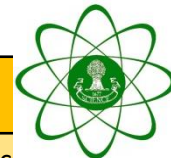


W.S ideas to be consolidated:

- 1 Development of scientific thinking
- 2 Experimental skills and strategies
- 3 Analysis and evaluation
- 4 Scientific vocabulary, quantities, units, symbols and nomenclature

Sandbach School Science Curriculum:



Year 10 Science Curriculum Sequence

Intent: To build on prior knowledge from the transition & induction phase & Y9 topics : Students will continue to visit these 10 key topics: electromagnetism, energy, waves, matter, reactions, earth, organisms introducing a GCSE perspective. In addition students will develop their knowledge of the scientific method within the contexts of AQA GCSE required practical's.

HT1	HT2	Term 2	Term 3
<p>Combined</p> <p>Bioenergetics</p> <p>Biology</p> <p>Bioenergetics</p>	<p>Combined</p> <p>Disease</p> <p>Biology</p> <p>B10-12 Homeostasis</p>	<p>Combined</p> <p>Transport from Cell unit then Homeostasis & responses & Genetics (reproduction only)</p> <p>Biology</p> <p>Finish Homeostasis, B13 Reproduction & genetics</p>	<p>Combined</p> <p>B16-18 Ecology</p> <p>Biology</p> <p>B16-18 Ecology (complete 1st 20 lessons)</p>
<p>Combined</p> <p>C5 Chemical Changes</p> <p>C13 Our Atmosphere</p> <p>Chemistry</p> <p>C13 Our atmosphere</p>	<p>Combined</p> <p>C12 Chemical analysis</p> <p>Chemistry</p> <p>C12 Chemical Analysis</p>	<p>Combined</p> <p>C7 Energy changes, C8 Rates of reaction, C9 Crude oil.</p> <p>Chemistry</p> <p>C9 Crude oil</p>	<p>Combined</p> <p>C14 Earths resources, C3 Structure & bonding recap</p> <p>Chemistry</p> <p>C14 Earths resources, C15 Using our resources</p>
<p>Combined</p> <p>P4 Electric Circuits, P5 Electricity in the home</p> <p>Physics</p> <p>P6 Molecules & matter, P7 Radioactivity</p>	<p>Combined</p> <p>P6 Molecules & Matter</p> <p>Physics</p> <p>P8 Forces in balance, P9 Motion</p>	<p>Combined</p> <p>P7 Radioactivity, P8 Forces in balance</p> <p>Physics</p> <p>P10 Forces & motion, P12 Wave properties, P13 EM Waves</p>	<p>Combined</p> <p>P10 Forces & motion, P12 Wave properties</p> <p>Physics</p> <p>P15 Electromagnetism ,Various triple lessons * see PoS document for further detail.</p>
<p>Why start here? * Y10 Biology recaps the complicated ideas of Bioenergetics & completes the transport section of B1/B2 Cells (this was left out of Y9 due to the high level of demand)</p>	<p>Why move onto these units? B10-12 Allows the consolidation of the key principles from Y9 including cells & cell division & organisation. C4 F only due to this being the most challenging unit, higher level work left unit Y11.</p>	<p>Why move onto these units? * Biology – Students need to recap required practical's from earlier topics due to these being missed in Y9 during Covid19 lock down.</p>	<p>Why move onto these units? Ecology – Summer term is suitable for these out door required practical's</p>
<p>Spec links: 4.4.1 Photosynthesis, 4.4.2 Respiration, 4.1.3.1 Diffusion, 4.1.3.2 Osmosis, 4.1.3.3 Active transport . 5.9.1.1 The proportions of different gases in the atmosphere, 5.9.1.2 The Earth's early atmosphere, 5.9.1.3 How oxygen increased, 5.9.1.4 How carbon dioxide decreased, 5.9.2 Carbon dioxide and methane as greenhouse gases, 5.9.2.4 The carbon footprint and its reduction 5.8.1.1 Pure substances, 5.8.1.2 Formulations, 6.2.3 Domestic uses and safety, 6.2.4 Energy transfer, 6.2.4.3 The National Grid, 6.3.1 Changes of state and the particle model, 6.3.2 Internal energy and energy transfers</p>	<p>Spec links: 4.5.1 Homeostasis, 4.5.2 The human nervous system, 4.5.3 Hormonal coordination in humans, 4.5.3.1 Human endocrine system, 4.5.3.2 Control of blood glucose concentration 5.8.1.3 Chromatography, 5.8.2 Identification of common gases</p>	<p>Spec links: 4.5.3.3 Hormones in human reproduction, 4.5.3.4 Contraception, 4.5.3.5 The use of hormones to treat infertility (HT only), 4.5.3.6 Feedback systems (HT only) 5.6.1 Rate of reaction, 5.6.2 Reversible reactions and dynamic equilibrium, 5.7.1 Carbon compounds as fuels and feedstock 5.6.2 Reversible reactions and dynamic equilibrium 5.5.1 Exothermic and endothermic reactions 6.4.2 Atoms and nuclear radiation, 6.4.2.4 Radioactive contamination, 6.5.1 Forces and their interactions, 6.5.4 Forces and motion, 6.5.4.1 Describing motion along a line , 6.5.4.2 Forces, accelerations and Newton's Laws of motion, 6.5.4.3 Forces and braking, 6.5.5 Momentum (HT only) , 6.6.1 Waves in air, fluids and solids</p>	<p>Spec links: 4.7.1 Adaptations, interdependence and competition, 4.7.2 Organisation of an ecosystem, 4.7.3 Biodiversity and the effect of human interaction on ecosystems. 5.7.1 Carbon compounds as fuels and feedstock 5.10.1 Using the Earth's resources and obtaining potable water, 5.10.2 Life cycle assessment and recycling 6.6.2 Electromagnetic waves, 6.6.2.1 Types of electromagnetic waves, 6.7 Magnetism and electromagnetism, 6.7.1 Permanent and induced magnetism, magnetic forces and fields</p>
<p>Teaching these topics here supports: C13 links to B8 & 9 Bioenergetics. B8-9 Bioenergetics from Y9, B8-9 Bioenergetics – respiration links to blood glucose control,</p>	<p>Teaching these topics here supports: C1 Atoms (basic particle theory / atomic structure recapped in P6.</p>	<p>Teaching these topics here supports: Further physics topics on waves Eg EM Waves, C3 Structure and bonding – references to ionisation.</p>	<p>Teaching these topics here supports: P12 wave properties supports the EM Spectrum (Y11 topic)</p>
<p>These topics feed from: 7A Cells and Organisms, B1-2 Cells & cell division. 8C breathing & respiration, 8E Combustion.</p>	<p>These topics feed from: B1-2 Cells & Cell division. 7A Cells and Organisms, 7K forces</p>	<p>These topics feed from: Previous Y9 Biology topics Eg B1 Cells for microscopes RP. C5 Chemical changes 7K Forces, 8L Fluids, 7L Sound & Light supports wave properties.</p>	<p>These topics feed from: 7D Ecosystems, 7L Sound & Light, 8E Combustion,</p>