

A gene is a series of nitrogen bases in a row that codes for a specific protein.  
Ex: ATGACGTAC

The order of the nitrogen bases determines the protein that is produced.

A 3 letter sequence is a codon. ex:CGT

Protein synthesis: production of proteins

Proteins help to determine the:  
size, shape, color and many other traits of an organism.

### Mutations

Mutations can cause an incorrect protein to be produced.

\*May result in a different trait

Types of mutations in genes:

Substitution

Deletion

Addition

Types of mutations in chromosomes:

Too many or too few chromosomes

Extra segments of chromosomes