BEACONSFIELD HIGH SCHOOL

Y8 Biology Grade Descriptors

Topic	Developing	Proficient	Confident
Microbes & Disease	• Identify the main types of microbes (bacteria, viruses, fungi). • Describe simple examples of useful microbes, including yoghurt & alcohol production. • State that the body has defences to protect against microbes. • Describe what a vaccine is and states that vaccines help prevent disease. • State that antibiotics are medicines used to treat bacterial infections. • Identify non-communicable diseases and recognises that they are not caused by microbes.	• Describe differences between types of microbes and gives examples of diseases they cause. • Explain how microbes are used in food production, including fermentation. • Describe the body's defence mechanisms, including physical barriers and immune responses. • Explain how vaccines work and their discovery and development. • Explain antibiotic action and how antibiotic resistance can develop. • Describe causes and risk factors of non-communicable diseases and their impact on health.	• Explain in detail the structure of different types of microbes and link to disease • Explain the biological processes involved in fermentation and evaluate their usefulness • Explain immune response, including the role of white blood cells and memory cells. • Evaluate long-term vaccine protection and public health support. • Explain antibiotic resistance and evaluate strategies to reduce its spread. • Analyse lifestyle, genetic and environmental causes of non-communicable disease.
Variation & Inheritance	• Define variation and give simple examples • Describe how characteristics are inherited and recognise environmental effects on variation. • Identify continuous and discontinuous variation • Recall that DNA carries genetic information and key scientists in its discovery.	• Explain genetic and environmental causes of variation • Describe the difference between continuous and discontinuous variation and draw appropriate graphs. • Explain how characteristics are coded by genes and inherited from parents. • Describe the discovery of DNA and explain the structure and function of DNA.	• Analyse genetic and environmental contributions to variety. • Represent and interpret continuous and discontinuous variation graphs • Explain how inheritance works, including the role of DNA in coding for characteristics. • Evaluate DNA discovery and role of peer review • Evaluate evidence for natural selection and evolution.

	• State the meaning of natural selection • State the meaning of biodiversity and know some reasons for preventing extinction	• Explain the process of natural selection and how it leads to evolution. • Describe the importance of biodiversity and explain extinction factors	• Evaluate the risk factors involved leading to extinction of a species and impact on biodiversity.
The Natural World	• State the purpose of classification • Recognise different taxa. • Name some kingdoms and provide simple examples. • Define biodiversity and can give some reasons for its importance.. • Describe some human impact with biodiversity • Can identify at least one method of preserving biodiversity.	• Understand the difference between natural and artificial classification • Correctly identifies and orders the major taxa • Name the five kingdoms with some examples for each. • Explain the importance of biodiversity in ecosystems and human benefits. • Describe human impact on biodiversity with examples. • Explain methods of preserving biodiversity.	• Evaluate the differences between natural and artificial classification • Describe full taxonomic hierarchy and species variation • Explain the importance of biodiversity, linking it to ecosystem stability, human survival, and ethical considerations. • Analyse human impacts on biodiversity with specific, detailed examples. • Evaluate and compares methods to preserve biodiversity (gene banks, conservation and captive breeding)