

Genetic Terminology Review

Gene = unit of hereditary information; codes for specific type of information (protein)

Allele = a specific variant of a gene

Locus (pl. **loci**) = the specific location of a gene on a chromosome; can often be used interchangeably with gene.

Haploid = having a single complete set of chromosomes

Diploid = having two complete sets of chromosomes; each gene would be represented by two alleles

Polyloid = having more than two sets of chromosomes

Gamete = a haploid reproductive cell that will fuse with another such cell (fertilization); e.g. eggs and sperm

Zygote = the diploid cell produced as a result of the fusion (fertilization) of two gametes

Homozygous = having two identical alleles for a particular gene

Heterozygous = having 2 different alleles for a particular gene

Genotype = the genetic makeup of an individual (i.e., its alleles)

Phenotype = actual expressed characteristics (physical, physiological, behavior, etc.)

Dominant = an allele that is always fully expressed, even in the heterozygous condition.

Recessive = an allele that can only be expressed when homozygous (its effects are not expressed in the phenotype when heterozygous).

Incomplete Dominance = heterozygotes have intermediate values

Pleiotropy = a single gene affecting multiple characteristics or traits of an organism

You should also be familiar with **Punnett Squares** and the basic principles of recombination that arise from meiosis and fertilization.

You should also have a basic familiarity with the structure of DNA and nucleotides and how genetic information is encoded in the DNA.