GIFT '05

Tameka Laster
Virginia Wood
Joyce Howell
Bill Haskin

This summer was by far one of the best experiences of our careers!

We would like to take the time and share some of these things. So sit back and enjoy the show!

Upon our arrival, we were introduced to our wonderful mentor, facilitators, and instructors:

Dr. Peggy Ozias-Akias,
Mentor

Goona,
instructor

Goel,
instructor

Mrs. Anne,
instructor

Lynn Swain, Nancy Brinson, and Judy Holwell,
facilitators

This summer, we acquired knowledge and the experience of manipulating DNA by:

Extraction

Electrophoresis

Transformation

Extracting DNA

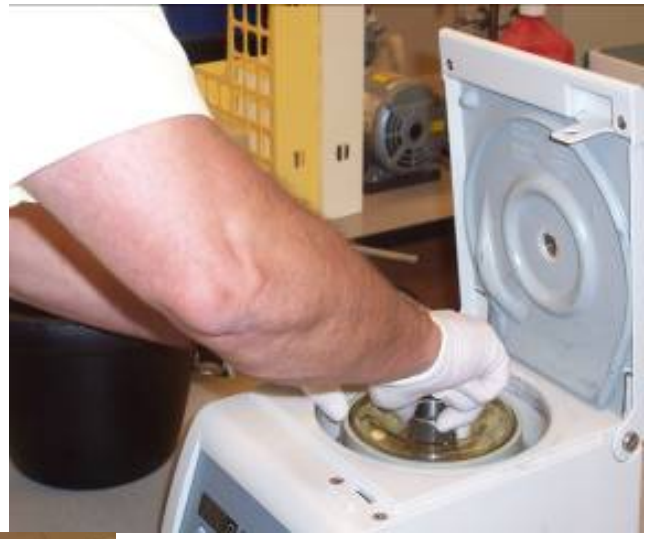
- First, we extracted DNA with Mrs. Anne, using household products: lentils, dish detergent, meat tenderizer, and a blender.

The scientific way of extracting DNA

- Then, we learned how to extract DNA using more of a scientific approach.
- First, we picked a leaf from a plant.

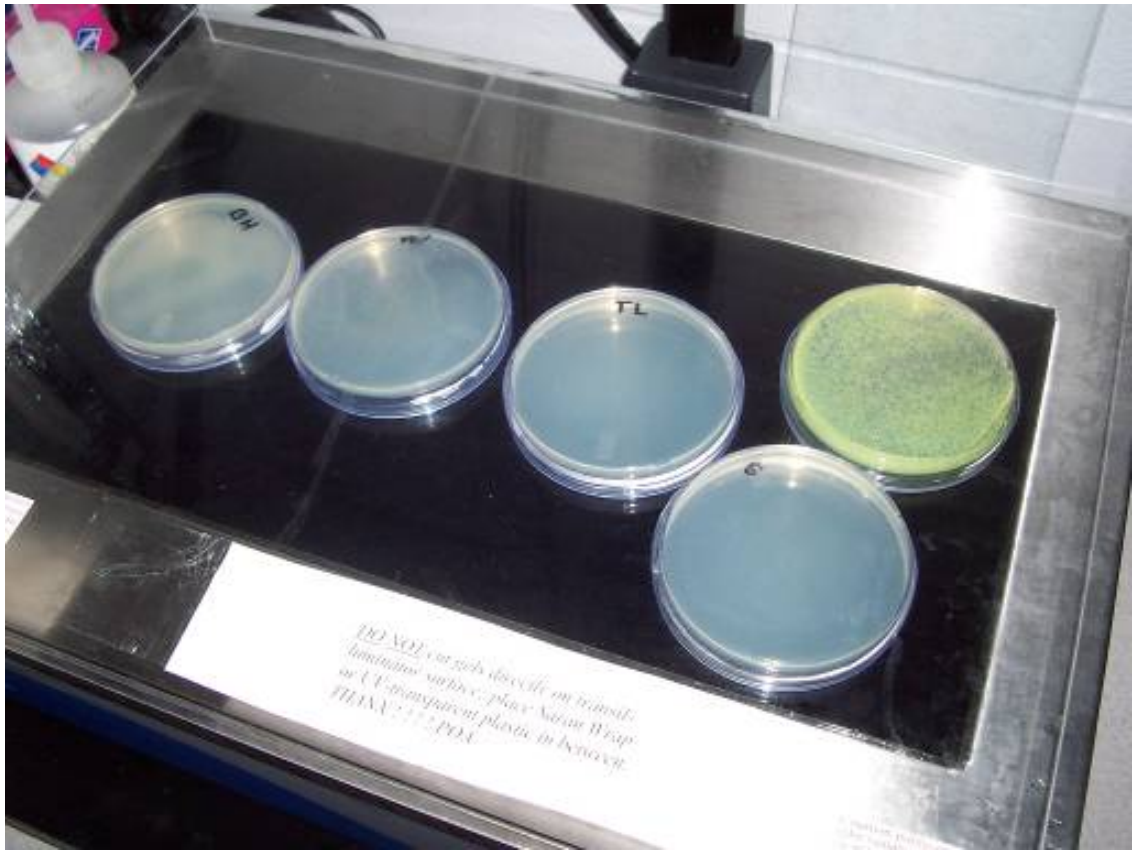
Then, we used liquid nitrogen to flash freeze it and grind it into a powder.

From there, we followed the protocol, in order to isolate the plasmid.



We grew E.coli bacteria and plated it.

We checked to make sure our bacteria had grown. Since the plate glowed, we knew we were successful.



We made up the agarose to run electrophoresis on our DNA to make sure we extracted it properly.

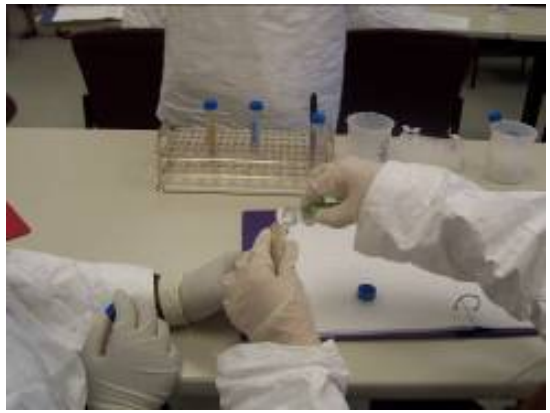
Our next mission was to insert our DNA into the E.coli by transformation.

We used the sequence cycler machine to read the new sequences of the new plasmid, in order to see if we had cloned our new plasmid.

Our next mission was to transfer everything we had done to a middle grade classroom!

On the first day, we introduced the students to a crime scene and built a DNA model.

Day Two: Students complete DNA extraction and transformation.



Day 3: Students ran electrophoresis and solved the crime.