

# Year 7 Knowledge Organiser - Variation

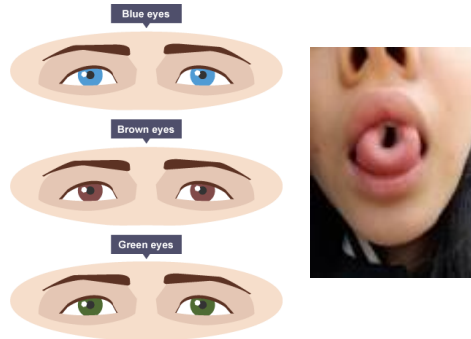
## Key words:

**Species:** A group of living things that have more in common with each other than with other groups.

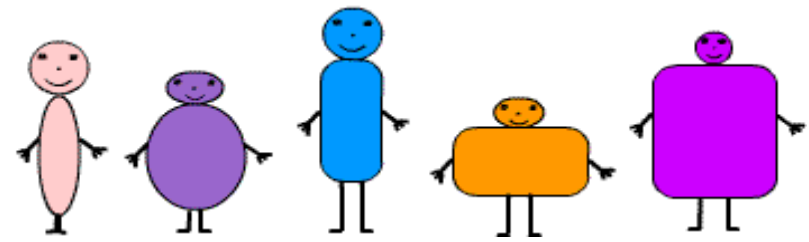
**Variation:** The differences within and between species.

**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.



Eye colour is an example of **genetic** variation. Other examples are blood group, lobed or lobeless ears and the ability to roll your tongue



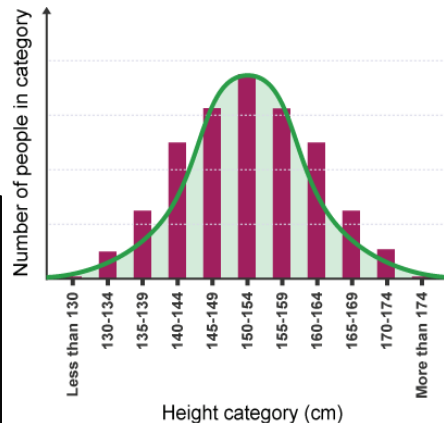
There is **variation** between individuals of the same species. Some variation is **inherited**, some is caused by the **environment** and some is a **combination**.

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

Some features vary because of a **combination** of genetic and environmental causes. For example, identical twins inherit exactly the same features from their parents. But if twin A eats more than twin B (and all other conditions stay the same), then twin A is likely to end up heavier.



For any species a characteristic that changes gradually over a range of values shows **continuous** variation



Examples of characteristics controlled by the **environment** are: climate, diet, accidents and lifestyle. A plant in the shade of a big tree will grow taller as it tries to reach more light.

## Websites that might be useful:

<https://www.bbc.com/bitesize/guides/z9gk87h/revision/1>  
<https://www.bbc.com/bitesize/articles/z6s26yc>  
<https://www.youtube.com/watch?v=aG8fMxaSSNw>  
<https://www.s-cool.co.uk/gcse/biology/genes-and-genetics/revise-it/variation>

## Extension ideas to research:

Use the ideas of variation to explain why one species may adapt better than another to environmental change

<https://www.bbc.com/bitesize/guides/zw9jq6f/revision/1>