Coordinated Biology Year 10 Curriculum Overview

What is the Year 10 Biology curriculum aiming to achieve?		
What do we want our Year 10 Scientists to be like?	How are we building on prior learning?	How can parents/carers support their child's learning?
• Be excited and enthusiastic about the scientific world around us • Be safe and competent practical scientists • Be able to make links between observations and scientific theory • Be good verbal and written communicators using key terms • Have furthered their understanding of key concepts in Biology	• We will make links to and build on the Biology topics from KS3 • We will build on our working scientifically skills in the areas of analysis, communication, enquiry and problem solving	• Talk to the pupils about what they are learning in lesson • Be curious about the world around you and discuss with your child • Support with homework tasks • Help consolidate learning e.g. BBC Bitesize or watching scientific documentaries • Purchase CGP revision guide and encourage use of GCSE Pod

How are we organising the Year 10 Biology curriculum?						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics	Communicable diseases	Cell Division Diffusion, active transport and osmosis	Animal transport and non-communicable diseases	Bioenergetics: Respiration, Photosynthesis and plant transport	Completion of Photosynthesis and plant transport	Begin Variation and evolution : Classification
Threshold Concepts	How the immune system, antibiotics and vaccines protect against pathogenic diseases	Mitosis is used for grow. Transport into cells via diffusion, active transport and osmosis	The structure and function of human transport system: lungs, heart, blood vessels and cells.	How organisms release energy both aerobically and anaerobically.	How plants use the sun to make food. Transpiration and translocation.	How organisms can be classified using Linnaeus and Woese.
Skills	Evaluate effectiveness of global vaccination programmes and drug trialling RP 2 Investigating the effect of antiseptics and antibiotics on bacterial growth	Evaluate the potential use of stem cells. RP 2 : effect of concentration on mass of potato chips	Link lifestyle and risks for non-communicable diseases. Evaluate methods of treating heart disease	Investigate effect of exercise on the body	RP 5 Light intensity on rate of pond weed photosynthesis. Measuring transpiration by water uptake.	Understand how science methods and theories develop over time
Enrichment within the curriculum	Practical work will be conducted wherever possible. Dissection opportunities include pigs pluck and hearts Personalised Learning Checklists for all units of work					
Cross curricular links	• Exercise and sports drinks in PE / Sports • Ethics of stem cell use in Ethics					
Extra-curricular opportunities	Different Biology staff are available each week at Year 11 Core Revision Café. However, there are many places you can get some extra help with Biology. GCSE Pod is excellent, and there are hundreds of pods to support you if you are on AQA Combined (Trilogy). The CPG revision guides are also an excellent place to go if you are revising for tests / exams or need some help with homework tasks. These are available on Parent Pay and you can collect your guides if you bring a copy of your receipt to the Science workroom. Helpful websites					

	1. BBC Bitesize Biology : https://www.bbc.co.uk/bitesize/examspecs/zpgcbk7 Combined Biology Trilogy : https://www.bbc.co.uk/bitesize/examspecs/z8r997h 2. Seneca learning Biology : https://app.senecalearning.com/classroom/course/6b76a6e0-cf79-11e7-83a9-29a486db2c9f/section/197216e0-d983-11e7-9bd5-53995c3110f0/session Combined Biology Trilogy Foundation : https://app.senecalearning.com/classroom/course/88066eb0-1d8c-11e8-a6da-15f18bba751c/section/6dce893a-4d82-448a-8fe6-970454d5b8b7/session Higher : https://app.senecalearning.com/classroom/course/891f0540-1d79-11e8-a6da-15f18bba751c/section/7cdcc960-1d7a-11e8-a6da-15f18bba751c/session

What are the intended outcomes of the Year 10 Biology curriculum?						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Opportunities to show progress (Assessments)	End of topic test Communicable diseases CTG task Homework tasks	End of topic test cell division and cell transport CTG task Homework tasks	End of topic test Animal transport and non-communicable diseases CTG task Homework tasks	End of topic test Photosynthesis and plant transport	Year 10 PPE	Summer task : how to classify euglena
Impact on personal development (SMSC)	*A number of sensitive topics are covered this year that allow students to deepen their understanding and form their own balanced views. These include the ethics of the use of stem cells, vaccination programmes, drugs trialling, and treatments for heart disease.*					
Preparation for the next stage of education	*All paper 1 topics for GCSE.* *All these topics are revisited and expanded on in A level Biology*					