

(Implementation)recorded (Impact)Demos- 4 x standard homeworks (Grade given.Models of DNA structure, models of DNA replication, models of protein synthesis 4 x standard homeworks (Grade given.Practical workWritten & verbal feedback. Response expected.)Optional extraction of DNA from cells 1 x end of topic test (Grade given. Verb feedback to class and individuals.)Written Class notes Past paper questions in class Past paper questions in homeworks- 4 x standard homeworksHow can parents help at home? Look at the topic specific resources on the VLE- 4 x standard homeworks	Subject	Ye	ar	Term		
Nucleic Acids, DNA & Protein Synthesis Content (Intent) Prior Learning (Topic) B6 – Inheritance, variation & evolution • DNA and RNA are important information-carrying molecules. • Ribosome structure and function. • The structure of DNA and RNA (including mRNA and tRNA), including nucleotide structure and the formation of a polynucleotide. • The semi-conservation replication of DNA ensures genetic continuity between generations of cells. • The process of semi-conservative replication of DNA. • Prokaryotic and eukaryotic DNA. • The genetic code – features and importance • Protein synthesis to include transcription & translation, including the roles of mRNA, tRNA an ribosomes. • Differences between protein synthesis in eukaryotes and prokaryotes. Future Learning (Topic) Year 13 topics: Inheritance; Mutations & Gene Expression; Gene Technologies How will knowledge and skills be taught? (Implementation) Demos Models of DNA structure, models of DNA replication, models of DNA from cells. Written Class notes Past paper questions in class Past paper questions in homeworks	Biology	12		1/2		
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Use appropriate youtube channels: cognito, freesciencelessons, Crash Course Biology.	• •			ons. Crash Course Biology		

Encourage students to use the textbook issued.

Take an interest! Ask your children what they have learnt and be curious about their learning.

Helpful further reading/discussion				
Reading	Vocabulary Lists	Careers Links		
New Scientist	Nucleotide, deoxyribose,	Biochemistry		
Biological Science Review	ribose, phosphate, organic	Biomedical science		
Magazine	base, semi-conservative	Biological sciences		
The Biologist Magazine –	replication, complementary,	Medicine		
Royal Society of Biology	helicase, DNA polymerase,	Veterinary medicine		
Royal Society of Biology blog	RNA polymerase,	Bioveterinary science		
The Double Helix – James	degenerate, amino acid,	Geneticist		
Watson	peptide bond, polypeptide,	Genetics counsellor		
A Life Decoded – James	introns, exons, splicing,			
Venter	transcription, translation.			
Genome – Matt Ridley				
The Selfish Gene – Richard				
Dawkins				