Foxford Learning Plan

Year 9

Autumn 1

Genetics and Evolution

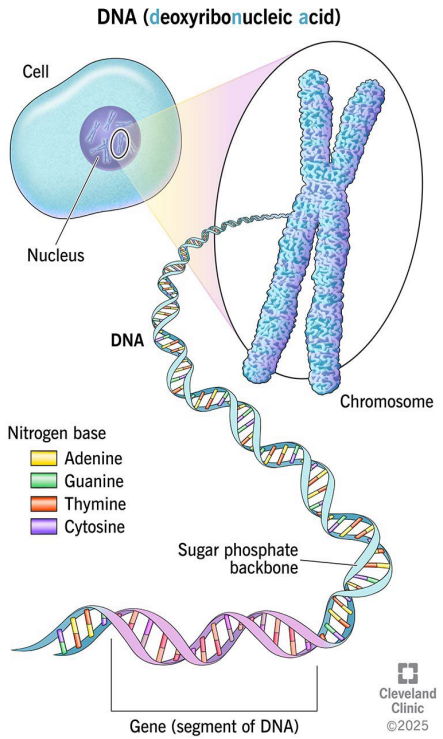
Key Vocabulary

DNA	The molecule that carries genetic information in all living organisms.
Gene	A short section of DNA that codes for a characteristic.
Allele	A version of a gene (e.g., blue eyes vs brown eyes).
Chromosome	A long DNA molecule containing many genes, found in the nucleus.
Genome	All the DNA in an organism.
Heredity	The passing of genetic information from parents to offspring.
Gamete	A sex cell (sperm or egg) containing half the usual number of chromosomes.
Fertilisation	The joining of a sperm and egg to form a new organism.
Variation	Differences between individuals of the same species.
Mutation	A change in DNA that can create new variation.
Natural Selection	When individuals with advantageous traits survive and reproduce.
Evolution	A gradual change in a species over many generations.

Over this course I will be able to

Key Skills

- Use labelled diagrams to identify DNA, genes and chromosomes and explain how genetic information is organised.
- Use genetic diagrams to predict how alleles and characteristics may be inherited from parents.
- Compare inherited and environmental variation and explain how mutations can produce new alleles.
- Interpret evidence about variation and survival to explain natural selection over generations.
- Use fossil and genetic evidence to explain evolution and relationships between species.



I will understand

- How genetic information is stored, organised and passed from one generation to the next.
- Why differences in DNA lead to variation within a species.
- How characteristics can change over time through natural processes such as natural selection.
- How scientific evidence is used to show patterns in inheritance and to support ideas about how species change over time.
- How living things are connected through shared ancestry and long-term evolutionary change.