**Name** _____

# The Wonderful World of Genetic Diversity: Meiosis Unveiled

## Multiple Choice Questions

1. What is the main purpose of meiosis?

a) To create identical copies of cells

b) To introduce genetic diversity in gametes

c) To repair damaged DNA

d) To produce asexually reproducing offspring

2. What happens during crossing over in meiosis?

a) Homologous chromosomes separate.

b) Genetic material is exchanged between homologous chromosomes.

c) Sister chromatids are pulled apart.

d) Chromosomes align at the cell's equator.

3. Why is genetic diversity important for species' survival?

a) It reduces competition within a species.

b) It ensures that all individuals are identical.

c) It allows species to adapt to changing environments.

d) It leads to the extinction of species.

4. What is the outcome of meiosis in terms of gametes?

a) Two identical gametes

b) Four identical gametes

c) Two unique gametes

d) Four unique gametes

5. How does genetic diversity contribute to disease resistance within a population?

a) It makes all individuals equally susceptible to diseases.

b) It allows diseases to spread more easily.

c) It makes it more challenging for diseases to spread.

d) It has no impact on disease resistance.