

Biology Unit: Evolution and inheritance

What does progression of knowledge look like?

Year	Progression of knowledge.
2	LINKS TO ANIMALS AND HUMANS UNIT 2
3	LINKS TO MATERIALS 3
6	<p style="text-align: center;">Evolution and inheritance</p> State what is meant by the term evolution. State the evolution occurs over a long period of time (for multi cellular organisms) Recall how fossils are formed. Identify why species show variation. Explain how animals and plants are adapted to their environment. Explain what a habitat is. Identify work done by Charles Darwin, Alfred Wallace, Mary Anning and John Edmonstone. State the environment humans evolved in. Explain how geographical location has resulted in the evolution of a spectrum of skin colours.
7	<p style="text-align: center;">Variation</p> Define variation, characteristic, data, and accurate, continuous and discontinuous variation. Inherited and environmental variation, species, population Tabulate data and interpret graphical data. Record observations of variations within a species. Explain why humans show a range of variations from hair colour to skin pigmentation. Explain how genetic and environmental factors result in variation Variation between and within a species. Explain how adaptations enable a species to survive. State the role of melanin State why people have different characteristics Explain why people have different hair types and colour. Identify ways in which humans have adapted to their environment.
8	<p style="text-align: center;">Evolution</p> Define the following terms: adaptations, natural selection, species, habitat, extinct, endangered, predator, prey, invertebrate, vertebrate. State the names of the different animal kingdoms. Explain the relationship between predator and prey. Describe the process of natural selection Identify the following people: Charles Darwin, Carl Linnaeus, John Edmonstone. Explain what is meant by binomial naming Explain how we categorise animals. Suggest the limitations of using the classification process Explain why animals become extinct. Suggest ways in which humans are still evolving.

Inheritance

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Explain the process of inheritance

Define the terms: chromosomes, gene, allele, dominant, recessive, melanin

State what DNA

Compare and contrast discontinuous and continuous variation.

Explain how key characteristics: hair colour, eye colour, skin colour are inherited.

Explain the difference between inherited and environmental variation.

Explain the difference between blood groups.

Explain how species, including humans inherit sex.

Create Punnett squares to explain the process of inheritance.

Explain how DNA fingerprinting works.

Explain how selective breeding occurs.

Explain the process of genetic engineering,

Evaluate the advantages and disadvantages of using GMO's.