

The Chromosome & Genes

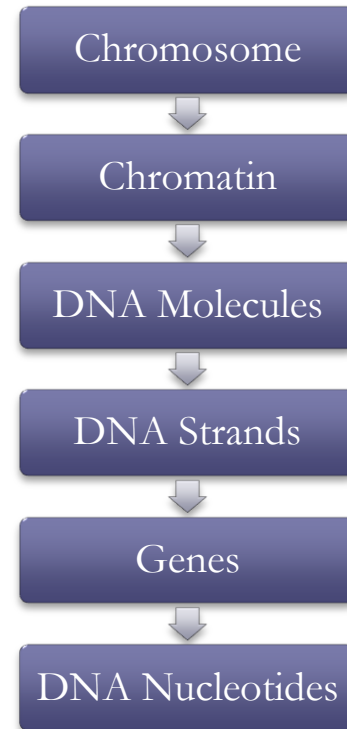
Packet #8

Review I

- * Within the nucleus of the cell, is found a structure known as a chromosome.

- * **Chromosome**

- * A linear end to end arrangement of **genes**, **other DNA** and **associated proteins**.



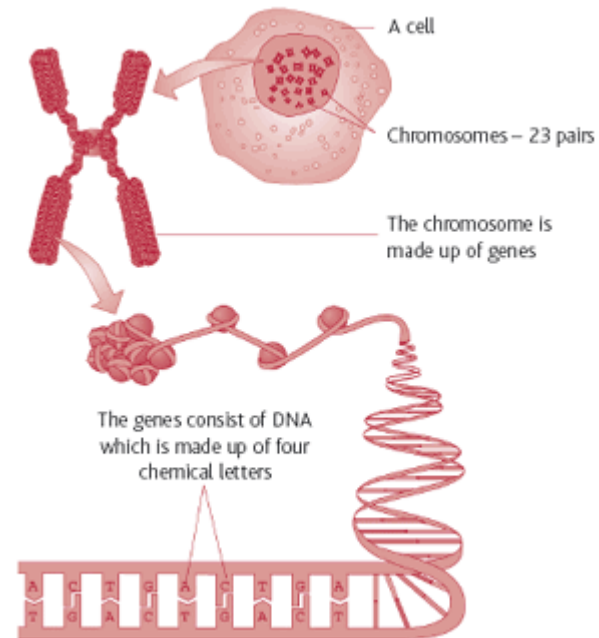
Chromosomes

* Genes

- * Segments of DNA, that **code** for an **observable or biochemical characteristic** (phenotype).

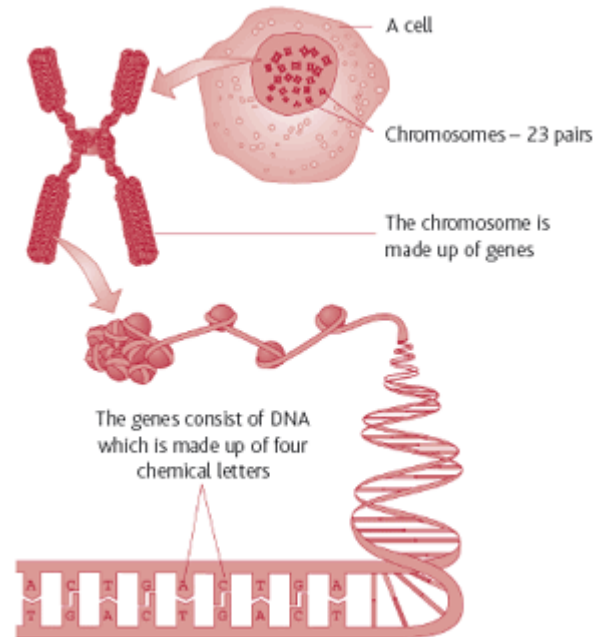
* Chromosome set

- * Represented by the letter n , contains a specified number of chromosomes.
- * $2n$ represents two chromosome sets.



Chromosomes

- * Chromosome Set
 - * Represented by the letter n , contains a specified number of chromosomes.



Ploidy

- * **Ploidy**

- * **Number of sets** of chromosomes in the nucleus of a cell.

- * **Haploid**

- * A cell having **one chromosome set**

- * Human Sperm **1 set** of 23 chromosomes
- * Female Egg **1 set** of 23 chromosomes
- * In human sex cells n , we represent the chromosome set by n

- * **Diploid**

- * A cell having **2 chromosome sets**

- * As an individual, human somatic cells contain 46 chromosomes ($23 + 23$)
 - * In human somatic cells, we represent the sets by $2n$ ($2 * 23$ chromosomes)
- * Sex cells still have **1 set of 23** chromosomes

Review