Home-School Learning Collaboration – KS3 Science

Topics in this cycle:	Taught:	Year Group:
Evolution and inheritance	Spring 1	9

Key knowledge/concepts to be learnt ('Tell me about….')	Websites/blogs/YouTube links and further reading to deepen and consolidate learning
• **What is variation?** Describe how variation in species occurs Describe the difference between environmental and inherited variation. • **What is continuous and discontinuous variation?** Describe the difference between continuous and discontinuous variation. Represent variation within a species using graphs. • **What is inheritance?** Describe how characteristics are inherited. Describe how scientists worked together to develop the DNA model. • **What is natural selection?** Describe the process of natural selection. Describe how organisms evolve over time. • **What is extinction?** Describe some factors that may lead to extinction. Describe the purpose of gene banks.	**Notes:** Variation: Types of variation - Inheritance and genetics - KS3 Biology - BBC Bitesize - BBC Bitesize Variation: Genetic and Environmental Variation | KS3 Biology Revision (shalom-education.com) Evolution Natural selection leads to evolution - Inheritance and genetics - KS3 Biology - BBC Bitesize - BBC Bitesize **Videos:** Variation KS3 variation ks3 science - Google Search Continuous variation Key Stage 3 Science (Biology) - Continuous and Discontinuous Variation (youtube.com) Variation Variation - YouTube Evolution by natural selection Key Stage 3 Science (Biology) - Evolution by Natural Selection (youtube.com)

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Key Vocabulary and Definitions To Be Learnt	
Variation	Differences in characteristics within a species.
Species	A group of similar organisms that can breed with one another to produce fertile offspring.
Inherited variation	Variation in a characteristic that is a result of genetic information from the parents.
Environmental variation	Differences in certain characteristics that are caused by external factors in an organism's surroundings.
Discontinuous variation	Refers to things like eye colour or blood group, which have a limited number of possible values.
Continuous variation	Refers to characteristics like weight or height, which change gradually.
DNA	A chemical made up of two long strands, arranged in a spiral, called a double helix shape.
Chromosomes	A coiled structure of DNA found in the nucleus of cells made from many genes.
Genes	A short section of DNA that is the genetic code for a characteristic.
Evolution	The process by which living things can gradually change over time.
Fossil	The remains or traces of plants and animals that lived long ago.
Natural selection	A process by which a species changes over time in response to changes in the environment, or competition between organisms, in order for the species to survive.
Extinct	Occurs when there are no remaining individuals of a species alive.
Biodiversity	A measure of the variety of different species living in a habitat.
Endangered	A species at risk of going extinct.

What Will The Assessment Look Like?

Extended writing –Explain Darwin's theory of evolution by natural selection.

End of Unit test: 25 minutes/25 marks

- Short answer questions
- Extended writing
- 3 marks for SPAG

Family Learning Opportunities

Evolution Tour - Schools (chesterzoo.org)

Evolution & Adaptations | RZSS

Key Stage Three Sessions - Dudley Zoo and Castle