Curriculum Rationale and Overview (Scheme level)

Subject: Biology **Year group: 11**

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
National Curriculum context						
Scheme of Learning Title:	Coordination and control	Genetics	Chemistry and/or physics taught	Variation and evolution	Course completed	Course completed
Content *What will students know?*	How conditions in the body are coordinated and controlled. How metabolism is controlled in the body How human reproduction can be controlled The roles of hormones in the reproductive system	Understand how genes interact to control characteristics How sex cells are produced How characteristics are inherited from one generation to the next.		What causes variation and the effects variation has on an individual. How competition and natural selection can lead to the evolution of a new species. Why some organisms become extinct		
What will students understand?	That regulation of the internal conditions in an organism is known as homeostasis. The pituitary gland is known as the master gland and regulates a number of hormones in the body How to increase or decrease the likelihood of	That DNA codes for a unique protein and if these proteins are altered it affects the functioning of the body How by understanding the role of DNA we are better able to explain how certain diseases develop. How sex of an organism is determined.		The causes of environmental and genetic variation. The work of Charles Darwin and Alfred Russel Wallace to describe the theory of evolution. How major world events, competion, human activity have led to some species becoming extinct.		

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	pregnancy using various methods					
What will students be able to do?	Identify the roles of hormones in the control of blood sugar, water levels, metabolism and development of secondary sexual characteristics. Select the most appropriate of controlling pregnancy based on statistical evidence. Describe how nerve impulses travel through the body Measure the reaction time of individuals with and without stimulants.	Explain the role of the Human Genome Project in increasing our understanding of DNA and the impact it could have on personalising medicine. Make predictions using a genetic cross or a pedigree chart to state which characteristics will be inherited. Explain how dominant and recessive disorders are inherited		Identify an adaptation in an organism and explain how this can lead to a greater chance of survival. Use common features found in fossils to explain how organisms have originated from one common ancestor. Explain how conservation efforts can reduce the likelihood of an organism becoming extinct.		
How will they be formally assessed?	End of topic test covering specification points	End of unit assessment covering specification points		End of topic test covering specification points		