

Topics in this cycle: Inheritance, Evolution and Drugs	Taught: Spring 2	Year Group: 9
Key knowledge/concepts to be learnt ('Tell me about...')		Websites/blogs/YouTube links and further reading to deepen and consolidate learning
<p>Where is our DNA stored?</p> <ul style="list-style-type: none"> Describe the structure and function of DNA. Use diagrams to show the relationship between DNA, chromosomes and genes. <p>How are gametes made?</p> <ul style="list-style-type: none"> Demonstrate an understanding of the differences between mitosis and meiosis. Understand that meiosis is exclusive to gamete production and subsequently sexual reproduction. Demonstrate an understanding of the role of dominant and recessive alleles in determining specific characteristics. <p>What causes a mutation?</p> <ul style="list-style-type: none"> Mutations are not always negative. Genetic manipulation is a highly specific technique. Its applications have major benefits. <p>What is a drug?</p> <ul style="list-style-type: none"> Describe what a drug is, whilst identifying some common examples Identify the risks involved in excessive alcohol consumption. Link the chemicals in smoke to health damage. Link the effects of marijuana to evidence, to form an opinion on legalisation. 		<p>DNA DNA - An Introduction (GCSE Biology) - Study Mind</p> <p>Gametes Where does our genome come from? - Genomics Education Programme (hee.nhs.uk)</p> <p>Mutation DNA and Reproduction – GCSE Biology (Combined Science) Edexcel Revision – Study Rocket</p> <p>Drug Alcohol and Smoking - The Dangers of Alcohol and Smoking - 9-1 GCSE Biology - YouTube</p>

Key Vocabulary and Definitions To Be Learnt		What Will The Assessment Look Like?
Cell	A cell is the basic unit of life that is responsible for the living and functioning of organisms.	<p>Extended writing – Explain why you share some characteristics with your mother and some with your father.</p> <p>End of Unit test: 25 marks</p> <ul style="list-style-type: none"> • Short answer questions • Multiple choice • Extended writing
Chromosome	The DNA is contained in structures called chromosomes.	
DNA	DNA, or deoxyribonucleic acid, DNA is a polymer made from two strands which twist around each other making a spiral ladder.	
Gene	A gene is a small section of DNA on a chromosome	
Gamete	Gametes are sex cells, that is egg and sperm in humans.	
Nucleus	The nucleus controls and regulates the activities of the cell (e.g., growth and metabolism) and carries the genes, structures that contain the hereditary information.	Family Learning Opportunities
Allele	Allele are different forms of a gene.	Create a funny genetic cartoon
Mutation	Any change in the DNA sequence of a cell	Create a drugs and alcohol throw and know ball
Recessive Allele	Only shows if the individual has two copies of the recessive allele.	Drugs and Alcohol Throw & Know™ Activity Ball Health Edco
Dominant Allele	Dominant allele always shows, even if the individual only has one copy of the allele.	Create a drugs and alcohol poster for your friends.
Depressant	Drugs that decrease alertness by slowing down the activity of the central nervous system	Drug and Alcohol Prevention Posters (k12posters.com)
Stimulant	Stimulants speed up the activity of the nervous system	Devise a quiz on DNA and test your family
Passive Smoking	Breathing in other people's smoke is known as exposure to second-hand smoke or passive smoking.	
Medicinal Drug	A substance or combination of substances that is intended to treat, prevent or diagnose a disease, or to restore, correct or modify physiological functions by exerting a pharmacological, immunological or metabolic action.	
Recreational Drug	"Recreational drugs" is a loose term that refers to legal and illegal drugs that are used without medical supervision.	