

## PROVISIONAL PROGRAMME

### Aim

To describe stages of a named example of succession, and to consider the effects of management on succession.

### Introduction

- The development of ecosystems over time.
- Stages of succession and the influence of named species on the environment.
- Definitions, pioneer species, climax community and succession.

### AM: Grassland through to woodland succession

- Line transect of Ground Flora showing successional changes from grassland, through scrub to woods.
- Point frame to collect percentage frequency data of sample species
- Measurements of abiotic factors; soil and air temperature, light and soil pH

### PM: Comparing two woodlands at different stages of succession

- Random sampling of ground layer using gridded quadrats
- Percentage cover data of canopy layer with gridded quadrats
- Measurements of abiotic factors; soil and air temperature, light and soil pH

### Follow up

- Undertake Spearman's Rank to analyse abiotic data from the transect – better stat as need to look at correlations.
- Undertake Mann Whitney U test for biotic data from the two woodlands.
- Discuss results and draw conclusions
- Discuss limitations

## SPECIFICATION LINKS

### 3.4.1 The dynamic equilibrium of populations is affected by a number of factors;

A critical appreciation of some of the ways in which the numbers and distribution of organisms may be investigated.

Random sampling with quadrats and counting along transects to obtain quantitative data.

The use of percentage cover and frequency as measures of abundance.

Risk management, ethical considerations, correlations and causal relationships.

Population size may vary as a result of abiotic factors.

### 3.4.7 Ecosystems are dynamic systems usually moving from colonisation to climax communities in the process of succession.

Succession from pioneer species to climax community.

A critical appreciation of some of the ways in which the numbers and distribution of organisms may be investigated.

Random sampling with quadrats and counting along transects to obtain quantitative data.

The use of percentage cover and frequency as measures of abundance.

### Investigative and practical skills

Fieldwork involving the use of frame quadrats and line transects, and the measurement of a specific abiotic factor.

Collection of quantitative data from at least one habitat, and the application of elementary statistical analysis to the results.

The use of percentage cover and frequency as measures of abundance.

### RECOMMENDED DAY LENGTH

9.00-16.00

**SAFETY** All activities are Risk Assessed. Recommended 1 adult per group.

**CLOTHING** Appropriate outdoor clothing. Indoor & outdoor footwear.

### VISITING TEACHER ROLE

Teachers to support FSC staff by circulating the students, keeping them on task. Teachers are responsible for behaviour.

**RESOURCES** All resources are provided.

**ICT** We have the option of using a digital camera to record techniques.



### Practical Skills Assessment (PSA)

Opportunity to assess students during ecology practical activities.

### ASSESSMENT

Progress assessed by open ended questioning, peer discussions, presentations and use of knowledge and skills in different situations.

### PRIOR LEARNING

Simple definitions and terms

### FUTURE LEARNING

Consider effects of human Influences on the environment