

## Meiosis Explored

### Part 1: Meiosis and Sexual Reproduction

Meiosis is a process that generates cells for sexual reproduction. A cell produced by meiosis contains half of the number of chromosomes as its original parent cell.

- Meiosis Is All About Sex
- Mitosis vs. Meiosis
- Homologous Chromosome Pairs
- Meiosis I
- Meiosis II
- Stages of Meiosis
- Ploidy and DNA Replication
- Sperm vs. Ova
- Fertilization
- Test Yourself
- Summary of Part 1

### Part 2: Meiosis and Genetics

Meiosis produces cells with new combinations of alleles through independent assortment and crossing over.

- A Game of Chance
- Genes vs. Alleles
- Homozygous vs. Heterozygous
- Independent Assortment
- Crossing Over
- Genetic Linkage
- Test Yourself
- Event Order Matters (Again)
- Summary of Part 2

### Part 3: Mistakes in Meiosis

Meiotic errors can produce gametes with the wrong number of chromosomes, called aneuploidy. The causes and consequences of meiotic mistakes depend on which division of meiosis is involved.

- Down Syndrome
- Spindle Attachment During Meiosis
- Age and Aneuploidy
- Meiotic Errors
- Test Yourself
- The Meiosis Puzzles
- Summary of Part 3

#### **Part 4: Broaden Your Knowledge**

Aneuploidy in sex chromosomes can be tolerated. Species differ in frequency and tolerance of ploidy changes. Sexual reproduction is associated with great diversity in sex determination.

- The 23rd Pair
- Aneuploidy in Sex Chromosomes
- Self-Fertilization
- Test Yourself
- Summary of Part 4

#### **Part 5: Mitosis vs. Meiosis Study Review**

Study aids for reviewing mitosis and meiosis.

- Differences and Similarities
- Event Order Matters (Again)
- The Meiosis Puzzles

#### **Part 6: Quiz Questions**

Quiz Questions

- Quiz Questions