**Genetics Quiz**

1. List one way genetic engineering has been applied to medicine.

Human growth hormone, Insulin, Vaccines, Gene therapy

1. List one pro and one con to genetic engineering

Pro

Improved growth rate and nutrition, Pest/disease resistant, Extended shelf life, New foods, Prevent and cure diseases

Con

Hamper nutrients/ increase allergens, Introduce pathogens, Genetic problems, Limits genetic diversity

1. List two acquired traits.
   1. Learning to read
   2. Learning to swim
2. List two inherited traits.
   1. dimples
   2. Building nests
3. How can light affect the expression of a trait found in plants?

How tall the plant will grow, the degree of flowering, color of leaves or flowers

1. What is the difference of genotype and phenotype?

Genotype is the genetic code (the actual alleles an organism has), phenotype is the expression of those alleles (the physical appearance or behavior of the organism)

1. Compare and contrast genes, chromosomes, and alleles.

Chromosomes are thread-like structures in the nucleus that contain DNA/genes/alleles. Genes are segments of DNA that code for specific proteins. Alleles are a particular version of a gene, located at specific position on a chromosome, which determine a specific trait.

1. What is DNA?

The hereditary material in living organisms that stores and transmits genetic information