GENETIC ENGINEERING

Recombinant DNA Technologies

How does recombinant DNA technology generally work?

What do restriction enzymes do?

What is used to "glue" genes together?

Using e. coli as an example, what is the plasmid used for in recombinant DNA process?

What are some common applications of recombinant DNA technologies? (where or how are they used in society?)

Why is golden rice better than regular rice?

What are 3 pros and 3 cons of recombinant DNA technologies?

Technologies Used to Analyze DNA

What does PCR stand for?

What does PCR generally do or how is it done?

How is PCR used in society?

Memorize the words to the PCR song…

In your own words describe what Gel electrophoresis is...how it is done?

In Electrophoresis, which sections of DNA move the furthest? Which move the least?

DNA fingerprinting (also known as southern blotting) uses the separated DNA in electrophoresis to "fingerprint" an individuals DNA

Every individual has a different DNA fingerprint

Southern Blotting is basically transferring the DNA bands produced in electrophoresis onto a filter so they can be interpreted…like a photograph

Using the Southern Blotting technique, how could a person determine which individuals were parents to a particular child?

How would Sothern blotting be used to solve a crime?

What would the bands look like of identical twins?