

## **GENOME (1)**

- Instruction book or recipe book
- Authors: Biological mother and biological father
- An organism's complete set of genetic instructions. Contains all information needed to build that organism and allow it to grow and develop
- Made up of DNA

## **DNA (2)**

- All of the pages of the book
- A long molecule that contains our unique genetic code. It holds the instructions for making all of the proteins in our body.
- What the genome is made up of.

## **CHROMOSOMES (3)**

- The chapters of the book
- Tightly coiled DNA packaged into compact storage units. Located in the Genome which is the nucleus of every cell.
- Each chromosome is held together by a centromere
- Humans have 46 chromosomes or 23 pair
- One set of chromosomes are sex chromosomes. XX is for female and XY is for male.
- Is where thousands of genes are located
- Chromosomes are arranged into karyotypes: the number and visual appearance of the chromosomes in the cell nuclei of an organism or species

## **GENES (4)**

- The paragraphs in the chapters
- Contains instructions for making proteins
- Determines specific traits
- Thousands are on the chromosomes
- "A unit of heredity that is transferred from a parent to offspring and is held to determine some characteristic of the offspring."

## **AMINO ACID CHAIN**

- The "sentences"
- Made from a chain of codons
- Forms a protein

## **CODON (5)**

- The "words" of the book
- A sequence of 3 nucleotides that form a unit of genetic code in a DNA molecule
- 3 nucleotides. Example: AAT in DNA is a code to make an amino acid which makes a protein

## **NEUCLEOTIDES (6)**

- The "letters in the words."
- A - T C - G

## **MUTATION "ALTERATION"**

- The changing of the structure of a gene, resulting in a change of DNA
- The "revisions" made when someone is editing