

## Genetics Notes

Genetics – Study of heredity

Inheritance/Heredity – Transmission of traits from parents to offspring

Traits – Characteristics that vary from person to person (hair color, eye color)

Alleles – Different expressions of a trait (Brown eyes, curly hair)

Dominant – An allele whose form of a trait always shows up in an organism if the dominant allele is present. Always written in capital letters. (ex. TT, Tt)

Recessive – Allele whose trait only shows up when the dominant allele is NOT present. Always TWO lower case letters. (ex. tt)

Genotype – Genetic makeup of an organism – (Actual genes – TT, Tt)

Phenotype – Physical characteristics of an organism – (What the “letters” mean - Curly hair, tall)

Homozygous – An organism with two identical alleles for a particular trait – TT, tt

Heterozygous – An organism with two different alleles for a particular trait – Tt

### Mendel's Laws

Principle of dominance – Some alleles are dominant and some are recessive

Law of independent assortment – Each pair of alleles separate independently of the other pairs of alleles

Law of segregation – Sperm or egg only give one allele toward the child

Biodiversity – Variation of life – important because there is less extinction and more combinations of breeds.