

### PROVISIONAL PROGRAMME

#### Aim

A comparison of biodiversity in two freshwater microhabitats, and two woodland ecosystems.

#### Introduction

- Background on freshwater and terrestrial ecosystems.
- Effects of management of ecosystems
- Classification and using keys

#### AM

##### Freshwater Biodiversity

- Sweep sampling of 2 Micro-habitats
- Field identification of invertebrates using dichotomous keys
- Analysis of data using Simpson's Diversity Index.

#### PM

##### Terrestrial Biodiversity

- Random sampling of ground flora with gridded quadrats of two woodland ecosystems (choose between - managed and unmanaged, or two woodlands representing different stages of succession).
- Field identification of flora using dichotomous keys.
- Analysis of data using Simpson's diversity index

#### Follow up

- Analysis of data using Simpson's Diversity Index
- Summary, conclusion and limitations.
- Discussion of scenarios of human influences on studied biodiversity levels.

### SPECIFICATION LINKS

- 3.2.1 - Living organisms vary, variation is due to genetic and environmental factors. Random sampling, normal distribution, mean standard deviation.
- 3.2.8. Classification is a means of organising the variety of life based on relationships between organisms and is built round the concept of species.
- 3.2.11 Biodiversity may be measured within a habitat. - Species diversity; Diversity may relate to the number of species present in a community. The influence of deforestation and the impact of agriculture on species diversity. - outcomes of the unit in relation to biodiversity.

*Candidates should be able to*

- *calculate the index of diversity from suitable data.*
- *interpret data relating to the effects of human activity on species diversity and be able to evaluate associated benefits and risks.*
- *discuss the ways in which society uses science to inform the making of decisions relating to biodiversity.*

#### 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. Students may bring their own rubber gloves for fieldwork.

#### 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 an Ecosystem