

PROVISIONAL PROGRAMME

Aim

To describe stages of a named example of primary 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, primary succession, and climax community.

Grassland through to woodland succession (am)

- Belt transects measuring distribution and abundance 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

Follow up

- Plot kite diagrams of biotic data from the transect
- Undertake Spearman's Rank to analyse abiotic data from the transect
- Discuss limitations

Energy flow and terrestrial invertebrates (pm)

- Use Pitfall traps to sample terrestrial invertebrate population in a deciduous woodland
- Bush beating to sample terrestrial invertebrates
- Draw Pyramids of number and biomass
- Discuss limitations of the ecology investigation

SPECIFICATION LINKS

Practical Skills:

Collection of quantitative data

- Measure the effect of a changing abiotic factor on the distribution and/or abundance of an organism.

Presentation, analysis, and evaluation of quantitative data

- plot kite diagrams.
- Assess the limitations of and ecological investigation.
- **5.3.1 a + c +d** - Define ecosystem, biotic and abiotic factors, producer consumer, decomposer and trophic level.
- **5.3.1 f + g** - Outline how energy transfers between trophic levels can be measured, and discuss the efficiency of energy transfers between trophic levels.
- **5.3.1 i** - Describe one example of primary succession resulting in a climax community.
- **5.3.1 j** - describe how the distribution and abundance of organisms can be measured, using line transects, belt transects, quadrats and point quadrats.
- **5.3.2 f** Explain how the management of an ecosystem can provide resources in a sustainable way, with reference to timber production in a temperate country.

RECOMMENDED DAY LENGTH
9.30-16.00

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.



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