpose of each technique.



1. Divide your poster board into six equal parts and label each section with one of the techniques listed above.
2. Describe the process and outcome of each technique in its section. Use pictures to illustrate the technique. Make sure your work is neat and spelling is correct.
3. On the back of your poster, attach a page that lists all of the internet sources you used in your research. Place your name on the back as well.

Your posters will be assessed based on the following criteria. Each section is given a score from 1-3, with 3 being the highest.

Section #	1	2	3	4	5	6
Accuracy of process and outcome						
Appropriate picture of technique						
Clarity of information (is it written so you understand)						
Correct spelling and grammar						