

# Lesson Title: Genetics

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## Lesson Overview

Genetics is a branch of Biology that explains how traits are passed from parents to offspring. This lesson introduces students to the basic principles of heredity and variation, helping them understand why individuals are unique.

## Learning Objectives

- Define genetics and heredity
- Identify genes, DNA, and chromosomes
- Explain dominant and recessive traits
- Understand inheritance of traits

## Key Concepts

### 1. What is Genetics?

Genetics is the study of how traits are inherited from parents to offspring.

### 2. DNA, Genes, and Chromosomes

DNA carries genetic information. Genes are sections of DNA that control traits. Chromosomes organize DNA in cells.

### 3. Heredity and Inheritance

Heredity is the process by which traits are passed from parents to offspring.

### 4. Dominant and Recessive Traits

Dominant traits appear with one copy, while recessive traits require two copies to appear.

## Simple Activity

Ask students which family members they resemble and what traits they share.

## Conclusion

Genetics helps us understand how traits are inherited and why individuals are different from one another.