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## Evolutionary relationships

Evolutionary relationships of animals can be deduced by studying the homologous organs and analogous organs.

### Define Homologous Organs:

Wings of birds and forelimbs of mammals: they have similar structure but are modified to suit different functions

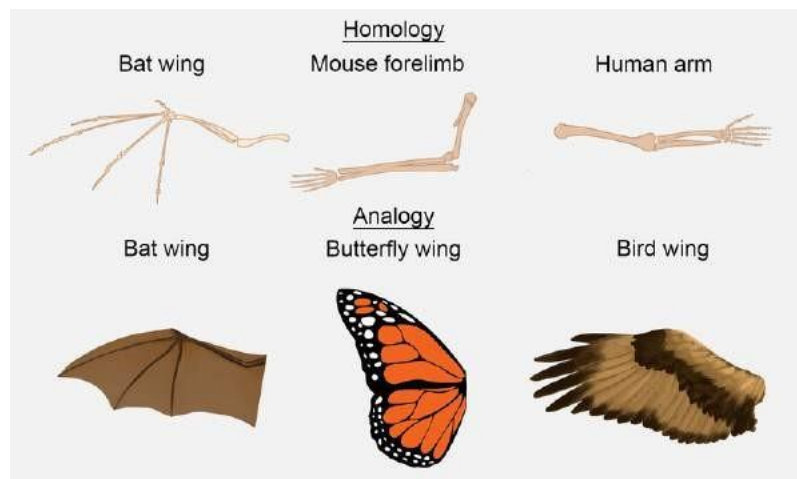
### Define Analogous organs :

- A tendril of pea plant and spine of barberry plant: both are modified leaves, but perform different functions.

### Define Analogous organs :

Wings of bats, birds and wings of insects: both are used for flying, but structurally are very different

- Leaves of opuntia and peepal: both perform photosynthesis, but leaves of Opuntia are modified stem whereas peepal leaves are normal leaves.



## *Homologous and Analogous organs*

### Evolution by stage

Evolution is a slow process and does not happen overnight.

- There are several stages in the evolution of almost every animal that we see today. Complexities
  - do not evolve suddenly, but evolve bit by bit and may have limited use at certain stages.
- This gradual evolutionary process is called evolution by stages.