

PROVISIONAL PROGRAMME

Aim

A comparison of biotic and abiotic factors in a woodland and meadow pond Ecosystem.

Introduction

- Background to Freshwater Ecosystems
- Food chains and Food Webs
- Risk and ethical assessment of the fieldwork.

Field Site 1: Meadow Pond

- Random Sampling using Sweep sampling of 3 Micro-habitats
- Field identification of invertebrates using dichotomous keys
- Measuring abiotic factors

Field Site 2: Woodland Pond

- Repeat of fieldwork techniques

Follow up

- Construct Pyramids of numbers and biomass
- summary, conclusion and limitations
- Exam question used to discuss application of work to exams and coursework

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.
- Carry out calculations to determine the efficiency of energy transfer between trophic levels.
- Explain how the concept of niche accounts for the distribution and abundance of organisms in a habitat.

Covers aspects of core practical:

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

RECOMMENDED DAY LENGTH 9.30-15.30

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.



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 and management on the environment

HOW SCIENCE WORKS

2, 3, 4, 5, 6