FSC Course: Freshwater Biodiversity AS

OCR Module 3: Biodiversity and Evolution
Unit 5.3.1 Biodiversity

PROVISIONAL PROGRAMME

Aim

A comparison of biodiversity between a woodland and meadow pond Ecosystem.

Introduction

- A comparison of two Freshwater Pond Ecosystems
- Oxygen adaptations (behavioural, physiological and anatomical) of freshwater invertebrates.

Field Site 1: Meadow Pond

- Risk assessment of the pond.
- Random Sampling using Sweep sampling of 3 Micro-habitats
- Field identification of invertebrates using dichotomous key.
- Measuring abiotic factors

Field Site 2: Woodland Pond

- Repeat of fieldwork techniques

Follow up

- Calculation of Simpson's Diversity Index
- Summary, conclusion as group presentations
- Discussion of the limitations of data collection using random sampling, and of data collection in the field.

RECOMMENDED DAY LENGTH
9.00-16.00

SAFETY All activities and sites 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.

SPECIFICATION LINKS

Module 3: Biodiversity and Evolution

2.3.1 Biodiversity

2.3.1 a: Define species, habitat and biodiversity.

2.3.1 c: Explain the importance of sampling in measuring the biodiversity of a habitat.

2.3.1 d: describe how random samples can be taken when measuring biodiversity.

2.3.1 e: Describe how to measure species richness, species evenness in a habitat.

2.3.1 f: Use Simpson's Index of Diversity (D) to calculate the biodiversity of a habitat.

2.3.1 g: Outline the significance of both high and low values of Simpson's Index Diversity (D).

2.3.2 Classification

2.3.2 f: Use a dichotomous key to identify a group of 6 animals.

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

HOW SCIENCE WORKS:
2b,2c, 3, 4, 6