## Vocabulary Chapter 8  Heredity and Genetic Variation

**probability**
The chance that an event will occur, usually expressed as a mathematical formula.
*Example:  There is a one in two probability that the new baby will be a boy.*

**dominant**
A trait that shows the visible characteristic in an organism receiving different traits from each parent.
*Example:  Brown eyes are a  dominant trait.*

**allele**
One of two or more possible or alternative forms of a gene, each one impacting the hereditary trait somewhat differently.
*Examples:  wrinkled or smooth peas, short or long stems, yellow or green pods (all in the same species of pea plant)*

**genotype**
The genetic composition of an organism.
*Example:  The genotype of this person for eye color is Xx.*

**phenotype**
The outward appearance of genetic traits.
*Example:  The student has brown eyes.*

**homozygous**
An organism which has the exact same alleles for a given trait.
*Examples: The brown-eyed student has an XX genotype and the blue-eyed student has an xx genotype.  Both are homozygous.*

**heterozygous**
An organism which has two different alleles for a given trait.
*Examples: The brown-eyed student has an Xx genotype and the green-eyed student has a xX genotype.  Both are heterozygous.*

**hybrid**
A heterozygous organism containing different two different alleles (one from each parent) for a particular trait.
*Example: The hybrid corn is disease resistant.*

**incomplete dominance**
A situation in which the outward trait of the organism is a blend or mix of the individual traits of the parents.
*Example:  The pink morning glory comes from a white and a red set of parents.*

**codominance**
A situation in which the makeup or appearance (phenotype) of the different alleles in a heterozygous organism is visible.
*Example:  The blood type ABO is a combination of three different alleles.*

**Down's syndrome**
A condition in humans in which the individual contains 47 chromosomes instead of the normal 46.  It results in developmental difficulties for the individual.

**fruit fly**
A small, rapidly reproducing fly used to study genetics through observable variable traits.

**recombinant DNA**
A type of DNA that contains parts of different parent DNA molecules formed by a process of combining the DNA from each parent.

**chromatography**
A process used by scientists to separate mixtures for the purpose of identification of the ingredients.
*Example:  The biologist used paper chromatography to determine the ingredients of the mystery mixture.*

**electrophoresis**
A process which makes use of an electric current to separate various molecules such as proteins or DNA.
*Example:  The biologist used electrophoresis to isolate the protein sample taken from the patient.*

**linked**
Genes that are inherited together are said to be linked.