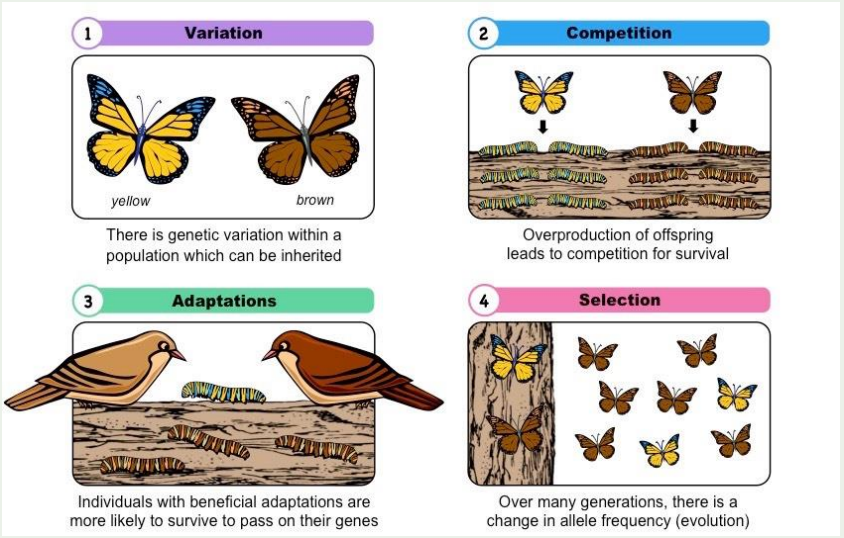
Variation

Key words

Species	A group of living things that have more in common with each other than with other groups.
Variation	The differences within and between species.
Continuous Variation	Where differences between living things can have any numerical value.
Discontinuous Variation	Where differences between living things can only be grouped into categories.
Genetic variation	Variation in a characteristic that is the result from genetic information from the parents.
Environmental variation	Variation caused by the surroundings.

Key diagram

How variation in a population can enhance chances of the species survival.



Key knowledge

There is variation between individuals of the same species. Some variation is inherited, some is caused by the environment and some is a combination.

Variation between individuals is important for the survival of a species, helping it to avoid extinction in an always changing environment.

Examples of discontinuous variation are blood group, gender and eye colour. Characteristics showing discontinuous variation should be plotted on a bar chart with gaps between the bars.

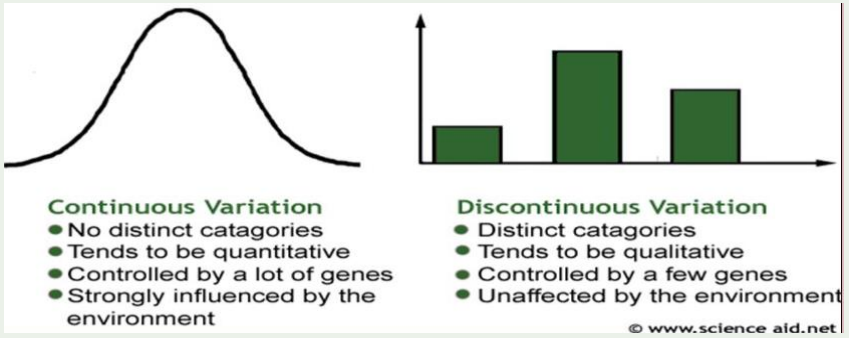
Examples of continuous variation are height, body mass and hair length. Characteristics showing continuous variation should be plotted on a histogram with no gaps between the bars.

Twin Studies

Identical twins are a good example of the interaction between genetic and environmental variation, because such twins are genetically the same. Any differences you may see between them – for example in personality, tastes and particular aptitudes – are due to differences in their experience or environment.

Key process – plotting variation data graphically

Continuous data can be plotted as a histogram without gaps between the bars or as a line graph



Discontinuous data should be plotted as a bar chart with gaps between the bars.