

Artificial selection

- The science of breeding domesticated animals provides a good record of recent changes in the heritage characteristics
- *Artificial selection* is when the farmers and breeders choose which animals will reproduce and which will not
 - It's not the driving force of evolution in natural ecosystems
- The breeders choose animals with specific characteristics

Homologous structures

- *Homologous structures* are similar anatomical structures that have been found in seemingly dissimilar species
 - Ex: pentadactyl limbs
- Similar bone structures with different function in modern animals point at a common ancestor
 - May be of a different size and morphology, but the basic shape and position are the same

Adaptive radiation

- *Adaptive radiation* occurs when 2 or more populations of a species diverge and evolve relatively rapidly forming a small number of species
 - Happens as variations within a population allow certain members to exploit a slightly different niche
 - A *niche* is a position or role within a community of an ecosystem
- Can happen by natural selection and the presence of a barrier
- Madagascar has many different regions and due to this many species of lemurs are adapted to different niches
 - Ground, trees, rainforest, desert, diurnal, nocturnal
 - They all share a common ancestor
 - Fun fact! Lemurs are only found in Madagascar, but fossils have been found elsewhere too. They're not successful in competing with apes and monkeys. When the latter become more common in fossil records, the former becomes rarer

Gradual divergence

- Within a species that has a wide geographical distribution, there can be measurable differences in DNA