

Year 10 Biology	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Knowledge	<p>Communicable Diseases</p> <ul style="list-style-type: none"> Health and Disease Pathogens Viral disease Bacterial disease Fungal disease Preventing infection Human defence <p>Preventing Disease</p> <ul style="list-style-type: none"> Vaccines Antibiotics and Painkillers Drug discovery Drug development Monoclonal Antibodies* 	<ul style="list-style-type: none"> Plant disease* Plant defence responses* <p>Non-Communicable Disease</p> <ul style="list-style-type: none"> Cancer Smoking risk Diet and Exercise risk Alcohol risk <p>Photosynthesis</p> <ul style="list-style-type: none"> Rate of Photosynthesis Uses of glucose 	<p>Respiration</p> <ul style="list-style-type: none"> Aerobic respiration Anaerobic respiration Exercise Metabolism <p>Nervous System</p> <ul style="list-style-type: none"> Reflex Action Synapses Brain* Eye* 	<p>Hormonal Coordination</p> <ul style="list-style-type: none"> Control of blood glucose Diabetes Adrenaline and Thyroxine Reproduction Contraception Infertility 	<p>Homeostasis</p> <ul style="list-style-type: none"> Controlling Body Temperature* Removing Waste* Kidneys* Dialysis* Kidney Transplants* 	<ul style="list-style-type: none"> Plant hormones* Use of Plant hormones* <p>Consolidation and revision</p>
Working Scientifically Skills	<ul style="list-style-type: none"> Evaluate the global use of vaccination in the prevention of disease. Understand that the results of testing and trials are published only after scrutiny by peer review. Appreciate the power of monoclonal antibodies and consider any ethical issues. Develop Hypotheses Apply experimental techniques Conduct accurate and safe experiment Record accurate observations Present data Evaluate accuracy, precision, repeatability and reproducibility and suggest improvements 	<ul style="list-style-type: none"> Interpret data about risk factors for specified diseases. Use data to relate limiting factors to the cost effectiveness of adding heat, light or carbon dioxide to greenhouses. Use of Chemical nomenclature Develop Hypotheses Apply experimental techniques Conduct accurate and safe experiment Record accurate observations Present data Identify trends and draw conclusions Evaluate accuracy, precision, repeatability and reproducibility and suggest improvements 	<ul style="list-style-type: none"> Evaluate the benefits and risks of procedures carried out on the brain and nervous system. Use of Chemical nomenclature Develop Hypotheses Apply experimental techniques Conduct accurate and safe experiment Record accurate observations Present data Identify trends and draw conclusions Evaluate accuracy, precision, repeatability and reproducibility and suggest improvements 	<ul style="list-style-type: none"> Everyday and technological applications of science; evaluate associated personal, social, economic and environmental implications; and make decisions based on the evaluation of evidence and arguments. Extract and interpret information from charts, graphs and tables. 	<ul style="list-style-type: none"> Evaluate the advantages and disadvantages of treating organ failure by mechanical device or transplant. 	<ul style="list-style-type: none"> Develop Hypotheses Apply experimental techniques Conduct accurate and safe experiment Record accurate observations Present data Identify trends and draw conclusions Evaluate accuracy, precision, repeatability and reproducibility and suggest improvements
Core Practical	<ul style="list-style-type: none"> Microbiology 	<ul style="list-style-type: none"> Photosynthesis Food Tests recap 	<ul style="list-style-type: none"> Reaction Time 			<ul style="list-style-type: none"> Plant Responses
Independent Learning Link	Communicable Disease Preventing Disease	Non-communicable Disease Photosynthesis	Respiration Nervous System	Hormonal Coordination	Homeostasis	Plant Hormones

Year 11	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Knowledge	<p>Consolidation and revision</p> <p>Reproduction</p> <ul style="list-style-type: none"> Sexual and asexual reproduction Meiosis DNA Protein Synthesis* Gene Expression* Genetic inheritance Inherited disorders Sex determination Embryonic Screening 	<p>Variation and Evolution</p> <ul style="list-style-type: none"> Natural Selection Selective breeding Genetic Engineering Cloning* Ethics of GM* <p>Genetics and Evolution</p> <ul style="list-style-type: none"> History of Genetics* Evolution evidence* Fossils and Extinction Antibiotic Resistance Classification 	<p>Ecology</p> <ul style="list-style-type: none"> Communities Abiotic and Biotic factors Competition Adaptations <p>Ecosystems</p> <ul style="list-style-type: none"> Feeding relationships Carbon cycle Decomposition* 	<p>Biodiversity</p> <ul style="list-style-type: none"> Pollution Deforestation Global warming Species Distribution* Conservation Trophic Levels* Biomass transfer* Food Security* Food Production* 	Consolidation and revision	
Working Scientifically Skills	<ul style="list-style-type: none"> Appreciate that embryo screening and gene therapy may alleviate suffering but consider the ethical issues which arise. 	<ul style="list-style-type: none"> Understand how scientific methods, models and theories develop over time. Interpret information about genetic engineering techniques and to make informed judgements about issues concerning cloning and genetic engineering, including GM crops. Extract and interpret information from charts, graphs, tables and evolutionary trees 	<ul style="list-style-type: none"> Extract and interpret information from charts, graphs and tables. Develop Hypotheses Apply experimental techniques Apply sampling techniques Record accurate observations Present data Identify trends and draw conclusions Evaluate accuracy, precision, repeatability and reproducibility and suggest improvements 	<ul style="list-style-type: none"> Extract and interpret information from charts, graphs and tables. Evaluate the environmental implications of deforestation, peatland destruction, global warming and intensive farming Understand that the scientific consensus about global warming and climate change is based on systematic reviews of thousands of peer reviewed publications. Explain and evaluate the conflicting pressures on maintaining biodiversity given appropriate information. 		
Core Practical			<ul style="list-style-type: none"> Field investigation Decay 			
Independent Learning Link	Reproduction Inheritance	Evolution Classification	Ecology Ecosystems	Biodiversity Food Production		