**DNA and the Genetic Code**

In living organisms nucleic acids (DNA and RNA) have important roles and functions related to their properties. The sequence of bases in the DNA molecule determines the structure of proteins, including enzymes.

The double helix and its four bases store the information that is passed from generation to generation. The sequence of the base pairs adenine, thymine, cytosine and guanine tell ribosomes in the cytoplasm how to construct amino acids into polypeptides and produce every characteristic we see. DNA can mutate leading to diseases including cancer and sometimes anomalies in the genetic code are passed from parents to babies in disease such as cystic fibrosis, or can be developed in unborn foetuses such as Downs Syndrome.

**Take a look at the following links:**

[**http://www.bbc.co.uk/education/guides/z36mmp3/revision**](http://www.bbc.co.uk/education/guides/z36mmp3/revision)

[**https://www.youtube.com/watch?v=8kK2zwjRV0M**](https://www.youtube.com/watch?v=8kK2zwjRV0M)

**Task: Fill in the following key word glossary**

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| **Genetic term** | **Definition** |
| **Gene** |  |
| **Allele** |  |
| **Locus** |  |
| **Chromosome** |  |
| **Chromatid** |  |
| **Intron** |  |
| **Exon** |  |
| **Genome** |  |
| **Proteome** |  |