Study Guide

Chapter 11: Introduction to Genetics

* 11.1: The Work of Gregor Mendel
	+ Vocabulary
		- Genetics
		- Fertilization
		- Trait
		- Hybrid
		- Gene
		- Allele
		- Principle of dominance
		- Segretation
		- gamete
	+ Key Questions
		- Where does an organism get its unique characteristics?
		- How are different forms of a gene distributed to offspring?
* 11.2: Applying Mendel’s Principles
	+ Vocabulary
		- Probability
		- Homozygous
		- Heterozygous
		- Phenotype
		- Genotype
		- Punnett square
		- Independent assortment
	+ Key Questions
		- How can we use probability to predict traits?
		- How do alleles segregate when more than one gene is involved?
		- What did Mendel contribute to our understanding of Genetics?
	+ Objectives
		- Perform mono- and di-hybrid Punnett square crosses and interpret the results.
* 11.3: Other Patterns of Inheritance
	+ Vocabulary
		- Incomplete dominance
		- Codominance
		- Multiple allele
		- Polygenic trait
		- Epigenetics
	+ Key Questions
		- What are some exceptions to Mendel’s principles?
		- Does the environment have a role in how genes determine traits?
	+ Objectives
		- Predict the result of crosses with incomplete dominance, codominance, multiple allele, and polygenic traits and provide examples of each in nature.
		- Differentiate between environmental factors, genes, and when a combination of both effect an organism.
		- Discuss epigenetics and provide examples of how it effects humans.