

Year 11

All numbers refer to specification points

Timing	Unit Title	Key Question	Knowledge	Assessing understanding
Autumn 1 and Autumn 2	4.6 Inheritance, variation and evolution	How and why do organisms differ, from each other and from their ancestors?	4.6.1.1 Sexual and asexual reproduction 4.6.1.2 Meiosis (and comparison with mitosis) 4.6.1.3 Advantages and disadvantages of sexual and asexual reproduction (biology only) 4.6.1.4 DNA and the genome 4.6.1.5 DNA structure (biology only) - recap from year 9 structure but everything else including protein synthesis and mutations is new knowledge 4.6.1.6 Genetic inheritance 4.6.1.7 Inherited disorders 4.6.1.8 Sex determination 4.6.2.1 Variation 4.6.2.2 Evolution 4.6.2.3 Selective breeding 4.6.2.4 Genetic engineering 4.6.2.5 Cloning (biology only) 4.6.3.1 Theory of evolution (biology only) 4.6.3.2 Speciation (biology only) 4.6.3.3 The understanding of genetics (biology only) 4.6.3.4 Evidence for evolution 4.6.3.5 Fossils 4.6.3.6 Extinction 4.6.3.7 Resistant bacteria 4.6.4 Classification of living organisms	How understanding is assessed Students will be assessed on their ability to: - Recall the knowledge covered - Interpret graphical and experimental data, - Make connections between different areas of understanding, - Explain the Biological processes covered. Assessment will take the form of written questions in a test. Skills - Graphical interpretation - Making connections - Explanations - Description - Scientific literacy and development of use of key terminology - Graph drawing - Data analysis.

Spring 1 and Spring 2 and summer 1	4.5 Homeostasis and response	How do humans respond to their internal and external environment?	• 4.5.1 Homeostasis • 4.5.2 The human nervous system • 4.5.3 Hormonal coordination in humans • 4.5.4 Plant hormones (biology only)	How understanding is assessed Students will be assessed on their ability to: • Recall the knowledge covered • Interpret graphical and experimental data, • Make connections between different areas of understanding, • Explain the Biological processes covered. Assessment will take the form of written questions in a test. Students will also be assessed on their ability to effectively carry out the following : <u>Required practical 7</u>: plan and carry out an investigation into the effect of a factor on human reaction time. <u>Required practical 8</u> : Investigate the effect of light or gravity on the growth of newly germinated seedlings. Record results as both length measurements and as carefully, labelled biological drawings to show the effects. Skills • Graphical interpretation • Making connections • Explanations • Description • Scientific literacy and development of use of key terminology • Graph drawing

				• Data analysis.