# **Science - Biology**



#### Key Stage 4 - Year 10 - Triple Award

Term One	Term Two	Term Three
The Heart & Respiration	Communicable and Non- Communicable Disease	Homeostasis – The Brain and Eye
<ul> <li>Heart and Blood Vessels Review</li> <li>Heart and CHD Review</li> <li>Treating the Heart</li> <li>Gas Exchange</li> <li>Aerobic Respiration</li> <li>Anaerobic Respiration and Exercise</li> <li>Metabolism and Anaerobic Respiration in Plants</li> <li>Investigating Respiration</li> <li>Linking Respiration to the Heart</li> </ul>	<ul> <li>Vaccines</li> <li>Treating Disease with Medicines</li> <li>Developing Drugs</li> <li>Monoclonal Antibodies</li> <li>Uses of Monoclonal Antibodies</li> <li>Cancer</li> <li>Non-Communicable Disease</li> </ul>	<ul> <li>The brain</li> <li>The eye</li> <li>Accommodation and light</li> <li>Problems with the eye</li> </ul>
Photosynthesis & Organisation in Plants	Homeostasis – Nervous Response	Homeostasis – Hormonal Control
<ul> <li>Structure of the Leaf</li> <li>Photosynthesis</li> <li>Factors Affecting Photosynthesis</li> <li>Speeding Up Photosynthesis</li> <li>Uses of Glucose</li> <li>Organisation in Plants</li> <li>Plant disease</li> <li>Transpiration Factors</li> <li>Potometers</li> </ul>	<ul> <li>Principles of Homeostasis</li> <li>Nervous Response</li> <li>Reflex Response</li> <li>Synapses</li> </ul>	<ul> <li>Hormonal Control</li> <li>Negative feedback</li> <li>Thermoregulation</li> <li>Glucoregulation</li> <li>Diabetes</li> <li>Treating Diabetes</li> </ul>

# **Science - Biology**



Plants Pathogens and Their Disease	Homeostasis – Hormonal Control
<ul> <li>Types of Pathogens</li> <li>Primary Defence to pathogens</li> <li>White Blood Cell Response</li> </ul>	<ul> <li>The kidney</li> <li>Problems with the kidney</li> <li>Treating the kidney</li> </ul>

# **Science - Biology**



#### Key Stage 4 - Year 11 – Triple Award

Term One	Term Two	Term Three
Homeostasis – Hormonal Control	Evolution, Speciation, Selective Breeding & Genetic Modification	The Earth's Resources and Ecosystems
<ul> <li>Hormones in Puberty</li> <li>Menstrual Cycle</li> <li>Contraceptives</li> <li>Fertility Treatments</li> <li>Plant hormones</li> <li>Plant hormone uses</li> </ul>	<ul> <li>Fossils as Evidence</li> <li>Selective Breeding</li> <li>Genetic Engineering</li> <li>Uses of GM</li> <li>Animal Cloning</li> <li>Plant Cloning</li> <li>Extinction</li> <li>Speciation</li> <li>Antibiotic Resistance</li> </ul>	<ul> <li>Food Security</li> <li>Farming Techniques</li> <li>Fisheries</li> <li>Biotechnology</li> <li>Investigating Ecosystems</li> <li>Factors Affecting Ecosystems</li> </ul>
Reproduction and Inheritance• Asexual and Sexual Reproduction• Meiosis• DNA and the Genome• Protein synthesis• Mutations• Mendel and evidence for inheritance• Genetic Inheritance (sex)• Genetic Inheritance (disease)• Evolution	<ul> <li>Ecosystems and Cycles in Biology</li> <li>Classification</li> <li>Animal and Plant Adaptations</li> <li>Carbon and Water Cycle</li> <li>Decay Cycle</li> <li>Factors Affecting Decay</li> </ul>	• Revision and exams