

Name _____

The Wonderful World of Genetic Diversity: Meiosis Unveiled

Short Answer Key

1. Crossing over in meiosis involves the exchange of genetic material between homologous chromosomes, leading to increased genetic diversity in offspring.
2. Genetic diversity allows a species to have individuals with various traits, increasing the chances that some will possess advantageous traits to survive and reproduce in changing environments.
3. During the second round of meiosis, sister chromatids are separated and distributed to gametes, further mixing up the genetic material from the first round.
4. Genetic diversity within a population can make it more challenging for diseases to spread because not all individuals are equally susceptible. Some may have natural resistance due to their unique genetic makeup.
5. Genetic diversity is essential for evolution as it leads to the emergence of new traits and combinations over time, allowing species to adapt and survive in changing conditions.

