

- Individuals compete with each other to survive
 - Individuals with certain traits are more likely to survive and reproduce, which means over time these traits become more frequent
- Adaptation and Acclimation
 - Adaptation is a long-term change within a population to accommodate an environmental influence
 - For example, a white rabbit blending into the snow
 - Acclimation is a short-term change within an individual to accommodate an environmental influence
 - For example, a cat growing a thicker fur coat in response to cold
- Evolution and Anatomical Structures
 - Many anatomical structures are evidence of evolution:
 - Homologous structures occur in different species and originate from a common ancestor (for example, forelimbs)
 - Analogous structures have closely related functions, but do not originate from a common ancestor (for example, wings)
 - Vestigial structures seem to serve no function, but resemble structures with functional roles in related organisms (for example, human tailbone)
- Convergent Evolution
 - Convergent evolution is a process by which unrelated species evolve similar physical traits because they have a similar lifestyles
 - For example, a sea glider and a flying squirrel
- Divergent Evolution
 - Divergent evolution is a process in which descendants of a single ancestor diversity into species that each fit different parts of the environment
 - For example, Darwin's Finches have different shaped beaks to eat different foods
- Adaptive Radiation
 - Adaptive radiation is an evolutionary pattern in which many species evolve from a single ancestral species
 - Therefore, adaptive radiation can lead to divergent evolution
- Artificial Selection
 - Artificial selection is a mechanism of evolution in which a human breeder chooses individuals that will parent the next generation
 - For example, there are 654 dog breeds produced by human selection
- Coevolution
 - Coevolution is when two or more species have evolved adaptations to each other's influence