Department	SCIENCE (Biology – YR 10)
Key Stage	Key Stage 4
Course Level	GCSE
Exam Board	AQA

HeathPark
EVERY PUPIL ALWAYS IN FOCUS

Dates Delivered	**Unit Title**	**End Points**	**Substantive Knowledge** **What will they learn about in this topic?**	**Disciplinary Knowledge** **What subject concepts will be developed through this topic?**	**Assessment Method**	**Key Course Guides & Reading**
Autumn term	Cell Biology Organisation	To be able to compare eukaryotic and prokaryotic cells. To apply practical skills to investigate microscopy, osmosis and culture microorganisms. To be able to define and compare the 3 key modes of movements: diffusion, osmosis, active transport. To be able to describe cell division in terms of mitosis and the cell cycle. To be able to evaluate embryonic and adult stem cells.	Cell structure Cell division Transport in cells	Drawing scientific diagrams. Application of new knowledge to exam questions. Analysing graphs and data. Calculating means and identifying anomalous results **(Maths link)** Identifying control, dependent and independent variables. Linking topics to ensure in-depth knowledge. Improving written communication skills and SPAG in preparation for 6-mark exam questions **(Literacy link)**	End of unit test at the end of each unit End of unit test at the end of each unit	AQA website for whole specification: GCSE Biology Specification Specification for first teaching in 2016 (aqa.org.uk) Physics and Maths tutor: AQA GCSE (9-1) Biology Revision - PMT (physicsandmathstutor.com) This covers the whole course, as well as

		To be able to describe the different organ systems. To be able to describe how enzymes act as biological catalysts to speed up a reaction and the factors that affect rate of enzyme activity**(Chemistry link)** To apply practical skills to investigate food groups and the effect of pH on the rate of reaction of amylase enzyme. To describe the different components of blood and compare the different blood vessels. To explore lifestyle and medical risk factors that increase the risk of coronary heart disease and health issues. To describe plant tissues and organ systems.	Animal tissues, organs, organ systems Heart and blood vessels Coronary heart disease, health issues, cancer Plant tissues, organs, organ systems			Chemistry and Physics. It includes: 1. Revision notes 2. Key definitions 3. Pre made flash cards 4. Mind-maps 5. Exam questions and mark schemes YouTube support: Freescienceless ons - YouTube Detailed videos on the whole course – including Chemistry and Physics YouTube support: Malmesbury Education - YouTube

						Detailed videos on all required practical's – including Chemistry and Physics

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Year 12 Spring /summer term	Infection and response	To define communicable and non-communicable diseases. To research viral, bacterial, fungal and protists diseases. To describe how these pathogens cause disease, how spread can be reduced and treated. To explain the defence systems of the human body against pathogens and if a pathogen enters the body the immune system tries to destroy the pathogen through white blood cells. To explain the steps of vaccination and compare primary and secondary vaccination.	Communicable diseases		End of unit test at the end of each unit	AQA website for whole specification: GCSE Biology Specification Specification for first teaching in 2016 (aqa.org.uk)
			Human defence system	Drawing scientific diagrams. Application of new knowledge to exam questions. Analysing graphs and data. Calculating means and identifying anomalous results **(Maths link)** Identifying control, dependent and independent variables. Linking topics to ensure in-depth knowledge. Improving written communication skills and		
			Development of drugs and monoclonal antibodies			
			Plant diseases			Physics and Maths tutor: AQA GCSE (9-1) Biology Revision - PMT (physicsandmathstutor.com)
					End of unit test at the end of each unit	

	Bioenergetics	To describe the discovery and development of drugs and the production of monoclonal antibodies. To explore plant diseases and responses. To write the formula of photosynthesis, explore factors effecting the rate of photosynthesis and drawing graphs to explain limiting reactants. To compare aerobic and anaerobic respiration. To explain the effect of exercise on the body. To describe metabolism.	Photosynthesis Respiration	SPAG in preparation for 6-mark exam questions **(Literacy link)**		This covers the whole course, as well as Chemistry and Physics. It includes: 1. Revision notes 2. Key definitions 3. Pre made flash cards 4. Mind-maps 5. Exam questions and mark schemes YouTube support: Freesciencelessons - YouTube Detailed videos on the whole course – including Chemistry and Physics YouTube support:

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