

## Genetics

Standards: 2a, 2b, 2c, 2d, 2e, 2f, 2g  
3a, 3b, 3c, 3e  
4a, 4b

### Culminating Project:

30 pts, Scientific Survey on Genetic Engineering

Groups of 3-4 people

Choose one of the topics to discuss with individuals

Survey 30 individuals about their opinions on genetic engineering

- food, handicaps, sex of baby, birth defects
- Questions will present 1) knowledge of subject & 2) opinion on subject
- Responses will be on a 4 point scale, Strongly agree, Agree, Disagree, Strongly Disagree
- Your data must be collected from the same location on the same day, ie mall, store, school, etc.

You will select a graph to show the data you collected. As a group you will present your graph and the data you collected. As an individual you turn in a 1-page write up that explains your procedure, summarizes the responses you collected.

### Genetic Engineering Powerpoint or Word presentation

1. Answer one of the questions
2. Present articles that helped to answer the questions you asked
3. Positive & Negative Aspects
4. Explain your group's position on the topic

Do not make it entirely text. Boring and difficult to follow. Add pictures, illustrations, things that will peak the readers/audiences attention.

Genetic testing should be done on cloned human fetuses for incurable diseases.

Humans should be given medication and vaccinations for diseases that have been tested on animals only.

30 pts, Family Tree showing the phenotypes and genotypes for 3 different character traits. Students must show the lineage for at least 4 different generations.

Character Traits: attached earlobes (recessive), roll one's tongue, eye color (Brown: dominant), left-handedness (recessive)

Pictures, relationships, genotypes, and phenotypes

### Instructional Activities

Lesson 1: Difference between mitosis and meiosis

Lesson 2: Meiosis

Lesson 3: Review for Quiz

Lesson 4: Mendel's Principle of Segregation

Lesson 5: Patterns of Inheritance

Lesson 6: Independent Assortment

Lesson 7: Modes of Inheritance

Lesson 8: Internet Activity