The Human Genome Project

Since we all are enrolled in the Biomedical Pathway at our high school, we decided that a medical advancement would most interest us. As we searched for a project that we believed would be the most interesting for us, we started to think about DNA and how far it has come, especially in reference to gene therapy. The current medical ability to replace certain "bad" genes with "good" genes sparked all of our interest which then led to us searching for what made this possible. We found that the Human Genome Project was what began the exploration towards the possibility of altering genome sequencing which would then lead to life-changing DNA adjustments.

We began our research by looking at the background information about the Human Genome Project (HGP). We wanted to first thoroughly understand the reasoning behind why this project was seen as important as it relates to the goal that the initial scientists had for the HGP. So, we looked into and noted the scientists involved, the research they conducted, the discoveries they've attained through their research, and some critiques that the new development had. We did this by reading multiple primary and secondary sources ranging from interviews to articles to books to multimedia. Then, from this information, we were able to decide that a website would best retain all the information that we wish to present. We would have some creative flexibility and a larger opportunity to utilize all of our skills with a website while also presenting an abundant but reasonable amount of information.

The Human Genome Project fits this year's theme of breaking down barriers in history as it opened up the possibility of altering genes. Before the project commenced, medical professionals were left questioning the unknown problems with people who had issues regarding

genetic disorders or diseases. It took scientists years to figure out the cause of inherited diseases because of their limited knowledge of genomes and DNA sequencing. With the technology that the project provided, scientists were able to discover about 1,800 inherited diseases and start to find treatments for them. Before people would be faced with a disease that no one understood why it happened. This advancement allowed the scientists to hold accountable the genes that were causing the problems. Then, with the knowledge of the "bad" genes, they were able to predict if descendants would also obtain the genetic disease. This led to medical professionals finding ways to lessen the severity of the disease and see if gene therapy could be a possible treatment for them. Also, the project made mapping and cloning mutant genes easier which then opened up the possibility of correcting or switching "bad" genes. So, the fact that the Human Genome Project provided ways to understand and alter genes broke barriers because medical treatments were able to be developed or improved. It broke the barrier of not having enough information towards the makeup of genes or the cause behind inherited diseases.