

PROVISIONAL PROGRAMME

Aim

To assess the abundance and distribution of ground flora, in order to describe the stages of a named example of succession to a climax community.

Introduction

- The development of ecosystems over time.
- Stages of succession and the influence of named species on the environment.
- Definitions, 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 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
- Random sampling of canopy layer with gridded quadrats
- Measurements of abiotic factors; air temperature, solar energy input, and edaphic factors.

Follow up

- Undertake Spearman's Rank to analyse abiotic data from the transect
- Undertake Mann Whitney U test to analyse biotic data from the two woodlands
- Discuss results and draw conclusions
- Discuss limitations

SPECIFICATION LINKS

Topic 5: On the Wild Side

- Explain that the numbers and distribution of organisms in a habitat are controlled by biotic and abiotic factors.
- Describe the concept of succession to a climax community.

Core Practical

Describe how to carry out a study on the ecology of a habitat to produce valid and reliable data (including the use of a quadrats and transects to assess abundance and distribution of organisms and the measurement of abiotic factors e.g. solar energy input, climate, topography, oxygen availability and edaphic).

RECOMMENDED DAY LENGTH 9.30-16.00

SAFETY All activities and sites 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.



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

HOW SCIENCE WORKS

2b, 2c, 3, 5a, 6