

# 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
Environmental Science	KNOWLEDGE DOMAIN	<p><b>Chp 1: The conditions for life on Earth</b> (earth before life and the development of life on earth)</p> <p><b>Chp2: Conservation and biodiversity</b> (the importance and threats to biodiversity)</p> <p><b>The following themes are built into most chapters:</b> Consider applications and implications of environmental science and evaluate their associated benefits and risks Consider ethical issues in the treatment of humans, other organisms and the environment Evaluate the role of the scientific community in validating new knowledge and ensuring integrity Evaluate the ways in which society uses</p>	<p><b>Chp 4: The Atmosphere</b> (composition of the atmosphere, how the atmosphere supports life, the greenhouse effect, the enhanced greenhouse effect and global warming, ozone depletion)</p> <p><b>Chp2: Conservation and biodiversity</b> (methods of conserving biodiversity, selected habitats)</p> <p><b>Chp 15: Research methods</b> (specific practical investigations, statistical analysis)</p>	<p><b>Chp 5: The Hydrosphere</b> (global demand for water, the natural water cycle, human impacts on the cycle, exploitation of new water sources, sustainable water management)</p> <p><b>Chp 6: The Lithosphere</b> (mineral resources extracted, geological processes that created exploitable deposits)</p> <p><b>Chp2: Conservation and biodiversity</b> (selected habitats)</p>	<p><b>Chp 6: The Lithosphere</b> (environmental impacts of mineral exploitation, future mineral supplies, cradle to cradle design)</p> <p><b>Chp 3: Life processes in the biosphere</b> (adaptations to the environment, ecological succession, species diversity and ecological stability, ecological terminology)</p>	<p><b>Chp 8 Soils</b> (soil fertility and erosion, soil triangle)</p> <p><b>Chp 7: Biogeochemical cycles</b> (carbon, nitrogen and phosphorous)</p> <p><b>Chp 15: Research methods</b> (scientific methodologies, population studies, specialist techniques and research, abiotic factors, specific practical investigations, statistical analysis)</p>	<p><b>Chp 7: Biogeochemical cycles</b> (carbon, nitrogen and phosphorous)</p> <p>Fieldtrip – review of all content taught in chp 15 (Compulsory 4 days of field work)</p>

		science to inform decision making					
SKILLS DEVELOPED THROUGH THE KNOWLEDGE AND ENQUIRIES TAUGHT THIS HALF TERM	<p>Students carry out <b>investigative/practical activities</b> within an environmental context. Students will develop the required <b>practical skills</b> which are signposted within the subject content. Students will incorporate the <b>required mathematical skills</b>. Students must undertake <b>experimental and investigative activities</b>, including appropriate risk management, in a range of environmental contexts. They must also know how to <b>safely and correctly use a range of practical equipment and materials</b>. Students must carry out practical activities using the best contemporary practices for risk assessment and safe working in the laboratory and during fieldwork.</p>	<p>Independent thinking Numeracy and the application of mathematical concepts in a practical context Use theories, models and ideas to develop scientific explanations of environmental processes Use knowledge and understanding to pose questions, define scientific problems, present scientific arguments and scientific ideas related to the environment Use of communication technology (ICT), to answer scientific questions</p>	<p>Same as before but included are revision strategies for mocks – graphical analysis, extended response and essay writing skills, review of key terms</p>	<p>Working scientifically: opportunities for skills development and independent thinking – this includes</p> <ul style="list-style-type: none"> <li>- Solve problems in practical contexts</li> <li>- Analyse and evaluate existing scientific knowledge</li> <li>- Apply scientific knowledge to practical contexts</li> <li>- Plan scientific investigations and apply these approaches to the practicals</li> <li>- Comment on experimental design and evaluate methods</li> <li>- Evaluate results and draw conclusions</li> <li>- Identify variables</li> <li>- Plot and interpret graphs</li> <li>- Process and analyse data using appropriate mathematical skills</li> <li>- Consider margins of error and accuracy</li> </ul>	<p>Working scientifically: opportunities for skills development and independent thinking – this includes</p> <ul style="list-style-type: none"> <li>- Solve problems in practical contexts</li> <li>- Analyse and evaluate existing scientific knowledge</li> <li>- Apply scientific knowledge to practical contexts</li> <li>- Plan scientific investigations and apply these approaches to the practicals</li> <li>- Comment on experimental design and evaluate methods</li> <li>- Evaluate results and draw conclusions</li> <li>- Identify variables</li> <li>- Plot and interpret graphs</li> <li>- Process and analyse data using appropriate mathematical skills</li> <li>- Consider margins of error and accuracy</li> </ul>	<p>Working scientifically: opportunities for skills development and independent thinking – this includes</p> <ul style="list-style-type: none"> <li>- Solve problems in practical contexts</li> <li>- Analyse and evaluate existing scientific knowledge</li> <li>- Apply scientific knowledge to practical contexts</li> <li>- Plan scientific investigations and apply these approaches to the practicals</li> <li>- Comment on experimental design and evaluate methods</li> <li>- Evaluate results and draw conclusions</li> <li>- Identify variables</li> <li>- Plot and interpret graphs</li> <li>- Process and analyse data using appropriate mathematical skills</li> <li>- Consider margins of error and accuracy</li> </ul>	