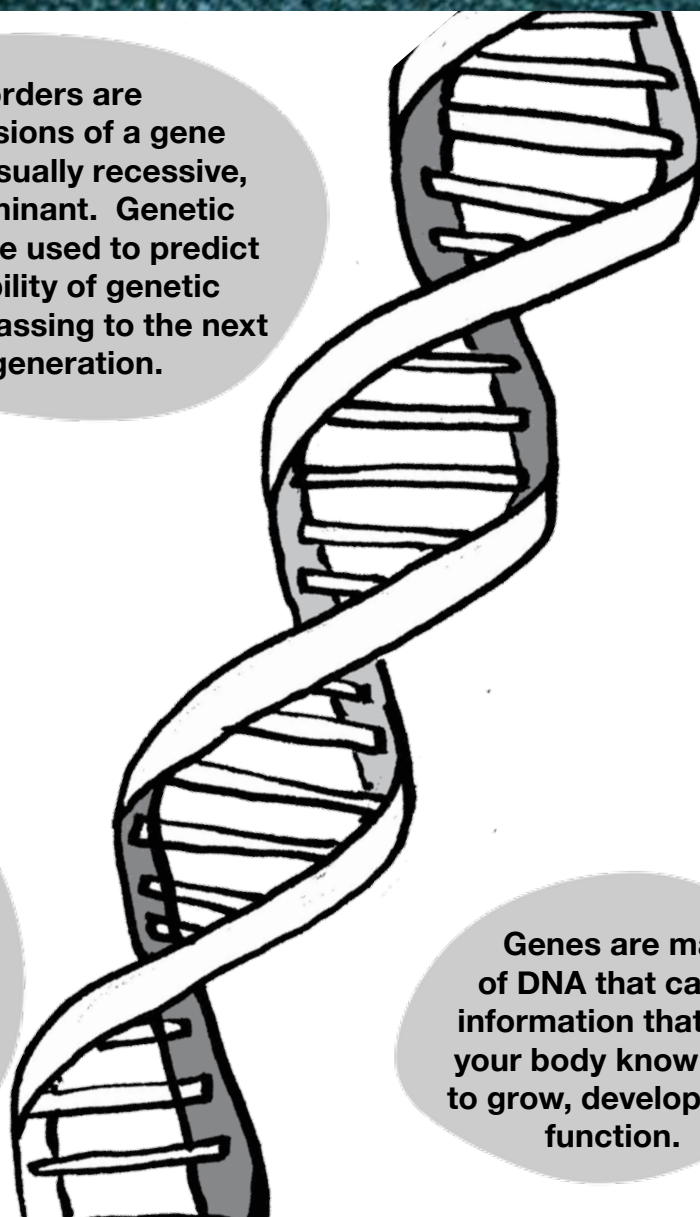




FACTS ABOUT GENES



Genetic disorders are due to faulty versions of a gene (alleles) that are usually recessive, but may be dominant. Genetic diagrams can be used to predict the probability of genetic disorders passing to the next generation.

Our bodies are made up of approximately 50 trillion cells.

Inside the nucleus of each human cell are 46 chromosomes. We inherit 23 chromosomes from each of our parents.

Genes are short stretches of DNA that carry instructions to make other chemicals (usually proteins) that help your body 'work'. Humans have approximately 20,000 genes.

Genes are made of DNA that carries information that help your body know how to grow, develop and function.

Sometimes there is a mistake in a gene - a mutation. This can lead to a protein being made differently, which may mean it cannot work properly; for example, an enzyme may be the wrong shape. A mutation can cause a genetic disorder.

DNA is made of a long chain of four building blocks (which we refer to as the letters A, T, C and G). The sequence of these 'letters' in a gene determines the amino acids that make a protein. Proteins are the chemicals in your body that 'do things' - your muscles are full of proteins; enzymes are a special type of protein, and so on.

