Subject	Year	Term
Science	8	2

Topic

8B2 DNA & Inheritance

Content (Intent)

Prior Learning: KS1 and KS2 National Curriculum and 7B1 The Basics of Life

- a simple model of chromosomes, genes and DNA in heredity
- the part played by Watson, Crick, Wilkins and Franklin in the development of the DNA model
- heredity as the process by which genetic information is transmitted from one generation to the next
- differences between species
- the variation between individuals within a species being continuous or discontinuous, to include measurement and graphical representation of variation
- the variation between species and between individuals of the same species means some organisms compete more successfully, which can drive natural selection
- changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction
- the importance of maintaining biodiversity and the use of gene banks to preserve hereditary material.

Future Learning: 11B1 Cells & Cell Division and 11B3 Inheritance & Evolution

How will knowledge and skills be taught? (Implementation)	How will your understanding be assessed & recorded (Impact)
Demos: DNA model **Practical work:** DNA base sequence of a cartoon character, using props to explain inheritance, collecting data on continuous (height) and discontinuous (eye colour) variation, modelling natural selection **Written:** Notes and completed worksheets in exercise books. Persuasive formal letter covering a scientist's contributions to the discovery of DNA, poster about extinct animal, web quest on maintaining biodiversity	- 2 x **Standard Homework Tasks:** Level given. Written feedback. Response expected. -1 x **End of Topic Test**: Level given. Verbal feedback to class and individuals. - **Persuasive formal letter**: in exercise book. Marked and feedback given. - **Causes of Extinction worksheet**: in exercise book. Marked and feedback given.

How can parents help at home?

Look at 8B2 topic resources on the VLE and use the CGP KS3 Study Guide provided.
Use appropriate YouTube channels [Cognito, PrimroseKitten, KhanAcademy, FuseSchool, AmoebaSisters, Freesciencelessons] and documentaries [TV series: DNA, TED Talk: How we discovered DNA, Netflix: Breaking Boundaries The Science of Our Planet & Our Planet]
Take an interest! Be curious and ask your child about their learning.

Helpful further reading/discussion

Reading	Vocabulary Lists	Careers Links
The Usborne Introduction to Genes & DNA Kingfisher Knowledge Genes and DNA by Richard Walker Genetics in Minutes by Tom Jackson The Secret Life of Genes by Derek Harvey https://www.yourgenome.org/ https://www.iucnredlist.org/ https://www.abpischools.org.uk/	*DNA, chromosomes, genes, double-helix, heredity, inheritance, continuous, discontinuous, variation, species, evolution, extinct, natural selection, biodiversity, conservation*	Clinician Genetic counsellor Nature conservation officer Forensic scientist Ecologist Environmental Policy Advisor Marine biologist