

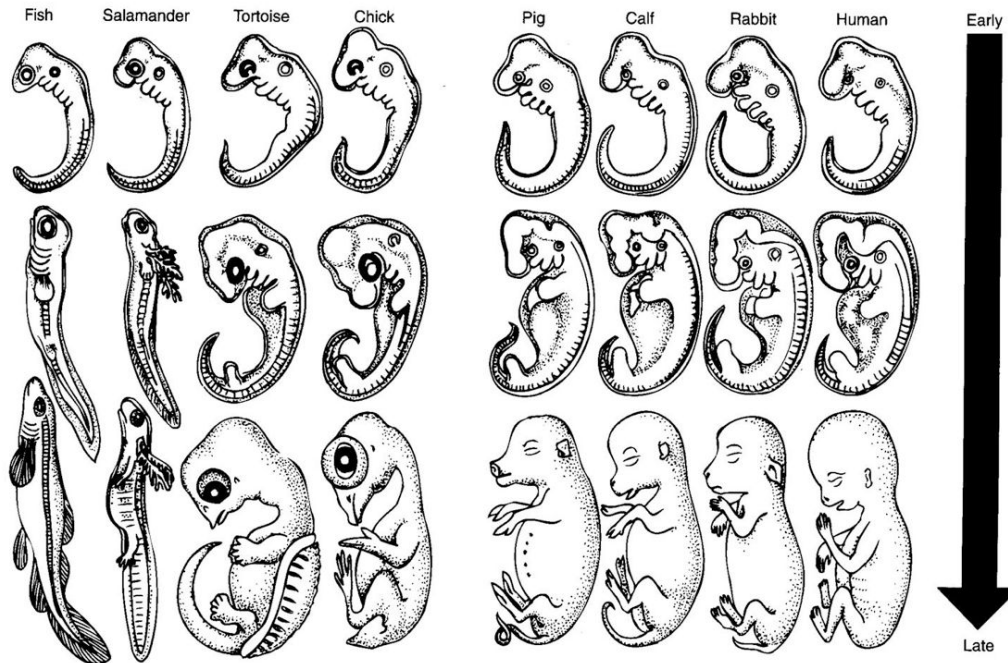
# Evidence of Evolution

## Fossil Record

The fossil record contains snapshots of the past that, when assembled, illustrate the evolutionary changes of the past four billion years. We can compare the fossils of different organisms from different times to see the relationship between them.

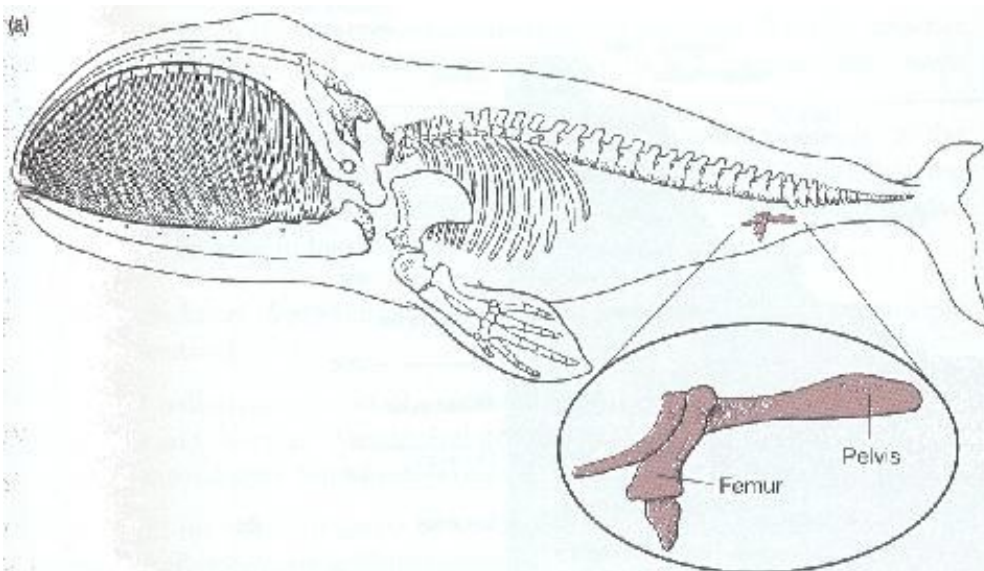
## Embryology

The embryonic state for many animals is very similar. For example, fish, bird, rabbit, and human embryos are similar in appearance in the early stages of life.



## Vestigial Structures

These are body parts that seemingly have no purpose or function, but at one time may have. As the animal has evolved, the structure is no longer used, but we see evidence that it was there.



## Homologous Structures

These are parts of the body that are similar in structure to other species' comparative parts. This suggests common ancestry.

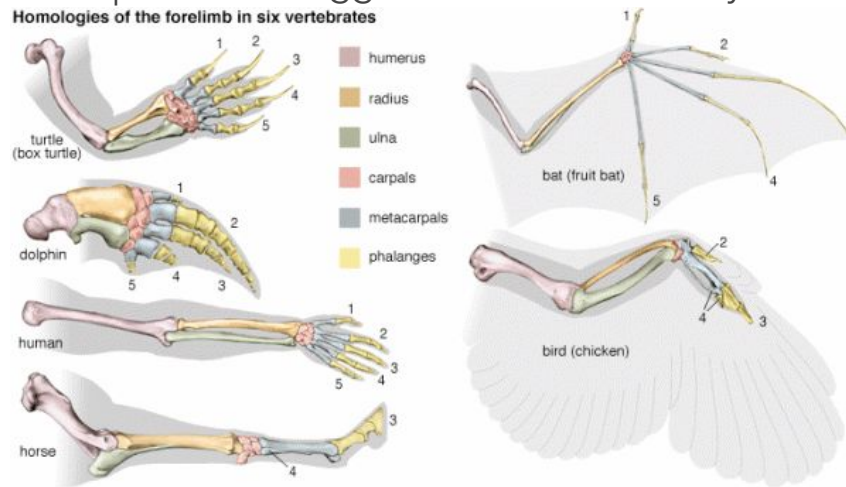
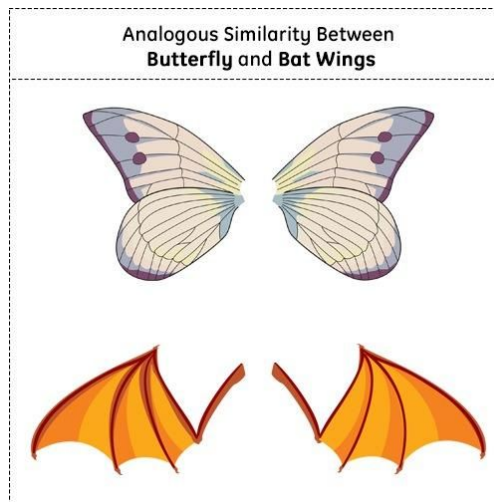


Figure 1 The forelimbs of a human and four animals showing the similarity in construction. This similarity was offered by Darwin as evidence that evolution has occurred.

## Analogous structures

Structures that are similar in structure and function, but do not come from a common ancestor. Wings are a good example. Both birds and insects have developed wings, but one did not evolve from the other.



## DNA

DNA can be used for evidence in a couple of ways. All life share the same DNA sequences from bacteria to humans. This is evidence that we all life came from a common ancestor (bacteria). DNA can also be used to compare the mutations that led to certain adaptations. In some cases, the same adaptation has been the result of mutations on different parts of an organism's DNA. This shows us that evolution is a result of the environment and not preprogrammed in an organism.