

PROVISIONAL PROGRAMME

Introduction

- Definitions; populations, ecology, biotic, abiotic
- Sampling methods; random, systematic, stratified
- Different quadrat types – advantages and limitations.

Woodland Investigation (am)

- A brief introduction to woodlands and ways of investigating them
- Mark release recapture on terrestrial invertebrates.
- Randomly sample using gridded quadrats in one deciduous woodland and measure abiotic and biotic factors, visit a second woodland to see the differences
- Start a belt transect from grassland into woodland measuring abiotic and biotic factors and using a point frame
- List all independent and dependent variables and controls
- Draw brief conclusions and discuss how it could be improved

Mini Projects (pm)

- Mark release recapture on terrestrial invertebrates.
- Students are to design a mini project around the centre.
- A planning sheet must be completed. The sheet includes sampling technique, variables, controls and statistics.
- Students produce a short presentation about any difficulties in planning.

SPECIFICATION LINKS

Biological Principles

Random sampling results in the collection of data which is unbiased and suitable for statistical analysis.

Investigative and Practical Skills

Use their knowledge and understanding to pose scientific questions and define scientific problems

Carry out investigative activities, including appropriate risk management, in a range of contexts.

- Analyse and interpret data they have collected to provide evidence
- Evaluate their methodology, evidence and data, resolving conflicting evidence.

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.

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.

The use of mark-release-recapture for more mobile species.

RECOMMENDED DAY LENGTH

9.30-16.00

SAFETY All sites and activities are risk assessed. Recommended 1 adult per group

CLOTHING Appropriate outdoor clothing. Indoor and 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 There is 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, prior knowledge from specifications

FUTURE LEARNING

Use techniques learn to develop own individual study