



	Lessons Sequence					
TOPIC (S) Reproduction & inheritance	1. Discovery and development of the DNA molecule 2. DNA Genes and Chromosomes 3. Inheritance		4. Variation 5. Continuous and discontinuous variation 6. Mid topic test 7. Adaptations in Animals and Plants		8. Competition between animals and plants 9. Adapting to change 10. Natural Selection 11. Endangered Species 12. Maintaining biodiversity 13. End of topic assessment	
Knowledge & Skills development	<ul style="list-style-type: none"> Knowledge of DNA, and its importance. Understanding how characteristics are inherited Predicting the probability of characteristics being passed from parents to offspring Understanding the difference between inherited and environmental characteristics Describing resources that organisms compete for Identifying how living things are adapted to their environments 			<ul style="list-style-type: none"> Understanding of working in a collaborative manner in research science. Interpreting predator /prey graphs Describe and explain the current theory of evolution. Understanding of why theories change over time. Understanding of the awareness of conservation projects. Understanding and awareness of the impact of human activities on ecosystems and how the effects can be minimised 		
Assessment / Feedback Opportunities	Targeted questioning throughout topic	Teacher assessment of practical skills during investigation - verbal	AWOL assessment – formative teacher assessment in students books	Mid topic assessment – formative assessment	Homework topic quiz – formative assessment	End of topic assessment – teacher summative assessment
Cultural Capital	<ul style="list-style-type: none"> Extraction of DNA from fruit Conducting a survey and plotting results Possible local conservation projects Recycling project 					
SMSC / Promoting British Values (Democracy, Liberty, Rule of Law, Tolerance & Respect)	<ul style="list-style-type: none"> Scientists Watson and Crick and how scientific community works together Life skills – Recycling project and minimising individual impact on the environment Listening to others during presentations Working in groups during practical's or research tasks 					
Reading opportunities	<ul style="list-style-type: none"> NHS information about health and inherited disorders Recommended Read: Variation and Classification (Oaka Books) 					
Key Vocabulary	Independent Variable, Dependent Variable, Control Variables, Method, Conclusion, Precaution, Evaluation, Reliable, Precision, Valid, Anomaly variation, inheritance, chromosome, DNA, gene, natural selection, evolution, extinction, endangered, conservation, adaptation, biodiversity, ecosystem, variation, continuous variation, discontinuous variation, gamete, heterozygous, homozygous, allele, competition					
Digital Literacy	SharePoint resources including topic quiz					

	Possible use of excel to plot graphs and analyse data, power point, word, etc to present information, internet for research
Cross-Curricular Links	Geography, PHSCE, Numeracy/Maths – averages (means), reading scales, graph plotting, lines of best fit, using and rearranging equations, using scientific calculators
Careers	Conservation worker, research scientist. Veterinary nurse, Vet, Zoo Keeper, Botanist