

Year 10 Science Curriculum Plan							
Unit	Core		Hinterland		NC Coverage	Assessment	Whole Education Opportunities
	Knowledge	Skills	Knowledge	Skills			
SB4 - Natural Selection and Genetic Modification	<ul style="list-style-type: none"> Evidence for human evolution Darwin's theory of natural selection Classification of organisms Breeds and varieties Tissue culture Genes used in agriculture and medicine (genetic engineering (H)) GM and agriculture Fertilisers and biological control 	<ul style="list-style-type: none"> Comparing and contrasting Observing Following processes Reading and interpreting data. Considering trends and patterns 	<ul style="list-style-type: none"> The science behind producing domesticated animals, pets e.g. Pedigree Dogs. Quorn, the soil mould that has that produces our meat alternatives. 	<ul style="list-style-type: none"> Awareness/application of science in the world around them. Critical thinking 	B4.1 to B4.13	<ul style="list-style-type: none"> End of topic assessment (35 marks) PR points use mixed topic assessments 	<ul style="list-style-type: none"> SMSC – If we can genetically modify crops to be perfect, can we do the same to humans? SMSC – Is it ethical to genetically screen embryos and terminate those that carry genetic diseases? Careers – Taxonomist Careers – Agriculture/Farming RSHE – The Science behind attraction.
SB5 – Health, disease and the development of medicines	<ul style="list-style-type: none"> Health and disease – communicable/non-communicable diseases. Cardiovascular disease – causes and treatment Types of pathogen, examples and how they can be spread How the body prevents disease infection Virus life cycles Plants defences and diseases Sexually transmitted diseases Immunisation – types of white blood cell Antibiotics – use and development Monoclonal antibodies 	<ul style="list-style-type: none"> Interpreting tabular data Interpreting graph data Interpretation of key words Developing exam skills Comparing advantages and disadvantages of a situation Recalling stages to a method Calculate BMI and waist:hip ratio Calculate cross-sectional areas of bacterial cultures and clear agar jelly using πr^2 	<ul style="list-style-type: none"> Smallpox eradication - vaccine success guinea worm eradication – poverty and clean water access John Snow – the history of cholera outbreak HPV – how can a virus increase the chance of cancer? Cardiovascular treatments – pig heart 	<ul style="list-style-type: none"> Understanding academic journal abstracts Applying knowledge to real- 	B5.1 to 5.22	<ul style="list-style-type: none"> End of topic assessment (30 marks) PR points using mixed topic assessments PLC tests (10 marks each) – 4 in this topic 	<ul style="list-style-type: none"> RSHE– STI's myth buster quiz SMSC – Why is heart disease the number 1 killer? SMSC – Why are so many people vaccine hesitant and what are the consequences? Careers – epidemiologist Careers – Cardiologist
SB6 – Plant structures and their functions	<ul style="list-style-type: none"> Photosynthesis – equations, key words, factors affecting it. Absorbing water and mineral ions – methods of transport Transportation and translocation – key words, methods of transport Plant adaptations Plant hormones and their uses 	<ul style="list-style-type: none"> Following a scientific method Recognising trends in data Developing exam skills Interpreting graphs Plotting scatter graphs Analysing data and concluding scientific ideas Health and safety understanding 	<ul style="list-style-type: none"> Evolution of carnivorous plants and their impact on the environment Plants diseases and development in genetic studies to help avoid extinction of some species of plants 	<ul style="list-style-type: none"> Applying knowledge to real life situations 	B6.1 to 6.16	<ul style="list-style-type: none"> End of topic assessment (30 marks) PR points using mixed topic assessments PLC tests (10 marks each) – 3 in this topic 	<ul style="list-style-type: none"> SMSC – plants used in different cultures Careers – Plant geneticist Careers – Landscape designer RSHE – Use of plants to produce medicines