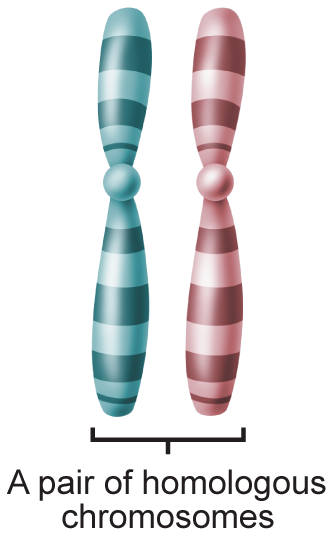
**Honors Biology Chapter 10 Section 1 Student Notes**

Chromosomes and Chromosome Number

* Human body cells have 46 chromosomes
* Each parent contributes 23 chromosomes
* Homologous chromosomes—one of two paired chromosomes, one from each parent
* Same length
* Same centromere position
* Carry genes that control the same inherited traits

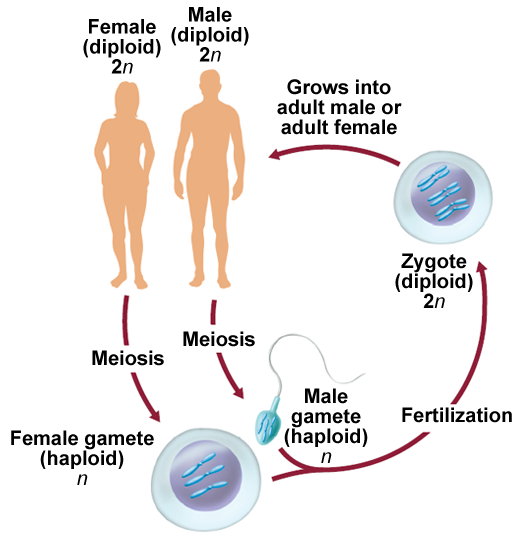


Haploid and Diploid Cells

* An organism produces gametes to maintain the same number of chromosomes from generation to generation.
* Human gametes contain 23 chromosomes.
* A cell with *n* chromosomes is called a haploid cell.
* A cell that contains 2*n* chromosomes is called a diploid cell.

Meiosis I

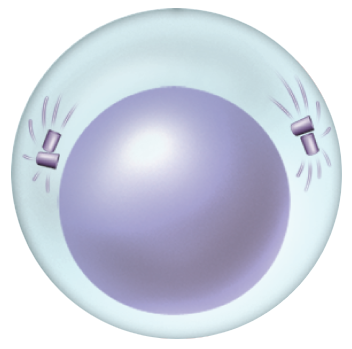
* The sexual life cycle in animals involves meiosis.
* Meiosis produces gametes.
* When gametes combine in fertilization, the number of chromosomes is restored.



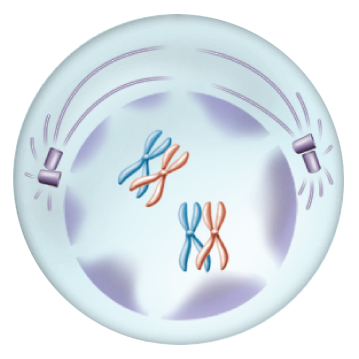
Stages of Meiosis I

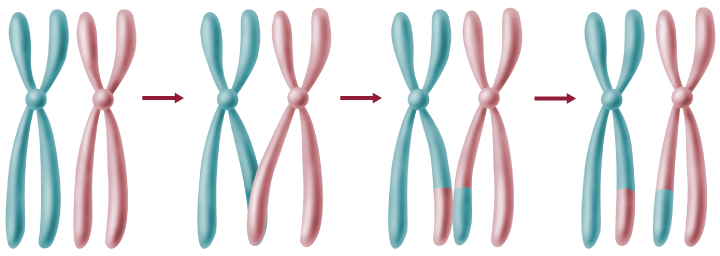
* Reduces the chromosome number by half through the separation of homologous chromosomes
* Involves two consecutive cell divisions called meiosis I and meiosis II

Interphase

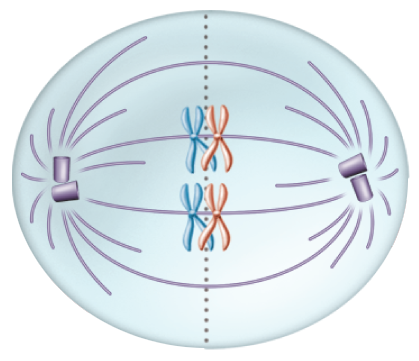


Prophase I

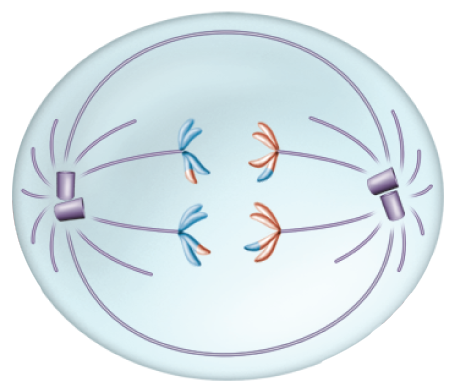




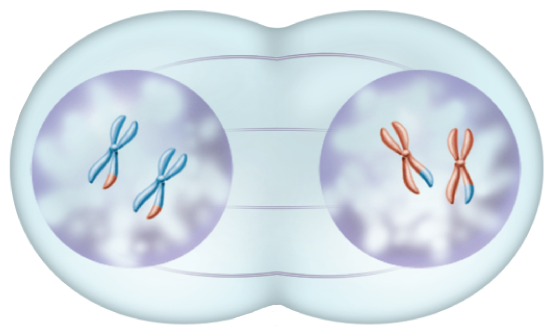
Metaphase 1



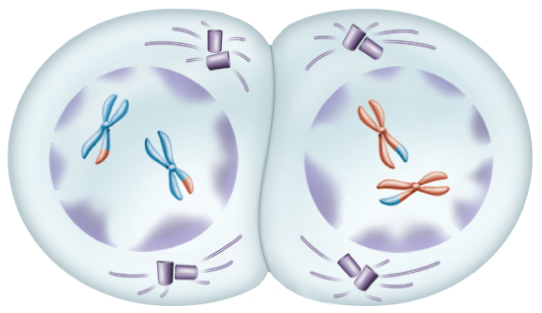
Anaphase 1



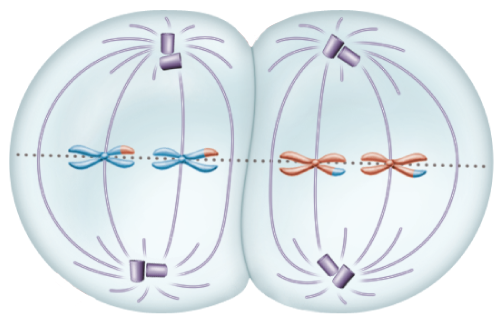
Telophase 1



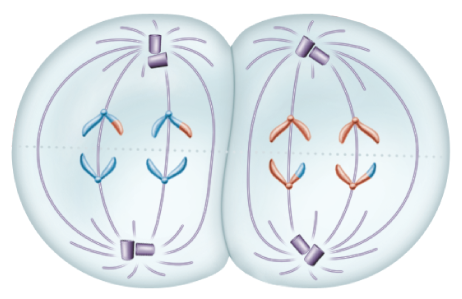
Prophase 2



Metaphase 2



Anaphase 2



Telophase 2

