Department	SCIENCE (BIOLOGY)
Key Stage	KEY STAGE 4- Year 9
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 1	Cell Biology	Students will be able to draw and describe the structure of organelles in eukaryotic and prokaryotic cells. Students will be able to describe the stages of mitosis and identify parts of the cell cycle Students will be able to define diffusion, osmosis and active transport. Also, investigate the effect of a factor on osmosis. For full breakdown see link to spec	Cell Structure Cell Division Transport in Cells	Drawing biological structures Application of knowledge to novel situations Graph and data analysis Linking topics Identification of control variables in experimental design Use of formula to calculate magnification	End of topic tests at the end of topic (identified in substantive knowledge) Assessed in year 9 end of year assessments	AQA website for unit GCSE Biology Specification Specification for first teaching in 2016 (aqa.org.uk)

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			What will they learn about in this topic?	What subject concepts will be developed through this topic?		Reading
Autumn 2	Organisation	Students will be able to use qualitative reagents to test for carbohydrates, lipids and proteins. Students will be able to label the human digestive system, respiratory system and circulatory system and describe their functions in the body. Also, enzymes and factors affecting enzyme activity. Students will be able to discuss the causes and effects of coronary heart disease and the risks associated with this. Students will also learn how the plant's transport system is dependent on environmental conditions to ensure that leaf cells are provided with the water and carbon dioxide that they need for photosynthesis.	Principles of organisation Animal tissues, organs and organ systems Plant tissues, organs and organ systems	Application of knowledge to novel situations Graph and data analysis Linking topics Identification of control variables in experimental design Analysing practical data to make conclusions	End of topic tests at the end of topic (identified in substantive knowledge) Assessed in year 9 end of year assessments	AQA website for unit GCSE Biology Specification Specification for first teaching in 2016 (aqa.org.uk)

		For full breakdown, please see exam board link				

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Spring 1	Infection and Response	Students will be able to identify pathogens and describe the infectious diseases caused and how they can be prevented. Students will be able to discuss how the immune system defends against pathogens and the body's defences. Also, how vaccinations work. Students will also be able to discuss how many groups of bacteria have	Communicable Diseases Monoclonal Antibodies (Higher Tier Only) Plant Disease	Application of knowledge to novel situations Graph and data analysis Linking topics Identification of control variables in experimental design	End of topic tests at the end of topic (identified in substantive knowledge) Assessed in year 9 end of year assessments	AQA website for unit GCSE Biology Specification Specification for first teaching in 2016 (aqa.org.uk)

		now become resistant to these antibiotics. Students will be able to discuss how monoclonal antibodies are produced and used. Students will also be able to discuss how plant diseases can be identified and treated. For full breakdown see link to spec				

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Spring 2	Bioenergetics	Students will be able to write a word and symbol equation for photosynthesis and describe limiting factors affecting photosynthesis. They will also be able to investigate the effect of a factor on photosynthesis. Students will be able to write word and symbol equations for aerobic and anaerobic respiration. Students will be able to describe the effect of exercise on the body. Students will also be able to discuss metabolism. For full breakdown see link to spec	Photosynthesis Respiration	Application of knowledge to novel situations Graph and data analysis Linking topics Identification of control variables in experimental design	End of topic tests at the end of topic (identified in substantive knowledge) Assessed in year 9 end of year assessments	AQA website for unit GCSE Biology Specification Specification for first teaching in 2016 (aqa.org.uk)

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Summer 1 and 2	Extending and Embedding (Units 1-4) Scientific Investigation Skills	Students will be able to understand how scientific methods and theories develop over time. Students will be able to devise hypothesises, write plans, identify variables and record accurate observations and measurements. Students will be able to collect, analyse and present data. For full breakdown see link to spec	Development of Scientific Thinking Experimental Skills and Strategies Analysis and Evaluation	Application of knowledge to novel situations Graph and data analysis Linking topics Identification of control variables in experimental design	Assessed in year 9 end of year assessments	AQA website for unit GCSE Biology Specification Specification for first teaching in 2016 (aqa.org.uk)