**Unit 5 Vocabulary**

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| **Trait** | **An inherited characteristic or condition.** |
| **Gene** | **A linear sequence of nucleotides along a segment of DNA on a chromosome; the basic unit of heredity.** |
| **Chromosome** | **Structure made of DNA that carries the units of heredity.** |
| **Allele** | **Different form of a gene for a particular trait.** |
| **Dominant** | **The trait that is expressed if it is present; denoted with a capital letter.** |
| **Recessive** | **Trait that is only expressed when the dominant trait is not present; denoted with a lower case letter.** |
| **Genotype** | **The actual combination of alleles for a trait** |
| **Homozygous** | **When there are two of the same alleles for a trait; AA or aa** |
| **Heterozygous** | **When there are two different alleles for a trait; Aa** |
| **Complete Dominance** | **Type of dominance in which the heterozygote**  **expresses the dominant trait.** |
| **Incomplete Dominance** | **Type of dominance in which the heterozygote expresses a blend of the dominant and recessive trait.** |
| **Codominance** | **Type of dominance in which the heterozygote expresses both the dominant and recessive trait.** |
| **Crossing over** | **The exchange of corresponding sections between homologous chromosomes during meiosis.** |
| **Nondisjunction** | **Failure of homologous chromosomes to separate properly during meiosis; results in gametes with too many or too few chromosomes.** |
| **Autosome** | **Chromosomes that determine characteristics other than gender of an organism.** |
| **Sex chromosome** | **Chromosome that determines the gender of an individual; the 23rd pair of chromosomes in humans.** |
| **Karyotype** | **A picture of homologous chromosome pairs; used to do chromosomal studies of organisms.** |
| **Polygenic inheritance** | **When traits are controlled by more than one gene.** |
| **Multiple Alleles** | **A gene that has more than one allele.** |
| **Sex Linked Trait** | **A trait controlled by a gene located on the sex chromosome.** |
| **Pedigree** | **A family record that shows which members inherit a specific trait over several generations.** |
| **Law of Segregation** | **States that the members of a pair of homologous chromosomes separate during meiosis and are distributed to different gametes.** |
| **Law of Independent Assortment** | **When gametes are made, the genes for traits found on different chromosomes separate independently of each other.** |
| **Gel Electrophoresis** | **Laboratory method used to separate mixtures of DNA, RNA or proteins according to the size of the molecules.** |
| **Gene Therapy** | **Insertion of genes into an organism’s cells in an attempt to replace defective genes.** |
| **Biotechnology** | **The use of living organisms or other biological systems to manufacture medication or other products that could improve the quality of human life.** |
| **Restriction Enzymes** | **DNA cutting enzymes that can cut both strands of a DNA molecule at a specific nucleotide sequence.** |