



AS & A2 Biology for WJEC

Tailored Courses

Slapton Ley

Please visit

<http://www.field-studies-council.org/outdoorclassroom/biology/WJEC/>  
for alternative A-level WJEC programmes

## **OVERVIEW**

## **OPTIONS**

### **Ecological Introduction**

A basic introduction to the key ecological concepts and terminology that will be used for the rest of the course. Introduction to sampling techniques and strategies.

### **Freshwater Ecology**

Students will use Slapton Ley to investigate variations in distribution and abundance of freshwater invertebrates. Alternatively Slapton Wood stream may be used depending on time of year and antecedent weather conditions. The study will also allow students to study trophic levels and energy flow within an ecosystem.

### **Rocky Shore Ecology**

Students will carry out several investigations on the rocky shore at Gorah Rocks, Prawle, to allow them to collect and analyse data relating to the distribution and abundance of rocky shore organisms. Students will have the opportunity to interpret data relating to species distribution and global warming.

### **Succession**

An investigation into the process of plant succession, which is occurring on the shingle ridge at Slapton Sands. Students will collect and analyse data on the vegetation, climate and soil factors along a transect line. Discussion of management strategies used on the shingle ridge will take place.

### **Woodland Ecology**

Students will use a variety of techniques and sampling strategies to investigate variations in distribution and abundance of woodland flora and invertebrates in Slapton Woods, part of the Slapton Ley NNR.

### **Conservation**

A walk round the NNR discussing sustainable management and conservation techniques used.

### Content of each topic

| Topic                     | Definitions & Concepts                                | Sampling and Experimental Techniques               | Data Analysis and Presentation Skills         | How Science Works                                      |
|---------------------------|---|--|---|--|
| <b>Ecological Intro</b>   | Species, habitat, ecosystems, abiotic/biotic factors  | Random sampling. Transects. Quadrats               |   |  |
| <b>Freshwater Ecology</b> | Trophic levels. Energy transfer. Predator-prey cycle. | Random sampling                                    | Species diversity index. Mann Whitney U-test. | Human impact on the flow of energy through ecosystems. |
| <b>Rocky Shore</b>        | Population size. Inter/intra specific competition.    | Random sampling. Belt transect.                    | Mean, mode, median.                           |  |
| <b>Succession</b>         | Primary succession. Climax community.                 | Systematic sampling. Line transect. Point Quadrats | Kite diagrams. Spearmans Rank                 | Conservation. Sustainable management.                  |
| <b>Woodland Ecology</b>   | Species, habitat, ecosystems, abiotic/biotic factors  | Random sampling. Transects. Quadrats               | Mean, mode, median                            | Conservation. Sustainable management.                  |
| <b>Conservation</b>       |   |  |   | Conservation. Sustainable management.                  |