	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Theme/Big Idea	**P4 – Electrical circuits** Current and charge; potential difference; resistance; series and parallel circuits; component characteristics. **P5 – Electricity in the home** Alternating current; cables and plugs; power; energy transfer; appliance ratings and efficiency. **B5 – Communicable diseases** Health and disease; pathogens; bacterial, viral, fungal and protist diseases; prevention and control. **C4 – Chemical calculations** Relative masses and moles; balanced equations; concentrations; titrations; gas calculations.	**C5 – Chemical changes** Reactivity series; displacement; extraction of metals; acids, bases, salts and pH. **C6 – Electrolysis** Electrolysis; electrodes; extraction of aluminium; electrolysis of aqueous solutions. **C7 – Energy changes** Exothermic and endothermic reactions; reaction profiles; bond energies; cells, batteries and fuel cells. **B5 – Communicable diseases** Health and disease; pathogens; bacterial, viral, fungal and protist diseases; prevention and control. **B6 – Preventing and treating disease** Vaccination; antibiotics; painkillers; drug discovery and development; monoclonal antibodies.	**C7 – Energy changes** Exothermic and endothermic reactions; reaction profiles; bond energies; cells, batteries and fuel cells. **P6 – Molecules and matter** Density; states of matter; changes of state; internal energy; specific heat capacity; gas pressure. **P7 – Radioactivity** Atomic structure; alpha, beta and gamma radiation; activity; half-life; medical uses; fission and fusion. **B7 – Non-communicable diseases** Non-communicable diseases;	**P7 – Radioactivity** Atomic structure; alpha, beta and gamma radiation; activity; half-life; medical uses; fission and fusion. **C8 – Rates, equilibrium and organic chemistry** Rates of reaction; collision theory; catalysts; reversible reactions; dynamic equilibrium; crude oil and hydrocarbons. **B9 – Respiration** Aerobic and anaerobic respiration; exercise; metabolism and energy release. **B15 – Evolution and classification** Evolution; natural selection; speciation; fossils; extinction; antibiotic resistance; classification.	**C8 – Rates, equilibrium and organic chemistry** Rates of reaction; collision theory; catalysts; reversible reactions; dynamic equilibrium; crude oil and hydrocarbons. **B16 – Adaptations, interdependence and competition** Adaptations; environmental factors; distribution and abundance; competition in animals and plants. **B17 – Organising an ecosystem** Feeding relationships; trophic levels; material cycles; carbon cycle; decomposition.	**Exams – Year 10 consolidation** Retrieval and application of Year 10 biology, chemistry and physics; equations; mathematical skills; practical knowledge. **P8 – Forces in action** Forces; vectors and scalars; resultant forces; moments; work; energy; pressure; resolution of forces. **B10 – The human nervous system** Homeostasis; nervous system; reflex actions; brain; eye; common eye problems.

		B7 – Non-communicable diseases Non-communicable diseases; cancer; smoking; diet; exercise; alcohol and disease risk.	cancer; smoking; diet; exercise; alcohol and disease risk. **B9 – Respiration** Aerobic and anaerobic respiration; exercise; metabolism and energy release. **B8 – Plant sections** Photosynthesis; rate of photosynthesis; limiting factors; uses of glucose; plant transport.			
Content What are they learning? (including keywords)	**P4 – Electrical circuits** Current and charge; potential difference; resistance; series and parallel circuits; component characteristics. **Keywords:** current, charge, potential difference, resistance, series, parallel, circuit, ammeter, voltmeter **P5 – Electricity in the home** Alternating current; cables and plugs; power; energy	**C5 – Chemical changes** Reactivity series; displacement; extraction of metals; acids, bases, salts and pH. **Keywords:** reactivity series, displacement, metal, salt, acid, base, neutralisation, pH **C6 – Electrolysis** Electrolysis; electrodes; extraction of aluminium; electrolysis of aqueous solutions. **Keywords:** electrolysis, electrolyte, electrode, cathode, anode, ion, oxidation, reduction	**C7 – Energy changes** Exothermic and endothermic reactions; reaction profiles; bond energies; cells, batteries and fuel cells. **Keywords:** exothermic, endothermic, energy transfer, reaction profile, activation energy, bond energy, cell, battery	**P7 – Radioactivity** Atomic structure; alpha, beta and gamma radiation; activity; half-life; medical uses; fission and fusion. **Keywords:** radioactivity, isotope, alpha, beta, gamma, activity, half-life, nuclear fission, nuclear fusion **C8 – Rates, equilibrium and organic chemistry** Rates of reaction; collision theory; catalysts; reversible reactions; dynamic	**C8 – Rates, equilibrium and organic chemistry** Rates of reaction; collision theory; catalysts; reversible reactions; dynamic equilibrium; crude oil and hydrocarbons. **Keywords:** rate, collision theory, activation energy, catalyst, reversible reaction, equilibrium, hydrocarbon, crude oil	**Exams – Year 10 consolidation** Retrieval and application of Year 10 biology, chemistry and physics; equations; mathematical skills; practical knowledge. **Keywords:** retrieval, application, calculation, graph, data interpretation, practical, evaluation, evidence **P8 – Forces in action** Forces; vectors and scalars; resultant

	transfer; appliance ratings and efficiency. **Keywords:** alternating current, cable, plug, fuse, power, energy transfer, efficiency, appliance **B5 – Communicable diseases** Health and disease; pathogens; bacterial, viral, fungal and protist diseases; prevention and control. **Keywords:** communicable disease, pathogen, virus, bacterium, fungus, protist, transmission, culture **C4 – Chemical calculations** Relative masses and moles; balanced equations; concentrations; titrations; gas calculations. **Keywords:** relative formula mass, mole, concentration, equation, titration, gas volume	**C7 – Energy changes** Exothermic and endothermic reactions; reaction profiles; bond energies; cells, batteries and fuel cells. **Keywords:** exothermic, endothermic, energy transfer, reaction profile, activation energy, bond energy, cell, battery **B5 – Communicable diseases** Health and disease; pathogens; bacterial, viral, fungal and protist diseases; prevention and control. **Keywords:** communicable disease, pathogen, virus, bacterium, fungus, protist, transmission, culture **B6 – Preventing and treating disease** Vaccination; antibiotics; painkillers; drug discovery and development; monoclonal antibodies. **Keywords:** vaccination, antibiotic, painkiller, drug, clinical trial, monoclonal antibody	**P6 – Molecules and matter** Density; states of matter; changes of state; internal energy; specific heat capacity; gas pressure. **Keywords:** density, particle, state of matter, internal energy, specific heat capacity, pressure, temperature **P7 – Radioactivity Atomic** structure; alpha, beta and gamma radiation; activity; half-life; medical uses; fission and fusion. **Keywords:** radioactivity, isotope, alpha, beta, gamma, activity, half-life, nuclear fission, nuclear fusion **B7 – Non-communicable diseases** Non-communicable diseases; cancer; smoking; diet;	equilibrium; crude oil and hydrocarbons. **Keywords:** rate, collision theory, activation energy, catalyst, reversible reaction, equilibrium, hydrocarbon, crude oil **B9 – Respiration** Aerobic and anaerobic respiration; exercise; metabolism and energy release. **Keywords:** aerobic respiration, anaerobic respiration, glucose, oxygen, carbon dioxide, metabolism **B15 – Evolution and classification** Evolution; natural selection; speciation; fossils; extinction; antibiotic resistance; classification. **Keywords:** evolution, natural selection, speciation, fossil, extinction, antibiotic resistance, classification	**B16 – Adaptations, interdependence and competition** Adaptations; environmental factors; distribution and abundance; competition in animals and plants. **Keywords:** adaptation, interdependence, competition, population, distribution, abundance, quadrat, transect **B17 – Organising an ecosystem** Feeding relationships; trophic levels; material cycles; carbon cycle; decomposition. **Keywords:** ecosystem, food chain, food web, trophic level, carbon cycle, decomposition, decay, nutrient cycle	forces; moments; work; energy; pressure; resolution of forces. **Keywords:** force, resultant force, vector, scalar, moment, pressure, work, equilibrium **B10 – The human nervous system** Homeostasis; nervous system; reflex actions; brain; eye; common eye problems. **Keywords:** homeostasis, nervous system, neurone, reflex, receptor, effector, brain, eye, reaction time

		B7 – Non-communicable diseases Non-communicable diseases; cancer; smoking; diet; exercise; alcohol and disease risk. **Keywords:** non-communicable disease, cancer, risk factor, smoking, diet, exercise, alcohol	exercise; alcohol and disease risk. **Keywords:** non-communicable disease, cancer, risk factor, smoking, diet, exercise, alcohol **B9 – Respiration** Aerobic and anaerobic respiration; exercise; metabolism and energy release. **Keywords:** aerobic respiration, anaerobic respiration, glucose, oxygen, carbon dioxide, metabolism B8 – Plant sections Photosynthesis; rate of photosynthesis; limiting factors; uses of glucose; plant transport. **Keywords:** photosynthesis, chlorophyll, limiting factor, light intensity, carbon dioxide, glucose, transpiration			

Skills How are they learning it?	**P4 – Electrical circuits** Measure current and potential difference; calculate resistance; construct and investigate circuits. **Required practical:** Investigate factors affecting resistance. **P5 – Electricity in the home** Use electrical equations; calculate power and energy; interpret appliance ratings; evaluate safe electrical practice. **Required practical:** No AQA required practical specified **B5 – Communicable diseases** Interpret disease data; compare pathogens; explain transmission and prevention; evaluate control methods. **Required practical:** Investigate the effect of antiseptics or antibiotics on bacterial growth. **C4 – Chemical calculations** Use moles and equations; calculate	**C5 – Chemical changes** Predict reactions; prepare salts; write equations; interpret pH data. **Required practical:** Preparation of a pure, dry soluble salt. **C6 – Electrolysis** Set up electrolysis safely; identify products; interpret observations; write ionic/half equations where required. **Required practical:** Electrolysis of aqueous solutions. **C7 – Energy changes** Measure temperature changes; calculate energy changes; interpret profiles; use bond-energy calculations. **Required practical:** Investigate temperature changes in reactions. **B5 – Communicable diseases** Interpret disease data; compare pathogens; explain transmission and prevention; evaluate control methods.	**C7 – Energy changes** Measure temperature changes; calculate energy changes; interpret profiles; use bond-energy calculations. **Required practical:** Investigate temperature changes in reactions. **P6 – Molecules and matter** Measure mass, volume and temperature; calculate density and energy changes; interpret particle models. **Required practical:** Determine density. **P7 – Radioactivity** Interpret decay data; calculate half-life; evaluate medical and energy applications;	**P7 – Radioactivity** Interpret decay data; calculate half-life; evaluate medical and energy applications; interpret nuclear equations. **Required practical:** No AQA required practical specified **C8 – Rates, equilibrium and organic chemistry** Measure reaction rates; control variables; explain collision theory; investigate catalysts; interpret equilibrium changes. **Required practical:** Investigate concentration and reaction rate. **B9 – Respiration** Interpret respiration data; compare aerobic and anaerobic respiration; analyse exercise results. **Required practical:** No AQA required practical specified **B15 – Evolution and classification** Interpret evolutionary evidence; explain natural selection;	**C8 – Rates, equilibrium and organic chemistry** Measure reaction rates; control variables; explain collision theory; investigate catalysts; interpret equilibrium changes. **Required practical:** Investigate concentration and reaction rate. **B16 – Adaptations, interdependence and competition** Use quadrats/transects; calculate means; analyse distribution data; evaluate sampling. **Required practical:** Sampling techniques and distribution. **B17 – Organising an ecosystem** Interpret food webs; model cycles; analyse decomposition data; identify factors affecting decay. **Required practical:** No AQA required practical specified	**Exams – Year 10 consolidation** Retrieve knowledge; apply equations; interpret data and graphs; answer practical and evaluation questions. Year 10 examinations / cumulative assessment. **P8 – Forces in action** Draw force diagrams; calculate resultant forces, moments, work and pressure; analyse equilibrium. **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. **Required practical**: Iinvestigate reaction time.

	concentrations; interpret titration results; apply quantitative chemistry. **Required practical:** No AQA required practical specified	**Required practical:** Investigate the effect of antiseptics or antibiotics on bacterial growth. **B6 – Preventing and treating disease** Interpret clinical evidence; explain vaccination and antibiotics; evaluate drug development. **Required practical:** No AQA required practical specified **B7 – Non-communicable diseases** Interpret risk data; distinguish correlation and causation; evaluate lifestyle evidence. **Required practical:** No AQA required practical specified	interpret nuclear equations. **Required practical:** No AQA required practical specified **B7 – Non-communicable diseases** Interpret risk data; distinguish correlation and causation; evaluate lifestyle evidence. **Required practical:** No AQA required practical specified **B9 – Respiration** Interpret respiration data; compare aerobic and anaerobic respiration; analyse exercise results. **Required practical**: No AQA required practical specified **B8 – Plant sections** Investigate limiting factors;	classify organisms; analyse resistance data. **Required practical:** No AQA required practical specified		

			collect and graph rate data; explain plant adaptations and transport. Required practical: investigate light intensity and rate of photosynthesis.			
Key Questions	**P4 – Electrical circuits** • How are current, potential difference and resistance related? **P5 – Electricity in the home** • How are power and energy related in domestic electricity? **B5 – Communicable diseases** • How do pathogens cause and spread disease? **C4 – Chemical calculations** • How can chemical quantities be calculated accurately?	**C5 – Chemical changes** • How does the reactivity series predict chemical reactions? **C6 – Electrolysis** • What happens at each electrode during electrolysis? **C7 – Energy changes** • What happens to energy during chemical reactions? **B5 – Communicable diseases** • How do pathogens cause and spread disease? **B6 – Preventing and treating disease** • How are diseases prevented and treated? **B7 – Non-communicable diseases** • What causes non-communicable disease and how can risk be reduced?	**C7 – Energy changes** • What happens to energy during chemical reactions? **P6 – Molecules and matter** • How does the particle model explain matter? **P7 – Radioactivity** • What is radioactive decay and how is radiation used? **B7 – Non-communicable diseases** • What causes non-communicable disease and how can risk be reduced?	**P7 – Radioactivity** • What is radioactive decay and how is radiation used? **C8 – Rates, equilibrium and organic chemistry** • What affects reaction rate and dynamic equilibrium? **B9 – Respiration** • How do cells release energy? **B15 – Evolution and classification** • How does natural selection produce evolution?	**C8 – Rates, equilibrium and organic chemistry** • What affects reaction rate and dynamic equilibrium? **B16 – Adaptations, interdependence and competition** • How are organisms adapted and how does competition affect distribution? **B17 – Organising an ecosystem** • How do energy and matter move through ecosystems?	**Exams – Year 10 consolidation** • Can I apply Year 10 knowledge to unfamiliar contexts? **P8 – Forces in action** • What determines whether forces are balanced? **B10 – The human nervous system** • How does the nervous system coordinate responses?

			B9 – Respiration • How do cells release energy? **B8 – Plant sections** • What limits the rate of photosynthesis?			
Assessment (specific assessed piece(s); milestone(s))	P4: End of topic assessment P5: End of topic assessment B5: End of topic assessment C4: End of topic assessment **Marking Milestone**	C5: End of topic assessment C6: End of topic assessment C7: End of topic assessment B5: End of topic assessment B6: End of topic assessment B7: End of topic assessment **Marking Milestone**	C7: End of topic assessment P6: End of topic assessment P7: End of topic assessment B7: End of topic assessment B9: End of topic assessment Plant sections of B8: End of topic assessment **Marking Milestone**	P7: End of topic assessment C8: End of topic assessment B9: End of topic assessment B15: End of topic assessment **Marking Milestone**	C8: End of topic assessment B16: End of topic assessment B17: End of topic assessment **Marking Milestone**	Exams: End of topic assessment P8: End of topic assessment B10: End of topic assessment **Marking Milestone** **End of Year 10 Exam**