Biology Year 12 Summer Term Curriculum Plan

Overview for Topic 10 – Ecology

Students should understand and identify the main components of an ecosystem including how nutrient cycles (carbon and nitrogen) are important for ecosystems to function. Students will consider the effects humans have on ecosystems from climate change to biodiversity. Students will also use different methods to evaluate these effects such as sampling techniques, calculating biodiversity and statistical analysis.

	Content covered by Ms Raggett	Content covered by Ms Clayton
Week beginning 04/05/2020	• Understand what an ecosystem is • Recap tropic levels and calculate efficiency of the energy transfer between tropic levels • Explain how energy is lost between tropic levels	• Explain (using data, where appropriate) how humans and human activities have impacted global conservation and biodiversity including in terms of depletion of resources, greenhouse emissions and fish stocks
Week beginning 11/05/2020	• Understand the advantages/disadvantages of representing ecosystems using pyramids of number, biomass and energy.	• Explain how the effects of humans and human activity on the environment have been managed • Understand the effect of treaties such as CITES on global conservation and biodiversity
Week beginning 18/05/2020	• Define: pioneer species, colonisation, succession and climax community • Describe the process of succession	• Understand the role of microorganisms in the carbon cycle
Week beginning 01/06/2020	• Define abiotic and biotic factors • List some abiotic and biotic factors and how they can be measured	• Understand the role of microorganisms in the nitrogen cycle
Week beginning 08/06/2020	• Understand techniques that are used to determine abundance and distribution of organisms (including ACFOR, types of quadrat, transects, percentage cover and individual counts)	• Use statistical tests to analyse data (t-test, Spearman's rank and correlation co-efficient)
Week beginning 15/06/2020	• Topic 10 assessment	• Topic 10 assessment
Week beginning 22/06/2020	• Year 13 transition work	• Year 13 transition work