

Calendar	Topic	Assessment	Sequencing and Coherence <i>concepts - themes - skills</i>	Literacy <i>reading - vocabulary - oracy - writing</i>
Autumn Term – HT1	B1 Cell Structure and Transport: Microscopes, animal and plant cells, specialisation of cells,	B1 Online quiz set on Educake – instantly marked and direct question feedback through Educake.  Pupils receive a whole class feedback sheet.	Cells are the basic unit of all forms of life In this section we explore how structural differences between types of cells enables them to perform specific functions within the organism. This unit builds on key cell concepts from Y7, uses a greater level of specialist terms and introduces more organelles.  Practical skills development from just using a microscope to drawing + labelling skills, and understanding and calculating magnification.	Include details of challenging texts and reading strategies, keyword glossary sheets, oracy opportunities and key disciplinary writing tasks.  Pupils have a list of key vocabulary in the learning journey which is issued at the start of every unit.  There are literacy tasks available for every unit.  Extended writing task: Using a microscope
Autumn Term – HT2	diffusion, osmosis and active transport, exchange materials.	B1 End of topic test GCSE style questions FT and HT. Teacher marked, feedback though model answer mark scheme and follow up exam style questions on areas of weakness – personalised.	Importance of the cell membrane is now explored in the context of transport in and out of cells – must be covered AFTER cell structure	Verbalise using key terminology the definitions of active transport, osmosis and diffusion  Extended writing task: Diffusion
Spring Term – HT 3	B2 Cell Division: cell division, growth and differentiation, stem cells and issues.	B2 Online quiz set on Educake – instantly marked and direct question feedback through Educake. B2 End of topic test GCSE style questions FT and HT, working scientifically and synoptic content from B1. Teacher marked, feedback though model answer mark scheme and follow up exam style questions on areas of weakness – personalised.	This builds on cell structure, introducing where and how DNA is located and stored. Genes in the nucleus control the differences in cells. For an organism to grow, cells must divide by mitosis producing two new identical cells. If cells are isolated at an early stage of growth before they have become too specialised, they can retain their ability to grow into a range of different types of cells. This phenomenon has led to the development of stem cell technology. This is a new branch of medicine that allows doctors to repair damaged organs by growing new tissue from stem cells.	Stem cells debate  Extended writing task: Stem cells

Spring Term – HT 4	B3 Organisation and the Digestive System: Tissue and organs, human digestive system, catalysts and enzymes, how the digestion system works.	B3 Online quiz set on Educake – instantly marked and direct question feedback through Educake. B3 End of topic test GCSE style questions FT and HT, working scientifically and synoptic content from B1-B2. Teacher marked, feedback though model answer mark scheme and follow up exam style questions on areas of weakness – personalised.	This builds on understanding that cells are the basic building blocks of all living organisms. A tissue is a group of cells with a similar structure and function. Organs are aggregations of tissues performing specific functions. Organs are organised into organ systems, which work together to form organisms How cells are arranged in terms of organisation for large multicellular organisms	Story of digestion  Extended writing task: Food tests required practical method
Summer Term – HT 5	B4 Organising Animals and Plants: The blood, blood vessels, the heart, breathing and gas exchange,	B4 Online quiz set on Educake – instantly marked and direct question feedback through Educake.	Builds on KS3 prior learning, identifying specific structures in the heart and digestive system. Opportunities for dissection and practical skills rather than just a demonstration	Journey of blood around the heart and body  Extended writing task: Villi
Summer Term – HT 6	tissues and organs in plants, transport systems in plants, evaporation and transpiration.	B4 End of topic test GCSE style questions FT and HT, working scientifically and synoptic content from B1-B3. Teacher marked, feedback though model answer mark scheme and follow up exam style questions on areas of weakness – personalised.	Pupils are familiar with animal organs, so this is studied first to learn the key terminology, and then the plant topic is studied with a more familiar context.	Extended writing task: Plant transport