

## 12-BY7 Natural selection

*Evolution is when, over billions of years, animals and plants gain and lose traits which can help them adjust to their environment. There is also the theory of natural selection that says that animals with the right traits will live and others will die.*

**Claim(s)**

**Over many years, animals and plants gain and lose traits.**

**Natural selection determines which animals and plants will survive.**

**Any challenges to the expressed claim?**

**Anything to disagree with?**

**Any clarification needed?**

**Question(s).**

**What does 'fittest' in the expression, 'survival of the fittest', mean?**

**Note:** Understanding natural selection is crucial to understanding evolution. It is the process by which the organisms in a population that are better adapted to their environment increase in frequency relative to less well-adapted forms, over many generations. The result is that, over time, species acquire characteristics that make them increasingly well-adapted to their environments. This trial and error process results in some species thriving in competition with those that are less successful and which eventually may become extinct. The expression, 'survival of the fittest' sums up the process.

Four conditions underlie natural selection:

- i) more living things are reproduced than can survive
- ii) there is variation between the individuals within a species
- iii) variation is passed on from parents to offspring
- iv) variation between individuals has an impact on survival and reproduction