**Genetics & Heredity Vocab**

1. **Genetics:** the study of heredity
2. **Heredity:** the passing of genetic traits or physical characteristics from parent to offspring
3. **Self-Pollinating:** has both male and female reproductive structures so pollen from one flower can fertilize another flower on the same plant
4. **True-Breeding:** an organism created by two of the same breed of parent; also known as a purebred; when a true-breeding plant self-pollinates all of its offspring will have the same trait as the parent
5. **Hybrid:** an organism created by two different breeds of parents
6. **Cross-Pollination:** pollen from one plant is transferred and fertilizes a flower from a different plant
7. **Characteristic:** a feature that has different forms in a population, hair color is an example of a characteristic in humans
8. **Trait:** the different forms for each characteristic, for example red hair, brown hair, blonde hair, or black hair; the specific characteristic that is passed to the offspring through DNA
9. **Dominant Trait:** the trait observed in the first generation when parents that have different traits are bred, traits that are expressed and hides others
10. **Recessive Trait:** a trait that reappears in the second generation after disappearing in the first generation when parents with different traits are bred, traits that are covered up or only expressed when a dominant trait is not present
11. **Ratio:** the relationship between two different numbers that is often expressed as a fraction
12. **Genes:** one set of instructions for an inherited trait that are made up of DNA and code for specific traits; are found on chromosomes, the two alleles combined (one from each parent)
13. **Alleles:** one of the alternative forms of a gene that governs a characteristic; the different forms of a gene; one allele from each parent combines to make a gene
14. **Phenotype:** an organism’s appearance or the physical appearance; a detectable characteristic; for example flower color
15. **Genotype:** the entire genetic makeup of an organism; the combination of genes for one or more specific traits; both inherited alleles together
16. **Homozygous:** an organism with two dominant or two recessive alleles; two of the same alleles; for example AA or aa
17. **Heterozygous:** an organism with two different alleles; for example Aa
18. **Punnett Square:** a tool used to predict traits in an offspring and organize all the possible combinations of offspring for particular parents
19. **Probability:** the likelihood that a possible future event will occur in any given instance of the event; the change or percentage that something will occur
20. **Incomplete Dominance:** when each gene has its own degree of influence or is not completely dominant over another and produces a third trait; for example red and white snapdragons producing pink snapdragons
21. **Double Helix:** the shape of DNA that looks like a twisted ladder
22. **Chromosome:** made up of genes which are made up of protein and DNA; found in the nucleus of most cells