

Peak District National Park Activities for A level Biology

Limestone Grassland Ecology

Age Range: Y12 - 13
Duration: 10:30 – 16:00
Location: Castleton - Cavedale

This program is aimed directly at the A level Biology required practical on Ecology. It is an investigation into the effect of a named environmental factor on the distribution of a given species using different sampling techniques, using limestone grassland as an example. The named environmental factor is aspect/light level and the named species can be selected from a number of species present.

Main Curriculum Links - Biology A level syllabuses:

- AQA - A level Biology practical activity requirements – investigation of a named environmental factor on the distribution of a given species
- OCR - A level Biology practical activity requirements – Use of sampling techniques in fieldwork
- Edexcel – A level Biology practical activity requirements – Investigate the effect of one abiotic factor on the distribution and morphology of one species.

Key Learning Objectives Students should learn	Experience
<ul style="list-style-type: none">• How biotic and abiotic factors are interrelated in an ecosystem.• How organisms are adapted to their environments.• The physical and chemical factors affecting the distribution of organisms.• The concept of energy flow through an ecosystem• That ecosystems are affected by human activity and are carefully monitored and managed.	<ul style="list-style-type: none">• Thinking Skills – All activities promote independent enquiry, creative thinking, team working and effective participation.• Different data collecting techniques, using quadrats, line transects, ID keys , using various meters and pH tests.• Collecting data for statistical analysis, limitations and evaluation of techniques.

Ideas for Extending Learning Before/After the Visit

Before: It is helpful if students are familiar with the concept of National Parks and have some understanding of what makes them special. A knowledge of basic ecological ideas, including succession adaptation, abiotic parameters.

After: You may also want to look at our [education resources page](#), and in particular the resources associated with this subject matter including a detailed analysis and a stats package.