Genetic Engineering Debate: Are There Lines We Shouldn't Cross?

The relationship between ethics and science has had a long, complicated history. An advancing science that is currently forcing society to re-evaluate ethical boundaries is genetic engineering.

Genetic engineering (also called genetic modification) is the direct manipulation of an organism’s genome using modern DNA technology. Genetically modified plants and animals have led to significant benefits, such as herbicide resistant crops and fast-growing animals. At the same time, this technology has created major ethical concerns relating to the perceived “unnaturalness” of changing a living organism and a fear that scientists are over stepping their boundaries through their alterations of an original being. In humans, researchers have predicted that gene therapy will not only allow us to treat and prevent debilitating diseases (an elusive goal for scientists over the past 20 years), but also enhance or improve normal human traits.

Should we have the right to alter ourselves and other organisms through genetic modification? At what point should genetic engineering be forced to draw a line? The answer to this is tricky.

**Your job is to choose one of these genetic engineering topics** that you would like to research. Topic ideas are listed below. You are to use the information you find to formulate a solid argument *for or against* the topic you have chosen.

**Possible Topics:**

Transgenic Organisms

Gene Therapy

Extending Life due to Genetic Engineering

Recombinant DNA

Nature vs. Nurture

Genetically Modified Food

Genetically Modified Organisms for use in medicine (GMO’s)

Stem Cell Research

Cloning

Genetic Enhancement or “Designer-Babies”

**If you want to research a topic that is not on this list, please discuss it with your teacher first.**

Article Summary Taken From: http://www.policymic.com/articles/3971/genetic-engineering-debate-are-there-lines-we-shouldn-t-cross

**Format:**

You have the option of presenting your argument in the form of a research paper, a power point, a tri-fold, or any presentation method approved by your teacher. Your project must include the following components:

1. **History of the Topic/Introduction to the Issue**
   1. **Include all necessary information that will allow the reader to follow your research. For example, define any terms that you did not know previous to this project.**
2. **Arguments For *AND* Against Your Topic**
3. **Your Position on the Topic**
   1. **Supporting Evidence/Reasoning for your Position on the Issue (at least three major points)**
   2. **Where you retrieved your evidence**
4. **Possible Results of this Practice (both positive and negative)**
5. **How it relates to what we are learning in class!**
6. **Closing Arguments – Summarize your major points**
7. **Bibliography (Work Cited)**

**Rubric:**

You will be graded on the following components of your research project.

**/5 points - History of the Topic/Introduction to the Issue**

**/60 points – Arguments For/Against (with supporting evidence AND source)**

**/10 points – Clear Position on Topic**

**/5 points – Possible Results of Genetic Engineering Practice**

**/10 points – How it relates to what we are learning in class**

**/5 points – Closing Arguments**

**/5 points – Bibliography Total: 100 Points**