

BIOS256 OL, Week 7 Lab

Name:

OL Lab 7: Mendelian Inheritance: From genes to traits

Learning Objectives:

- Explain how traits are passed on from parents to their offspring and the factors that causes variations.
- Apply Mendel's Laws of Inheritance in color deficiency.
- Compare and predict the phenotypes of offspring with given genotypes using Punnett squares.
- Analyze dominant and recessive alleles, and how these alleles influence an individual's biological make- up

Our characteristics or traits are determined by our genes. In this simulation, you will learn how Mendelian postulates can be applied to determine the inheritance of characteristics. Also, you will reconnect to concepts in meiosis and gametogenesis and learn the laws of X linked inheritance to understand why color blindness affects more men than women.

You will use mice as animal models to study how their genes can influence their fur color and apply these concepts to understand human color blindness. Using the Punnett squares and Pedigree trees, you will learn to predict the genetic makeup of a family and analyze if a color-blind individual can pass on the traits to the offsprings.