<u>Genetic drift:</u> by chance rather than actual selection a random change in gene frequencies. Creates can be lost from population dependent upon the effective population size.

<u>Mutation:</u> change in sequence of base pairs in a species DNA. Can allow for the revolution of new traits in populations with the reduced genetic make up.

<u>Allele:</u> one version of the gene at a given location during a chromosome.

Locus: the specific site of a particular gene on its chromosome.

Evolution: a change in frequencies of alleles in a gene pool of the population.

<u>Uniformitarianism</u>: the assumption that the natural processes operating in the past the same as those that can be observed operating in the present.

Gradualism: change occurs slowly in specific gradual steps.

Phyletic gradualism: gradual formation of a new species.

Punctuated equilibrium: splitting occurs quickly.

Saltation: the significant change in one generation to call a major difference.

Four separate ways speciation can occur: Allopatric, Periodric, Parapatric, and sympatric.

Allopatric speciation: the population is split and the isolated populations diverged.

Peripatric speciation. speciation occur on same place.

Parap tric speciation: reduced gene flow between extremes of a population. For example, the increased likely hood that you will mate with your neighbour rather than someone at the far end of your species range.

<u>Co-evolution</u>: species appear to have evolved alongside each other.

<u>There are three main types of evolution:</u> divergent, convergent, and parallel evolution.

Diverging evolution: occurs when two or more biological characteristics have a common evolutionary origin but have diverged over evolutionary time.

<u>**Convergent evolution:**</u> independent evolution of similar traits due to adaptation to a similar ecological niche with no evolutionary relationship.

Parallel evolution: all the independent evolution of similar traits starting from a similar ancestral condition due to similar environments or other evolutionary pressures.