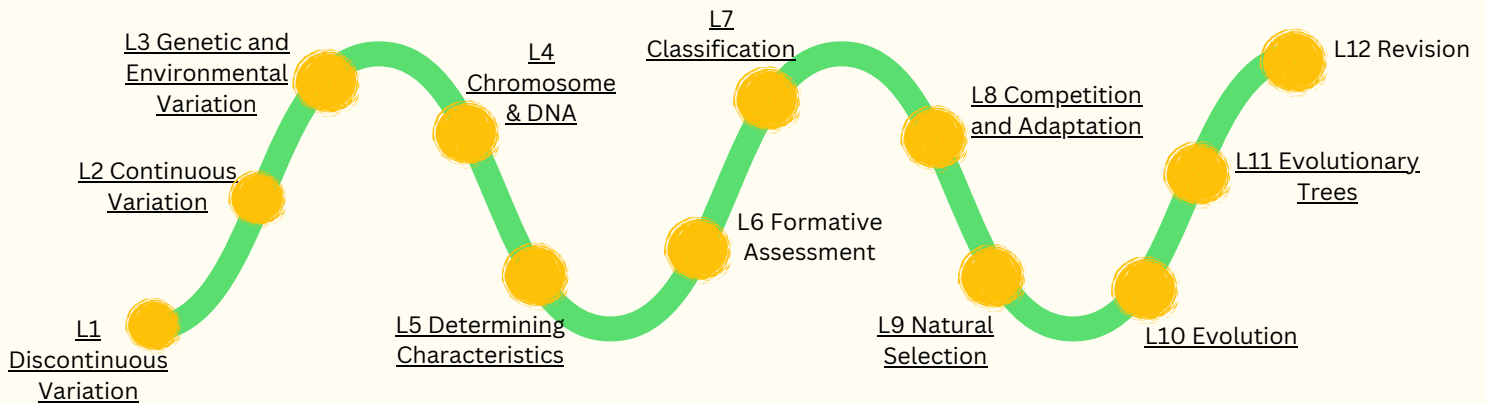


Yr8 Variation, Inheritance and Evolution Biology

In this unit you will learn:

- How characteristics are inherited from parents through genetic material, and the difference between inherited and environmental variation.
- How variation within a species can affect survival and reproduction.
- The process of natural selection and how it can lead to evolution over time.



Prior learning link: KS2 Living things and their habitats & Animals, including humans

Key words

- **Inheritance** – The passing of genetic information from parents to offspring.
- **Continuous variation** – Variation that shows a full range of values between two extremes, often influenced by both genes and the environment (e.g. height, body mass).
- **Discontinuous variation** – Variation that falls into distinct categories with no intermediates, usually controlled by a small number of genes (e.g. blood group, flower colour).
- **Genes** – Sections of DNA that carry instructions for making proteins, which determine characteristics.
- **DNA** – The molecule that contains the genetic code in all living organisms.
- **Chromosome** – A structure made of DNA that contains many genes; humans have 23 pairs.
- **Gamete** – A sex cell (sperm or egg) that carries half the normal number of chromosomes.
- **Fertilisation** – The joining of male and female gametes to form a zygote.
- **Variation** – Differences between individuals of the same species.
- **Inherited variation** – Variation in characteristics passed from parents through genes.
- **Environmental variation** – Variation caused by conditions in the environment.
- **Mutation** – A change in the DNA sequence of a gene, which can lead to new characteristics.
- **Adaptation** – A characteristic that helps an organism survive and reproduce in its environment.
- **Natural selection** – The process by which individuals with advantageous characteristics are more likely to survive and reproduce.
- **Evolution** – The gradual change in species over generations through natural selection.

Revision Resources

[BBC KS3 Inheritance and Genetics](#)