

Name \_\_\_\_\_

## Cell Division Chronicles: The Tale of Mitosis, Meiosis, and Living Beings

### Short Answer Key

1. Mitosis plays a role in growth, tissue repair, and cell replacement in humans, animals, and plants. It ensures the creation of genetically identical daughter cells.
2. Meiosis contributes to genetic diversity by creating unique combinations of genetic traits in humans, animals, and plants. In humans, it forms sperm and egg cells, ensuring diversity in offspring.
3. Bacteria primarily reproduce asexually through processes like binary fission, bypassing meiosis. In binary fission, a single cell divides into two genetically identical daughter cells.
4. Meiosis is crucial for sexually reproducing species in the animal kingdom because it ensures that offspring inherit a diverse set of traits from both parents. This genetic diversity enhances the adaptability and survival of species.
5. Understanding mitosis and meiosis has practical applications in medical contexts, such as cancer treatment and fertility assistance. In conservation, it helps preserve genetic diversity in endangered species.

