

# Heredity

## Vocabulary List

- Allele-alternate forms of the same gene, affecting a single characteristic, located at the same locus on homologous chromosomes.
- Gene- a unit of heredity; a sequence of DNA nucleotides that determines a single characteristic.
- Genetics- the science of heredity.
- Homologous chromosomes- two chromosomes, identical in size, shape, and centromere site, carrying the genes controlling identical characteristics. Each parent contributes one chromosome to his or her offspring.
- Trait- The physical or chemical expression of heredity.
- Homozygous- identical gene pairs on homologous chromosomes
- Heterozygous- non-identical gene pairs on homologous chromosomes. The individual will be hybrid for the trait in question.
- Dominant- an allele that is phenotypically expressed in the homozygous or heterozygous state. This allele masks the presence of a recessive allele.
- Recessive- an allele that is only expressed when homozygous. The recessive trait only appears when the dominant allele(s) are absent.
- Phenotype- the actual physical appearance/characteristic of the organism.
- Genotype- the genetic makeup of an organism based on the alleles present.
- Punnett square- a diagram showing the gametes that can be produced, including the joining of gametes, to produce offspring. The resulting diagram shows the possible genotypes and phenotypes of the offspring and the ratios of each produced.