

PROVISIONAL PROGRAMME

POND INVESTIGATION

- Introduce microhabitats, biotic and abiotic factors.
- Feeding relationships in the pond and construction of food chains.

Field Site 1: Meadow Pond

- Sweep sampling of invertebrates in the pond.
- Identifying invertebrates using keys.
- Measuring abiotic factors including light levels and substrate depth.

Review

- Construct pyramids of numbers to illustrate the feeding relationships in the pond.

WOODLAND INVESTIGATION

- Comparison of deciduous and coniferous woodland.

Field Sites 2 & 3: Deciduous & Coniferous Woodland

- Random sampling of ground layer using a quadrat.
- Identifying vegetation using keys.
- Measuring micro-climate including temperature, light, wind speed, precipitation and humidity.
- Sample soils for pH.

Review

- Compare the vegetation, soils and microclimate in the two woodlands.
- Consider the limitations of the fieldwork.

LEARNING OUTCOMES

Most students will (N.C. Level 5/6)

- recognise that feeding relationships form food chains
- explain why it is necessary to use a reasonably large sample when investigating the habitat preferences of small invertebrates
- explain that a variety of organisms are found in different habitats because of differences in environmental factors.
- sequence a food chain.
- identify features which are different in different habitats.
- identify predators and prey and their features.
- explain the direction of arrows in a food chain.
- describe and explain the relationships that exist between plants, animals and the environment.

Some students will not have made as much progress and will (N.C. Level 4/5)

- recognise that feeding relationships form food chains
- explain why it is necessary to use a reasonably large sample when investigating the habitat preferences of small invertebrates
- explain that a variety of organisms are found in different habitats because of differences in environmental factors.
- sequence a food chain.

Some students will have progressed further and will (N.C. Level 6/7)

- describe adaptations to life in water.
- pick out appropriate adaptations and explain clearly their significance.
- identify a suitable question for investigation.
- describe some strategies which plants and animals adopt to avoid climatic stress.
- explain the advantages that adaptations give an organism.

SAFETY All activities and sites are risk assessed.
Recommended adult: child ratio of 1:12

CLOTHING Appropriate outdoor clothing. Indoor & outdoor footwear.

BEHAVIOUR Teachers are responsible for good behaviour & lunchtime supervision.

RESOURCES All resources are provided.

ICT There is the option of using a digital camera to record techniques. Photos on a disk cost £5

ASSESSMENT

Progress assessed by open-ended questioning, peer discussion and explanation of hypotheses and results.

PRIOR LEARNING

Review habitats, food chains and ecosystems.

FUTURE LEARNING

Produce a well-structured report that draws on evidence to reach conclusions.

