**Vocabulary for Inheritance/Heredity**

**You are responsible for these vocabulary words.**

Heredity (or inheritance): The study of how traits are transmitted from parents to offspring

Expression: Technically, protein synthesis; the process that links genes with traits

Allele: A specific version or variant of a gene, generally represented by a single letter

Genotype: The alleles present in an individual; an organism’s genetic make-up

Phenotype: The observed trait; the expression of the genotype

Homozygous: Adjective used to describe an individual who has two copies of the same allele for a particular gene; sometimes called “purebred”

Heterozygous: Adjective used to describe an individual who has two different alleles for a particular gene; sometimes heterozygotes are called “carriers”

Recessive: a trait is recessive if there must be two copies of its allele present in order for it to be expressed (recessive alleles are usually expressed by a lowercase letter)

Dominant: a trait is dominant if it is expressed when only one copy of its allele is present (dominant alleles are usually represented by a capital letter)

P generation: the parental generation in a given scenario/experiment

F1 generation: the first generation of offspring in a given scenario/experiment

F2 generation: the second generation of offspring (i.e., “grandchildren”) in a given scenario/experiment

Self-fertilization: Some plants and hermaphroditic organisms can sometimes fertilize themselves—this means that you are crossing an individual with itself

Genotypic ratio: The ratio of genotypes produced by a cross; when calculated with a Punnet square, this ratio is theoretical (“expected”) and may differ from the experimental (“actual” or “observed”) genotypic ratio

Phenotypic ratio: The ratio of phenotypes produced by a cross; when calculated with a Punnet square, this ratio is theoretical (“expected”) and may differ from the experimental (“actual” or “observed”) phenotypic ratio