**Topic 3 Key Terms**

**Speciation**

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| Speciation | Formation of a new species.  |
| Hybridisation | Production of offspring as a result of sexual reproduction between individuals from two different species.  |
| Geographical isolation | Occurs when a physical barrier such as a river or a mountain range separates individuals from an original population. |
| Ecological isolation | Occurs when two populations inhabit the same region, but develop preferences for different parts of the habitat.  |
| Seasonal isolation | Occurs when the timing of flowering or sexual receptiveness in some parts of a population drifts away from the norm for the group. This can eventually lead to the two groups reproducing several months apart.  |
| Behavioural isolation | Happens when changes occur in the courtship ritual, display or mating pattern so that some animals do not recognise others as being potential mates. This might be due to a mutation that changes the colour or pattern of markings.  |
| Mechanical isolation | Happens when a mutation occurs that changes the genitalia of animals, making it physically possible for them to mate successfully with only some members of the group, or it changes the relationship between the stigma and stamens in flowers, making pollination between some individuals unsuccessful.  |
| Allopatric speciation | Speciation that takes place when populations are physically or geographically separated and there can be no interbreeding or gene flow between the populations. |
| Endemic | A species is endemic if it evolves in geographical isolation and is only found in one place.  |
| Adaptive radiation | Process by which one species evolves rapidly to form a number of different species that all fill different ecological niches.  |
| Marsupials | Mammals that give birth to very immature young and then protect them in pouches.  |
| Monotremes | Primitive mammals that lay eggs and feed their offspring with milk from mammary glands.  |
| Placental mammals | Mammals that provide for the developing fetus during gestation through a placenta.  |
| Sympatric speciation | Speciation that takes place between populations of a species living in the same place. They become reproductively isolated by mechanical, behavioural or seasonal mechanisms and gene flow continues between the populations to some extent as speciation takes place.  |