	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Theme/Big Idea	**B5 – Communicable diseases** Health and disease; pathogens and disease; growing bacteria in the laboratory; preventing bacterial growth; viral, bacterial, fungal and protist diseases. **B6 – Preventing and treating disease** Vaccination; antibiotics and painkillers; discovering and developing drugs; monoclonal antibodies and their uses.	**B7 – Non-communicable diseases** Non-communicable diseases; cancer; smoking and disease risk; diet, exercise and disease; alcohol and other carcinogens. **B8 – Photosynthesis and plant processes** Photosynthesis; rate of photosynthesis; limiting factors; uses of glucose; making the most of photosynthesis; relevant plant processes.	**B9 – Respiration** Aerobic respiration; response to exercise; anaerobic respiration; metabolism and energy release. **B10 – The human nervous system** Principles of homeostasis; nervous system; reflex actions; brain; eye; common problems of the eye.	**B10 – The human nervous system** Principles of homeostasis; nervous system; reflex actions; brain; eye; common problems of the eye.	**B16 – Adaptations, interdependence and competition** Adaptations; organisms in their environment; distribution and abundance; competition in animals and plants; adaptation and survival. **B17 – Organising an ecosystem** Feeding relationships; materials cycling; carbon cycle; decomposition.	**Exams – Year 10 consolidation** Retrieval and application of Year 10 Separate Science content; equations; required practical knowledge; data interpretation; graph skills and exam technique. **B18 – Biodiversity and ecosystems** Human population explosion; land and water pollution; air pollution; deforestation and peat destruction; global warming; impact of change; maintaining biodiversity; trophic levels; biomass; biomass transfer; factors affecting food security; making food production efficient; sustainable food production.
Content What are they learning?	**B5 – Communicable diseases** Health and disease; pathogens and disease; growing bacteria in the laboratory; preventing bacterial growth; viral,	**B7 – Non-communicable diseases** Non-communicable diseases; cancer; smoking and disease risk; diet, exercise and disease; alcohol and	**B9 – Respiration** Aerobic respiration; response to exercise; anaerobic respiration; metabolism and	**B10 – The human nervous system** Principles of homeostasis; nervous system; reflex actions; brain; eye; common problems of the eye. **Keywords:** homeostasis, nervous	**B16 – Adaptations, interdependence and competition** Adaptations; organisms in their environment; distribution and abundance; competition in	**Exams – Year 10 consolidation** Retrieval and application of Year 10 Separate Science content; equations; required practical knowledge; data interpretation; graph

(including keywords)	bacterial, fungal and protist diseases. **Keywords:** communicable disease, pathogen, virus, bacterium, fungus, protist, transmission, culture, toxin, disease **B6 – Preventing and treating disease** Vaccination; antibiotics and painkillers; discovering and developing drugs; monoclonal antibodies and their uses. **Keywords:** vaccination, antibiotic, painkiller, drug, clinical trial, monoclonal antibody, immunity	other carcinogens. **Keywords:** non-communicable disease, cancer, risk factor, carcinogen, tumour, smoking, diet, exercise, alcohol **B8 – Photosynthesis and plant processes** Photosynthesis; rate of photosynthesis; limiting factors; uses of glucose; making the most of photosynthesis; relevant plant processes. **Keywords:** photosynthesis, chlorophyll, limiting factor, light intensity, carbon dioxide, glucose, transpiration	energy release. **Keywords:** aerobic respiration, anaerobic respiration, glucose, oxygen, carbon dioxide, lactic acid, metabolism **B10 – The human nervous system** Principles of homeostasis; nervous system; reflex actions; brain; eye; common problems of the eye. **Keywords:** homeostasis, nervous system, neurone, receptor, effector, reflex, synapse, brain, eye	system, neurone, receptor, effector, reflex, synapse, brain, eye	animals and plants; adaptation and survival. **Keywords:** adaptation, interdependence, competition, population, distribution, abundance, quadrat, transect **B17 – Organising an ecosystem** Feeding relationships; materials cycling; carbon cycle; decomposition. **Keywords:** ecosystem, food chain, food web, trophic level, carbon cycle, decomposition, decay, nutrient cycle	skills and exam technique. **Keywords:** retrieval, application, calculation, data, graph, practical, evaluation, evidence, conclusion, command word **B18 – Biodiversity and ecosystems** Human population explosion; land and water pollution; air pollution; deforestation and peat destruction; global warming; impact of change; maintaining biodiversity; trophic levels; biomass; biomass transfer; factors affecting food security; making food production efficient; sustainable food production. **Keywords:** biodiversity, population, pollution, deforestation, global warming, trophic level, biomass, food security, sustainable, ecosystem
Skills How are they learning it?	**B5 – Communicable diseases** Interpret disease data; compare pathogen types; investigate microbial	**B7 – Non-communicable diseases** Interpret risk data; distinguish correlation and causation; evaluate	**B9 – Respiration** Interpret respiration data; compare aerobic and anaerobic	**B10 – The human nervous system** Interpret nervous-system diagrams; explain reflex arcs; analyse reaction-time	**B16 – Adaptations, interdependence and competition** Use sampling techniques; calculate means; analyse	**Exams – Year 10 consolidation** Retrieve knowledge; apply equations; interpret data and graphs; answer

	growth safely; explain transmission and prevention. **Required practical:** Investigate the effect of antiseptics or antibiotics on bacterial growth. **B6 – Preventing and treating disease** Interpret clinical evidence; explain vaccination and antibiotic action; evaluate drug development and monoclonal antibody applications. **Required practical:** No AQA required practical specified.	lifestyle and disease evidence; communicate evidence-based conclusions. **Required practical:** No AQA required practical specified. **B8 – Photosynthesis and plant processes** Investigate factors affecting photosynthesis; collect and graph rate data; control variables; interpret limiting-factor graphs. **Required practical:** Investigate the effect of light intensity on the rate of photosynthesis.	respiration; analyse exercise results; explain metabolism. **Required practical:** No AQA required practical specified. **B10 – The human nervous system** Interpret nervous-system diagrams; explain reflex arcs; analyse reaction-time data; evaluate models of the brain and eye. **Required practical:** No AQA required practical specified.	data; evaluate models of the brain and eye. **Required practical:** No AQA required practical specified.	distribution data; evaluate environmental evidence and hypotheses. **Required practical:** Measure population size of a common species and use sampling techniques to investigate distribution. **B17 – Organising an ecosystem** Interpret food webs and trophic levels; model material cycles; analyse decomposition data; identify factors affecting decay. **Required practical:** No AQA required practical specified.	practical-method questions; evaluate conclusions and improvements; practise extended responses. **Required practical:** Revisit all required practicals taught during Year 10, including methods, variables, measurements, errors, conclusions and improvements. **B18 – Biodiversity and ecosystems** Interpret ecological data; evaluate human impacts; analyse biomass and food-security data; assess sustainability strategies; communicate evidence-based conclusions. **Required practical:** No AQA required practical specified.
Key Questions	**B5 – Communicable diseases** • How do pathogens cause disease? How are communicable diseases transmitted and controlled? **B6 – Preventing and treating disease** • How can disease be prevented and	**B7 – Non-communicable diseases** • What causes non-communicable disease? How can risk factors be reduced? **B8 – Photosynthesis and plant processes** • What limits the rate of photosynthesis? How	**B9 – Respiration** • How do cells release energy? What happens during exercise? **B10 – The human nervous system** • How does the nervous system	**B10 – The human nervous system** • How does the nervous system coordinate responses? Why are reflexes important?	**B16 – Adaptations, interdependence and competition** • How are organisms adapted to their environments? How does competition affect distribution? **B17 – Organising an ecosystem** • How do energy and	**Exams – Year 10 consolidation** • Can I apply Year 10 knowledge to unfamiliar contexts? Can I interpret practical data and evaluate methods? **B18 – Biodiversity and ecosystems** • How do human

	treated? How are drugs tested?	do plants use the glucose produced?	coordinate responses? Why are reflexes important?		matter move through ecosystems? What controls decomposition?	activities affect ecosystems and biodiversity? How can food production become more sustainable?
Assessment (specific assessed piece(s); milestone(s))	B5: End of topic assessment B6: End of topic assessment	B7: End of topic assessment Plant sections of B8: End of topic assessment	B9: End of topic assessment B10: End of topic assessment	B10: End of topic assessment	B16: End of topic assessment B17: End of topic assessment	Exams: End of topic assessment B18: End of topic assessment