

Variation

- The differences in characteristics of living things is known as **variation**
- There is a large amount of variation between different **species**, but within species many more characteristics are shared
- Even though two organisms may look the same, they will always have variation between them

Inherited variation	Environmental variation
<ul style="list-style-type: none"> • Is anything that comes directly from your parents, anything that you inherit • Examples can include lobe less or lobed ear lobes and eye colour 	<ul style="list-style-type: none"> • Is any type of variation that is caused by your surroundings • Factors that can cause environmental variation include diet, education and lifestyle

- Environmental factors can also impact inherited factors, for example a poor diet can affect height or your exposure to the sun can affect skin tone
- Characteristics which are inherited and not affected by environmental variation include natural eye colour, blood group and genetic diseases

Adaptations

- **Adaptations** are characteristics which organisms have developed to best survive in their surroundings
- Organisms with the best suited adaptations can breed and pass these on
- Those who are not best adapted will die out and not be able to pass on their genes

Key words

Key word	Definition
Adaptation	Characteristic that helps an organism survive in its environment
Continuous variation	Where differences in characteristics between living things can have any numerical value.
Discontinuous Variation	Where differences in characteristics between living things can only be grouped into categories.
Environmental variation	Variation (differences) between organisms caused by environmental factors.
Inherited variation	Variation (differences) between organisms caused by genetic factors.
Species	A group of living things that have more in common with each than they do with other groups. This allows them to mate to produce fertile offspring.
Variation	The differences within and between species.