

SCIENCE learning springboards

Pappus

Living things and their habitats

Use secondary sources to construct a food web

Aim: Understand the interrelationship of many species in food webs

The *Pappus* Plant ID sheets include information about the ecological importance of each species, and the food webs that they sustain.

Activity:

Pupils research information to prepare diagrams of food chains and food webs using the *Pappus* Plant ID sheets and other complementary sources.

Details for two specific examples are given elsewhere on this document, for nettles and dandelions.



Food chains: nettles, ladybirds and butterflies

Research the importance of nettles

Aim: Understand that nettles are an important link in the food chain, supporting aphids, some butterflies, ladybirds, spiders and birds such as blue tits

Activity:

Use the *Pappus* Nettle ID sheet to find out more about the food web nettles support; extend this with book and internet research.

- Count the number of ladybirds and ladybird larvae that are found in a nettle patch compared with another plant (not a nettle) close by.

Choose an appropriate way of recording the data and discuss why are there more ladybirds in nettles than in other plants. For a clue, look also at aphid numbers.

There is a 'nettles' website that contains more information about why nettles are vital to wildlife:

Nettles



www.pappusproject.eu

Living things and their habitats

Focus on the dandelion and its place in food chains

Aim: Discover the importance of dandelions in food chains

Activity:

Pupils start with an exploration of the grounds or gardens to find dandelions. Can they find any evidence of creatures that are using dandelions in some way?

To answer the question pupils should use the *Pappus* Plant ID sheet for dandelion to identify its value within the food web – additional research via the internet and books will also be valuable as complementary materials.

It may surprise pupils to learn that this 'weed' provides the following:

- an early nectar source in spring
- a source of pollen
- seeds for seed-eating birds such as goldfinch and sparrow
- leaves are a rich mineral source for rabbits and guinea pigs.

Dandelions were also commonly used in traditional herbal remedies for humans.

Habitats: horse chestnut leaf miner

Discover the secret tunnels of the miner moth

Aim: Understand the habitat and life cycle of minute moth larvae in leaf tunnels

Activity:

Pupils can diagnose leaf miner infestation by holding a leaf up to the light and spotting the caterpillars or pupae (circular dark patches) inside the discolored area of the leaf.

One of the biggest pests for the horse chestnut, this insect comes originally from Macedonia, and is now widespread in Europe.

Three or four generations of this moth can hatch every year from May to September and a heavily infested tree can harbour up to half a million leaf miner moths. This pest has no natural enemies, does not contribute to the food chain and so a tree exposed to it is unprotected.

