

Saffron Walden County High School Curriculum

CURRICULUM SUMMARY



SAFFRON WALDEN
COUNTY HIGH SCHOOL

Year 12		AUTUMN TERM		SPRING TERM		SUMMER TERM	
		TERM 1A	TERM 1B	TERM 2A	TERM 2B	TERM 3A	TERM 3B
Science (Applied)	KNOWLEDGE DOMAIN	<p>Unit 1 – Key concepts Biology: Cell structure, eukaryotic vs prokaryotic cells, magnification and microscopes, photosynthesis Chemistry: Atomic structure, electronic configuration, ionisation energies, isotopes, Ar and Mr calculations, periodic table Physics: Electricity and circuits, calculating I,V,P &R, calculating heating and effect of current, I-V characteristics, resistance and power, potential divider circuits, conductors and semiconductors,</p>	<p>Unit 1 – Key concepts Biology: transport across membranes and photosynthesis Chemistry: Periodic table, patterns in groups 0, TM, ionic, covalent and metallic bonding, moles and crystal structures Physics: Efficiency and useful energy, increasing efficiency in mechanical and thermal systems, thermal transfer and U values</p> <p>Unit 2 – Applied Experimental techniques: Physics: PO3a – Resistivity practical</p> <p>Unit 3 – Science in the modern world</p>	<p>Unit 1 – Key concepts Biology: finish photosynthesis, heart Chemistry: empirical and molecular formula, yield calculations Physics: generation of energy from different sources, advantages, and disadvantages of energy</p> <p>Unit 2 – Applied Experimental techniques: Biology: PO2b – photosynthesis practical</p> <p>Unit 3 – Science in the modern world (REVISION and</p>	<p>Unit 1 – Key concepts Biology: finish heart, cardiac cycle, pacemakers, breathing rates and respiration Chemistry: Indicators and colorimetry Physics: Dynamics, v,a,d-t graphs and v-t graphs, Newtons laws of motion and conservation of momentum</p>	<p>Unit 1 – Key concepts Biology: homeostasis, body temp, blood sugar control, diabetes, osmoregulation and kidneys Chemistry: Enthalpy, exo and endothermic reactions, enthalpy combustion, $Q=mc\Delta T$, enthalpy neutralisation, bond enthalpies and Hess' law Physics: GPE, KE and power, finish all dynamics</p> <p>Unit 2 – Applied Experimental techniques: Biology: PO2a – respiration practical</p>	<p>Unit 1 – Key concepts Complete any content and revision on all units and content – Exam for Unit 1 is in June.</p> <p>Unit 2 – Applied Experimental techniques: Chemistry: PO2b – Colourimetry practical</p> <p>Complete all practical coursework write ups. Final drafts are handed in and ready for assessment This work is submitted in Jan the following year.</p>

	<p>thermistors and LDRS</p> <p>Unit 2 – Applied Experimental techniques: Chemistry PO2a – Titration practical</p>	<p>(all three teachers will prepare students for the exam in Jan) Pre-release articles are researched and prepped.</p>	<p>exam in mid-January)</p>		<p>Physics: PO3b – Specific Heat capacity practical</p>	
<p>SKILLS DEVELOPED THROUGH THE KNOWLEDGE AND ENQUIRIES TAUGHT THIS HALF TERM</p>	<p>Unit 1 – Key concepts in science Learners develop their knowledge and understanding of key concepts in science and how they are applied in the medical, healthcare, food, environmental, chemical, pharmaceutical, material and automotive industries. TAUGHT throughout year 12 Unit 2 – Applied Experimental techniques All experimental techniques relate to their application in research and development for new pharmaceutical products, the quality control of existing products and the investigation of new materials, ecological</p>	<p>Unit 3: This unit will enable learners to develop their analytical, evaluative and critical thinking skills. These are important skills for scientists and technicians working in research, product development and scientific testing. Maths skills</p> <p>Life skills:</p> <ul style="list-style-type: none"> • Research • Communication • Teamwork • Problem solving 	<p>Unit 3: This unit will enable learners to develop their analytical, evaluative and critical thinking skills. These are important skills for scientists and technicians working in research, product development and scientific testing. Maths skills</p> <p>Life skills:</p> <ul style="list-style-type: none"> • Research • Communication • Teamwork • Problem solving 	<p>Unit 1 – Key concepts in science (Building on knowledge from KS4 Science and relating this to a vocational context) TAUGHT throughout year 12 Unit 2 – Applied Experimental techniques (6 practicals will be researched and completed over the year)</p>	<p>Unit 1 – Key concepts in science (Building on knowledge from KS4 Science and relating this to a vocational context) TAUGHT throughout year 12 Unit 2 – Applied Experimental techniques (6 practicals will be researched and completed over the year)</p>	<p>Revision strategies, mathematical skills</p>

		<p>investigations, consideration of the most suitable material to use for a specific application, or in a forensic or pathology laboratory. Learners are able to describe the usefulness of each technique in a setting outside the school or college laboratory</p> <p>Unit 3 – Science in the modern world This unit will enable learners to develop their analytical, evaluative and critical thinking skills. These are important skills for scientists and technicians working in research, product development and scientific testing</p> <p>TAUGHT in some of Unit 1 but mostly in TERM 1B and term 2a</p>					
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