

IGCSE Coordinated Science: Chromosomes and Genes

Chromosomes and Genes

1. Define inheritance

Genetic information that is passed down from one generation to another.

2. Define the terms:

- Chromosome as a thread of DNA, made up of a string of genes,
- Gene as a length of DNA that is the unit of heredity and codes for a specific protein. A gene may be copied and passed on to the next generation
- Allele as any of two or more alternative forms of a gene.

3. Define the terms:

- Haploid nucleus as a nucleus containing a single set of unpaired chromosomes (e.g. sperm and egg),

So a sex cell, which has half the number of chromosomes, has a haploid nucleus

- Diploid nucleus as a nucleus containing two sets of chromosomes (e.g. in body cells).

A normal body cell, which has two set of chromosomes has a diploid nucleus

4. Describe the inheritance of sex in humans (XX and XY chromosomes).

Males have XY chromosomes and females have XX.