

| John Taylor High School Home of the National Forest Teaching School | | | Subject Curriculum Map: | Environmental Science | Year Group: | 12 |
|--|--|---|---|--|---|--|
| Term | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| Topic | Conditions for life on Earth Conservation of Biodiversity Atmosphere | Conservation of Biodiversity Hydrosphere | Conservation of Biodiversity Hydrosphere | Life Processes in the Biosphere and Conservation Planning Lithosphere | Biochemical Cycles Lithosphere | Soils Research Methods |
| Big Question | <ul style="list-style-type: none"> How do the conditions on Earth support life? Why is conservation important? How do humans impact on the composition of the atmosphere? | <ul style="list-style-type: none"> Why is conservation important? How do humans make use of and impact on the hydrosphere? | <ul style="list-style-type: none"> Why is conservation important? How do humans make use of and impact on the hydrosphere? | <ul style="list-style-type: none"> How do organisms adapt to and change their environment? How do human obtain and exploit minerals from the lithosphere? | <ul style="list-style-type: none"> How do humans influence natural cycles? How do human obtain and exploit minerals from the lithosphere? | <ul style="list-style-type: none"> How do humans affect soil fertility? How do scientists study the environment? |
| Content | <ul style="list-style-type: none"> Understand how the conditions on planet Earth allowed early life to develop and survive. Understand how biota have helped to maintain stability. understand how changes in monitoring methods have allowed more accurate estimation of past conditions on Earth. Know the importance of the conservation of biodiversity How atmospheric energy processes involving ultra violet (UV), infrared (IR) and visible light in the stratosphere and troposphere affect life-support systems how interconnected natural systems cause environmental change Ozone depletion | <ul style="list-style-type: none"> Understand how humans influence biodiversity, with examples in a range of different context Develop an understanding of methods of conserving biodiversity The impact of unsustainable exploitation Analysis and evaluation of strategies for sustainable management the importance of thermohaline circulation in distributing heat and regulating climate | <ul style="list-style-type: none"> Develop an understanding of methods of conserving biodiversity Increasing sustainability by treating contaminated water Increasing sustainability by economical use and the exploitation of new sources | <ul style="list-style-type: none"> Learn how adaptation to the environment affects species' habitat requirements and influences conservation decision-making describe the roles of living organisms in their habitats and their interactions with the physical environment The control of ecological succession in conserving plagioclimax habitats How population control and the management of desired and undesired species affects the conservation of biodiversity Minerals extracted from the lithosphere Geological processes that produced localised concentrations of recoverable mineral deposits Reserves and resource | <ul style="list-style-type: none"> The importance of biogeochemical cycles for living organisms The carbon cycle including human influences The nitrogen cycle including human influences The phosphorus cycle including human influences How a range of exploratory techniques work Factors affecting mine viability Control of the environmental impacts of mineral exploitation Strategies to secure future mineral supplies | <ul style="list-style-type: none"> How human activities affect soil fertility Causes of soil degradation and erosion Soil management strategies to increase sustainability Develop an understanding of the key research methods that environmental scientists use to monitor and explain environmental change. |
| Assessment | Students will be assessed through homework activities, lesson starter activities, end of Unit class tests and a range of activities aimed at developing their understanding of research methods, including fieldwork.. | | | | | |