

Biology I - Unit 5 Study Guide

bio1u5sg (Heredity)

Study Objectives

1. Recognize that **artificial selection** has led to offspring through successive generations that can be very different in appearance and behavior from their distant ancestors ("Wolf in the Fold")
 - a. Know term and its application today
 - b. Understand how this occurs
2. Use Mendel's Laws of **Segregation** and **Independent Assortment** to explain the occurrence of genetic variation (text)
 - a. Law of Segregation
 - b. Law of Independent Assortment
 - c. How each can explain genetic variation
3. Apply the terms **phenotype**, **genotype**, **allele**, **homozygous** and **heterozygous** in determining the outcome of **monohybrid crosses** (Punnett Square Worksheet)
 - a. Know terms
 - b. How to set up a Punnett square
 - c. How to use a Punnett square
4. Trace the inheritance of a genetic **trait** through the **pedigree** of a family ("Naming the Dead")
 - a. What is a pedigree
 - b. Rules for creating a pedigree
 - c. Trace a trait
5. Differentiate between **dominant**, **recessive**, **codominant**, **incomplete dominance**, **polygenic** and **sex-linked traits** (text)
 - a. Know terms and how to use them
 - b. Examples in nature

Vocabulary

pedigree polygenic trait codominance incomplete dominance trait hybrid pure-bred
dominant recessive allele homozygous heterozygous phenotype genotype
sex-linked trait artificial selection

Assignments

- ✓ Read 9.1, 9.2, 12.2
- ✓ Notebook **10pts**
 - 2-Column Notes on Study Objectives 1 - 5
 - "Wolf in the fold" (artificial selection)
 - Activity: "Naming the Dead"
 - Crossword/Punnett Square Worksheet
- ✓ Lab: Monogenic Traits Study (using statistical analysis)**10pts**
- ✓ Quiz **15pts**
- ✓ Test **20pts** (all multiple choice and rolled into final exam)