Woodland Survival

Key Stage 3 Science
Teachers' notes

This unit of work is based upon the first part of ***QCA Science Unit 7C 'Environment and Feeding Relationships'.***

Learning Objectives Covered by this Work

- Know that animals are adapted to their food sources.
- Know the characteristics of predator and prey species.
- Consider adaptations in plants to deter feeding animals.
- Understand that habitats vary and have different features and support different organisms.
- Know that animals are adapted to their environment, including daily and seasonal changes.
- Survey the living things within a habitat.
- Make measurements of environmental changes and interpret these.

Before the Visit

Consider environmental factors in a local woodland and compare to those in contrasting habitats from other parts of the world. What are the limiting factors in each environment likely to be? Consider the animals and plants found in each habitat and adaptations to the environment.

Review vocabulary related to food chains and establish with pupils that these are ways of describing feeding relationships. Use photos, video and preserved and live specimens to compile lists of the adaptations of predator and prey species.

In the Woodland

Observe plant features which may deter feeding animals e.g. holly prickles, nettle stings.

Use differently coloured balls of dough or wool distributed around a defined area to investigate the role of colour in camouflage. Alternatively, place coloured pictures of woodland animals in different locations within the woodland and score for effectiveness of camouflage.

Measure environmental factors including temperature, light, oxygen level and pH.

Survey the animals and plants found in the woodland. For plants, it is not necessary to identify to species level, unless this is obvious. For animals, make use of clues indicating the presence of the animal e.g. footprints, feeding remains.

Make predictions about the plants and animals not recorded at the time of the visit but which might be observed at other times of the day or year. Predict the ways in which environmental factors in the woodland will change (or stay the same) over a 24-hour period. If possible, set up equipment to monitor these changes.

Predict changes in environmental factors in the woodland over the course of a year. How might these changes be reflected in the populations and lives of the flora and fauna? Look for examples of the following adaptations to woodland life:

Dormant structures e.g. deciduous twigs

Early flowering e.g. wood anemone

Climbing habit e.g. ivy, honeysuckle

Bulbs for food storage e.g. bluebell

Food stores e.g. squirrel

Camouflage e.g. deer, owl

Migration e.g. chiffchaff and willow warbler

Hibernation e.g. hedgehog

Overwintering pupae e.g. butterflies and moths

Follow-up Work

Draw line graphs based on data collected over a 24-hour period. If this has not been possible, sketch graphs to predict variations over an equivalent period. Sketch a similar graph showing changes in environmental factors over a year. Identify links between the changes and consider how the variations might affect the animals and plants found.

Extension Activities

Visit the wood at a different time of day to observe bats and moths or to listen to the dawn chorus and at a different time of the year to repeat the work and observe differences.

Woodland Survival

Use this sheet to collect evidence of adaptations to woodland life and record these in words or as drawings.

Key Stage 3 Science

Pupil sheet

A plant with spines, prickles or thorns	Animals that hide using camouflage
A stinging plant	Animals that hibernate
A plant showing dormant structures e.g. buds, twigs	Animals that live underground for protection
A plant using bulbs for food shortage	Birds that migrate in the winter
A plant that flowers in early spring	Animals with an overwintering stage e.g. chrysalis
A plant that climbs towards the light	Animals with a sting