

Year 10 Combined Science	T1	T2	T3	T4	T5	T6
Content / Topic for Term	Cells	Cells (cont)	Organisation	Organisation (cont)	Infection and response (cont)	Infection and response (cont)
Key Knowledge for acquisition, recall and application in assessment or exam	Working scientifically • five lessons of practical skills Cells • plant and animal cells • eukaryotes and prokaryotes • microscopy • cell specialisation	Cells (cont) • transport in cells • osmosis • active transport • cell division • stem cells	Organisation • organisation hierarchy • plant tissues and transport • digestive system • the stomach • food tests • enzymes	Organisation (cont) • heart structure • blood and vessels • heart disease • lung structure and function	Infection and response • microbes and pathogens • spreading disease • body defences • white blood cells • aseptic techniques • vaccination • antibiotics and painkillers • resistant bacteria • antibiotics	Infection and response (cont) • Non-communicable diseases • lifestyle and cancer • developing drugs • monoclonal antibodies • plant minerals and disease • plant defences
Key skills to apply in assessment or exam	• Use scientific vocabulary, terminology and definitions. • Recognise the importance of peer review of results and of communicating results to a	• Use scientific vocabulary, terminology and definitions. • Use prefixes and powers of ten for orders of magnitude (eg tera, giga, mega,	• Use scientific vocabulary, terminology and definitions. • Interpreting observations and other data (presented in verbal, diagrammatic,	• Use scientific vocabulary, terminology and definitions. • Explain every day and technological applications of science; evaluate associated personal, social,	• Use scientific vocabulary, terminology and definitions. • Evaluate risks both in practical science and the wider societal context, including perception of risk	• Use scientific vocabulary, terminology and definitions. • Explain every day and technological applications of science; evaluate associated personal, social,

	range of audiences. • Explain every day and technological applications of science; evaluate associated personal, social, economic and environmental implications; and make decisions based on the evaluation of evidence and arguments.	kilo, centi, milli, micro and nano) • Plan experiments or devise procedures to make observations, produce or characterise a substance, test hypotheses, check data or explore phenomena.	graphical, symbolic or numerical form), including identifying patterns and trends, making inferences and drawing conclusions.	economic and environmental implications; and make decisions based on the evaluation of evidence and arguments.	in relation to data and consequences.	economic and environmental implications; and make decisions based on the evaluation of evidence and arguments.
Title of Knowledge Organiser	• Cells	• Cells	• Organisation	• Organisation	• Infection and response	• Infection and response

Year 10 Seperate Science	T1	T2	T3	T4	T5	T6
Content / Topic for Term	Year 9 content recap Bioenergetics	Homeostasis	Homeostasis (cont)	Inheritance	Inheritance (cont)	Ecology
Key Knowledge for acquisition, recall and application in assessment or exam	Recap Year 9 Content • first three weeks review and recap key Year 9 content Bioenergetics • aerobic respiration • anaerobic respiration • effect of exercise • metabolism • biotechnology and fermentation	Homeostasis • what is homeostasis? • nerve structure • SRCER pathway • nerves • the brain (t) • the eye (t) • hormonal control	Homeostasis (cont) • glucose control • temperature control • reproductive hormones • contraception and IVF • the kidney • kidney transplants • plant hormones • germination	Inheritance • meiosis • DNA and genome • DNA and mutations • protein synthesis • inheritance • sex determination • Mendel • inherited disorders • ethics and embryo testing	Inheritance (cont) • variation • selective breeding • genetic engineering • cloning • evolution • Darwin • fossils and extinction • speciation • classification	Ecology • habitats and competition • biotic and abiotic factors • sampling • adaptations • food chains • decomposition • decay • cycling carbon • cycling water • biodiversity
Key skills to apply in assessment or exam	• Use scientific vocabulary, terminology and definitions.	• Use scientific vocabulary, terminology and definitions.	• Use scientific vocabulary, terminology and definitions.	• Use scientific vocabulary, terminology and definitions.	• Use scientific vocabulary, terminology and definitions.	• Use scientific vocabulary, terminology and definitions.

	• Use prefixes and powers of ten for orders of magnitude (eg tera, giga, mega, kilo, centi, milli, micro and nano). • Plan experiments or devise procedures to make observations, produce or characterise a substance, test hypotheses, check data or explore phenomena.	• Evaluate risks both in practical science and the wider societal context, including perception of risk in relation to data and consequences.	• Interpreting observations and other data (presented in verbal, diagrammatic, graphical, symbolic or numerical form), including identifying patterns and trends, making inferences and drawing conclusions.	• Explain every day and technological applications of science; evaluate associated personal, social, economic and environmental implications; and make decisions based on the evaluation of evidence and arguments.	• Appreciate the power and limitations of science and consider any ethical issues which may arise. • Understand how scientific methods and theories develop over time.	
Title of Knowledge Organiser	• Bioenergetics	• Homeostasis	• Homeostasis	• Inheritance	• Inheritance • Ecology	• Ecology