

Year Group: 12	Subject: Biology	Term: Summer
Topic	Key Learning points	Assessment
Transport in animals	<p>End Point: To understand how different substances are transported through and around animals</p> <ul style="list-style-type: none"> Describe different types of circulatory systems including the need for them in multicellular organisms Describe the function and structure of different blood vessels in humans Describe how tissue fluid and plasma is made in humans Describe the structure and function of the heart Explain how the heart rate is controlled Analyse ECG traces to determine if a heart rate is healthy Explain how oxygen is transported around the body, including how it is transferred to muscles and a foetus Explain how carbon dioxide is transported around the body, including its impact on oxygen transport 	<p>Students will complete homework booklets and tutorials to assess their ongoing understanding.</p>
Communicable disease	<p>End Point: To know how diseases are transmitted and the defences animals and plants employ to fight off infection.</p> <ul style="list-style-type: none"> Know the different types of pathogen and explain how they can be transmitted. To be able to describe the non-specific defence against pathogens in animals and plants. Know the form and function of immune cells to include neutrophils, antigen-presenting cells, phagosomes and lysosomes. Know the specific immune response including the action of B and T lymphocytes. Know how immunity to a pathogen develops through the action of T memory cells and B memory cells. Understand the difference between active, passive, natural and artificial immunity. Know how vaccinations are created and their role in preventing the spread of infectious disease. Know sources of medicines and the increased benefit of personalised medicine. 	<p>At the end of the term students will have a summative assessment. This will be an exam paper which will be marked by their teacher.</p> <p>Teachers will provide students with targeted feedback, based on their test performance.</p>
Ecosystems	<p>End Point: To understand how ecosystems develop and change due to different factors and how they can be observed in different ways</p> <ul style="list-style-type: none"> Define an ecosystem, abiotic and biotic factors Explain how different factors impact different ecosystems Explain how sampling can be used to determine distribution and abundance within ecosystems Explain the process of succession Define biomass and describe how it moves through different ecosystems Explain how carbon and nitrogen cycle through different ecosystems 	
Populations and sustainability	<p>End Point: To understand what a population of organisms is, the factors that affect them and how they can be conserved</p> <ul style="list-style-type: none"> Define population, describe interactions between populations and recall factors that determine population size Explain the significance of limiting factors on the carrying capacity of an environment Define conservation and preservation and describe the difference between them Explain the economic, social and ethical reasons for conservation of biological resources Explain how management of ecosystems can provide resources in sustainable ways Explain the management of environmental resources Explain the effects of human activity on environmental resources 	