

DNA & Chromosomes

- Read page 270 top part.



The study of patterns of inheritance

Geneticists are scientists that study genetics. Genetics is simply the study of heredity & heredity is the process of passing the characteristics of one generation to the next generation by sexual or asexual reproduction.

The sum of all the DNA in the cell of an organism, measured in the number of nucleotide base pairs contained in a haploid set of chromosomes, is its genome.

Genomes differ between species but there may be similarities, the study of genomes is called genomics.

The Human Genome was completely mapped in 2003 by the HGP through the use of rapidly advancing technology. It was discovered that human genomes have 3 billion nucleotide base pairs with approximately 20,000 - 25,000 genes, the next phase is to figure out what they actually do.

→ Read genomic research pg. 273

→ Discuss comparative genomics i.e. chimp vs. human & bioinformatics.

→ HGP & chromosome worksheets.

→ Read pg. 273 → 274 & review karyotypes with w/sheet

① Generate a table which compares eukaryotic DNA to prokaryotic DNA.

② Summarise chloroplast DNA & mitochondrial DNA.