



Arundel Wetland Centre
Guided Learning Sessions
Curriculum Links
KS4 Science

Key Stage 4

Biology

Chemistry

Ecosystems

Photosynthesis

Evolution, inheritance and variation

Earth and atmospheric science

levels of organisation within an ecosystem

some abiotic and biotic factors which affect communities; the importance of interactions between organisms in a community

how materials cycle through abiotic and biotic components of ecosystems

the role of microorganisms (decomposers) in the cycling of materials through an ecosystem

organisms are interdependent and are adapted to their environment

the importance of biodiversity

methods of identifying species and measuring distribution, frequency and abundance of species within a habitat

positive and negative human interactions with ecosystems

photosynthesis as the key process for food production and therefore biomass for life

the process of photosynthesis

factors affecting the rate of photosynthesis

the process of natural selection leading to evolution

the evidence for evolution

developments in biology affecting classification

evidence, and uncertainties in evidence, for additional anthropogenic causes of climate change

potential effects of, and mitigation of, increased levels of carbon dioxide and methane on the Earth's climate

the Earth's water resources and obtaining potable water

Environmental change in freshwater ecosystems



Wetland conservation in action



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Curriculum Links
KS4 Geography

Key Stage 4

Physical geography: processes and change

People and environment: processes and interactions

Geomorphic processes and landscape – How geomorphic processes at different scales, operating in combination with geology, climate and human activity have influenced and continue to influence the landscapes of the UK. This should include detailed reference to at least two different and distinctive physical landscapes in the UK.

Changing weather and climate – The causes, consequences of and responses to extreme weather conditions and natural weather hazards, recognising their changing distribution in time and space and drawing on an understanding of the global circulation of the atmosphere. The spatial and temporal characteristics, of climatic change and evidence for different causes, including human activity, from the beginning of the Quaternary period (2.6 million years ago) to the present day.

Global ecosystems and biodiversity – An overview of the distribution and characteristics of large scale natural global ecosystems. For two selected ecosystems, draw out the interdependence of climate, soil, water, plants, animals and humans; the processes and interactions that operate within them at different scales; and issues related to biodiversity and to their sustainable use and management.

Resources and their management – An overview of how humans use, modify and change ecosystems and environments in order to obtain food, energy and water resources. Detailed study of one of either food, energy or water, recognising the changing characteristics and distribution of demand and supply, past and present impacts of human intervention, and issues related to their sustainable use and management at a variety of scales.

Environmental change in freshwater ecosystems



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