# Molecules of Life

#### Spec Reference: 3.1.1

## **Evidence of Evolution**

Darwin's theory of evolution is supported by the fact that there has been a large variety of organisms that have graced the Earth with their existence, all with the same biochemistry. Every organism contains the same carbon-based compounds that all interact similarly, like the use of nucleic acids to store genetic information. All of these similarities suggest that both plants and animals share a common ancestor, which provides indirect evidence for evolution.

### **Monomers and Polymers**

A monomer is a small, basic unit that conform a polymer. It is simply a single molecule that can be chemically joined together to form a chain of that molecule, known as a polymer. A polymer is a large, complex molecule made of many monomers. Most carbohydrates, proteins and nucleic acids are polymers.

Reactions

Condensation Reactions CO.UK Most biological polymers are formed by condensation reactions between their monomers. A condensation reaction is a chemical reaction that is ases a molecyle of water when a chemical bond is formed between two, or marking chamers.

When apolymer is broken down back into its monomers, a molecule of water is added. This is known as a hydrolysis reaction and is the opposite of a condensation reaction.