

Year 12 Curriculum intent - 2022-23						
	Autumn Term		Spring Term		Summer Term	
	1	2	1	2	1	2
Key Concepts	The Living	The Physical	The Living	The physical	Revision of the living	Revision of the
	Environment	Environment	Environment	Environment	environment	physical environment
						and pollution
	Pupils are given the	This unit focuses on	The continuation of	Pupils will deepen	Pupils will also	
	opportunity to	the physical	this unit will focus	their knowledge and	explore a range of	Pupils will also
	studying the living	processes which	upon how human	understanding of the	practical skills	explore a range of
	environment with	drive our climate and	understanding of the	lithosphere by	including sampling	practical skills
	emphasis placed	their interactions. It	living environment	exploring a key	methodologies,	including sampling
	upon how organisms	places attention on	can lead to well	resource on Earth,	utilisation of data,	methodologies,
	interact with their	anthropogenic	informed decisions	soil. This is utilised as	statistical scientific	utilisation of data,
	biotic surroundings.	activities which may	which will promote	a context for different	methods.	statistical scientific
	Firstly pupils are	threaten these	sustainable human	management		methods.
	introduced to how	processes. From this	activities. Firstly	strategies and		
	the living	management	pupils explore	environmental		
	environment has	techniques can be	examples of habitat	impacts; including		
	been fostered to	explored to reduce	management and	fertility and erosion.		
	develop by a series of	the effects of over-	the provision of			
	physical phenomena	exploitation of	abiotic and biotic	Pollution		
	such as orbital	natural resources.	factors to support	This unit has strong		
	location and	Pupils are introduced	species survival.	links to the physical		
	behaviour and the	to the physical	Pupils are introduced	environment. Pupils		
	atmosphere. Pupils	processes driving the	to the concept of	will gain a more in		
	will explore the ways	planet including the	plagioclimax habitats	depth knowledge the		
	in which biota have	atmosphere, wind	and their importance	properties of various		
	driven change to the	patterns, ocean	as well as the	pollutants and		
	planet and how the	currents. Following	management of both	innovative ways their		
	historical conditions	this pupils explore	desirable and	impacts can be		
	have changed. Pupils	how anthropogenic	undesirable species.	minimised. Both		
	investigate how our	changes may be		contemporary and		
	monitoring of these	causing shifts in		historical incidences		



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	conditions has	these patterns		are explored.			
	developed over time.	resulting in global					
	Following this pupils	climate change; and					
	will delve into the	the difficulties in					
	world of	predicting and					
	conservation	monitoring the					
	exploring a range of	impacts. They will					
	strategies, complex	investigate ozone					
	ecosystem	depletion. Following					
	interactions, the key	this pupils will study					
	legislation	the hydrosphere as					
	surrounding	an example of					
	conservation efforts	exploitation and					
	and how the impacts	sustainable					
	are monitored and	development. Pupils					
	measured.	are given opportunity					
		to explore our					
		exploitation of					
		geological resources					
		and the impacts.					
		Finally pupils will be					
		deepen their					
		understanding of					
		biogeochemical					
		cycles.					
Knowledge &	Students following the	AQA A-level	Students following the	AQA A-level	Students following the	AQA A-level	
Understanding	Environmental Science	specification will build	Environmental Science specification will build		Environmental Science specification will build		
	upon their knowledge	and understanding	upon their knowledge	and understanding	upon their knowledge	and understanding	
	throughout the year. Pupils will continuously		throughout the year. Pupils will continuously		throughout the year. Pupils will continuously		
	be introduced to new	content and concepts	be introduced to new content and concepts		be introduced to new content and concepts		
	relevant to today's env	relevant to today's environmental landscape.		relevant to today's environmental landscape.		relevant to today's environmental landscape.	
	Students are provided with ample		Students are provided with ample		Students are provided with ample		
	opportunity to apply these in contextualised		opportunity to apply these in contextualised		opportunity to apply these in contextualised		



situations. Students will obtain scientific knowledge which can be applied to many different industries allowing them to potentially access many different sectors.

The Living Environment

- How the main conditions, which allow early life to develop and survive on planet Earth, came about
- How the presence of life on earth has brought about environmental change
- How historical conditions for life were monitored in the past and how these methods have been developed over time
- The importance of the conservation of biodiversity
- Sustainable habitat management
- Protecting species
- Ecosystem interactions
- Human influence of biodiversity
- Setting conservation priorities
- Legislation
- Captive breeding and release programmes
- Habitat conservation
- Ecological monitoring techniques

The physical environment

- The atmosphere
- Global climate change

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The Living Environment

- How adaptation to the environment affects species habitat requirements and influences conservation decision making
- Ecological terminology to describe the roles of living organisms
- Key ecological terminology to describe roles of living organisms
- Control of ecological succession in conserving plagioclimax
- Population control of desirable and undesirable species

The physical Environment

- Soil fertility
- Soil degradation and erosion
- Management strategies

Pollution

- Pollutant properties
- Factors effecting dispersal
- Factors driving degradation
- Principles of control
- Control techniques of many pollutants
- Development of new control technology

situations. Students will obtain scientific knowledge which can be applied to many different industries allowing them to potentially access many different sectors. During this term pupils will gain more experience in research methods as well as exam technique utilising AS assessment resources.

- Exam technique
- Practical skills
- Working scientifically
- Evaluation and critical thinking



	Ozone depleticThe hydrosphe		-			
	- Mineral resources - Biogeochemical cycles					
Assessment	End of unit	End of Unit	End of unit	End of Unit	End of unit	End of Unit
7.0000011101110	assessments	Assessments & mock exams	assessments	Assessments & mock exams	assessments	Assessments & mock exams
Why this?	The physical and living environment units		Continuing to build upon the themes and		Having covered the entirety of the	
Why now?	' '		knowledge within both units. The living		traditionally AS content students are well	
	principles without which pupils will be		environment utilises pupils knowledge of		equipped to begin developing their ability to	
	unable to fully grasp content to follow.		climate change from term one to		evaluate and apply knowledge to more	
	Conditions for life are the reason for living		contextualise adaptations. Building from		nuanced contexts. With increasing scientific	
	organisms and therefo	re a primary driver	GCSE Biology pupils focus on ecological		vocabulary pupils are able to access	
	hence their introducto	ry nature. The living	principles, these are touched upon in the first			
	environment is designe	ed to capture pupils	term but with specific examples utilised. The physical environment continues to apply			
	passions by allowing th	nem to explore				
	different habitats and	contextualise issues				
	which pupils will further build upon. The physical environments climate change sections is studied first as due to its topical		key ecological concepts in a niche sector by students investigating soil and they ways it may affect the planet.		method when conducting practical elements of the course.	
	and relevant nature it provokes scientific		Pollution is introduced here as the content is			
	engagement. This is also content covered in		likely to be least familiar with students. This			
	less detail through the GCSE Chemistry		provides time for pupils to build confidence			
	specification allowing pupils to utilise their		and develop mastery over the content.			
	knowledge, before introducing new concepts like ozone depletion and mineral resources.					
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Skills &	- Wider	- Wider	- Wider	- Wider	- Wider	- Wider
Characteristics	application	application	application	application	application	application
	- Writing skills	- Writing skills	- Writing skills	- Writing skills	- Writing skills	- Writing skills
	- Comparison	- Comparison	- Comparison	- Comparison	- Comparison	- Comparison
	- Mathematical	- Mathematical	- Mathematical	- Mathematical	- Mathematical	- Mathematical
	skills	skills	skills	skills	skills	skills



		- Research	- Research	- Research - Working scientifically - Statistical analysis - Sampling methodology - Research - Working scientifically - Statistical analysis - Sampling methodology	
Aspirations &	By studying Environmental Science pupils are p	preparing themselves for	future labour market de	evelopments in a growing local industry.	
Careers	Career options are broad and may include: - Environmental consultant - Horticulturalist - Environmental engineer - Minerals surveyor - Conservation officer - Sustainability consultant - Waste management officer - Toxicologist - Landscape architect - Civil engineering				
End points	By the end of year 12, students will have developed a comprehensive knowledge surrounding the living environment (3.2), the physical environment (3.2) and pollution (3.4). They will have developed mastery surrounding the scientific jargon to be utilised in these environmental sectors. Pupils will have gained an deep understanding of the scientific method and be able to confidently use their critical thinking skills to evaluate scientific research.				