



The hedgerow

Curriculum links:

- **Science** Living things
Environmental awareness and care
- **Geography** Human environments
- **SPHE** Myself and the wider world

Lesson objectives:

To explore food chains in detail and to learn about the existence of food webs. To acknowledge the schemes in place to help the farmer manage the environment on his/her farm.

Teacher guidelines

It is suggested that teachers ensure that students are familiar with the vocabulary and concepts introduced in the previous modules before starting this lesson.

Keywords and concepts introduced in previous modules:

habitat community ground layer grassy layer shrub layer
canopy layer insecticides biodiversity

The hedgerow is a habitat made up of four different layers - the bottom layer, the grassy layer, the shrub layer and the canopy layer. All the different plants and animals which live in the hedgerow form together to create a community.

Keywords for this lesson:

food web Department of Agriculture field margins

The living forest

The living forest contains different layers which support life. The emergent layer is located near the top of the trees where the crown spreads out and is usually very sunny and windy. Here you will find many birds perched, e.g. the blackbird, thrush and barn owl. The canopy layer contains the thick branches of smaller trees, usually rich in foliage, fruits and seeds. It normally sways in a light breeze with dappled sunlight. It is here you would find nesting birds, bats and squirrels. The understorey (hedgerow) is made up of leafy bushes and the tops of smaller trees and is usually dark and humid. Here, the fox and badger amongst other smaller animals can be found. Beneath, lies the forest floor; a carpet of dead leaves, moss and twigs, which is usually dark and very humid. Here you would find small creatures like the hedgehog, mice and moles, and insects (mini-beasts) such as woodlice, slugs and earthworms. The layers of the living forest, especially the hedgerow, rely on each other because many food chains exist within this habitat.

Food chains in the hedgerow

The layers of the hedgerow rely on each other because many food chains exist within this habitat. A food chain is the order by which living creatures make their food or get their energy and all food chains start with the sun. The farmer tries to develop different food chains as they create balance on the farm, helping the soil to be moist and fertile, the grass to grow and the animals to stay healthy.

It is important to note that as you move up the food chain, the animals get bigger but fewer.

Look at the food chain below:



Sun beams help the trees to create leaves. Woodlice feed on the bark of the tree and dead leaves. Woodlice are then consumed by the many mice that live near the base of the tree or in the hedgerow. Birds such as owls that live on the farm consume rodents such as mice and rats. A barn owl is the farmer's friend as it can eat up to 12 mice in a night.

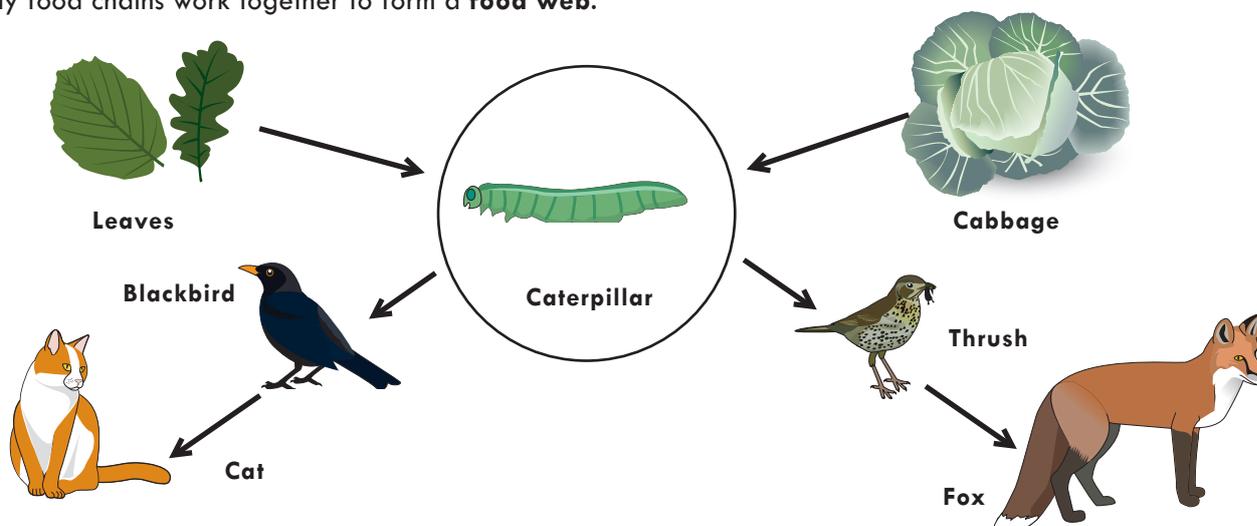
Other food chains include:

- | | | | |
|----------------------------|---------------|-------------|-------|
| 1. Leaves | → Caterpillar | → Thrush | → Fox |
| 2. Dead plants and animals | → Slugs | → Hedgehogs | |
| 3. Cabbage | → Caterpillar | → Blackbird | → Fox |

Food webs and interdependence

All the animals in a food chain are dependent on each other.

Many food chains work together to form a **food web**.



How can the farmer maintain his/her hedgerow?

The farmer works hard to maintain the hedgerow on the farm. Otherwise, it becomes overgrown. Fences may then need to be put up instead, which can have a devastating effect on the wildlife and food chains on the farm. Farmers are restricted from cutting, grubbing, burning, or destruction of vegetation growing on uncultivated land i.e. hedges and ditches during nesting and breeding season for birds and wildlife, from 1st March to 31st August each year. Farmers will usually trim back overgrown areas during the winter months of January and February.

Farmers always avoid spreading chemicals such as fertilisers and pesticides in or around hedgerows, field margins or water bodies.



Suggested activities

- Complete the activity sheet on page 53
- Go on a class walk and get the class to create/sketch different food chains and food webs in their area
- Discuss what would happen to the food chain if one member was removed
- Get each student to choose one animal that lives on the farm and write an essay about where that animal fits into the food chain
- Watch 'The Lion King' and discuss the different positions of the animals in the 'Circle of Life'
- Ideally farmers should trim their hedges in January and February. Why do you think this is so?
- Get the class to create a drama about all the different ways in which the farmer cares for the environment
- List what other food chains you would expect to see on the farm

Learning outcomes:

At the end of this lesson, students should know what food webs are and how the farmer maintains the hedgerow.

Additional resources:

- www.agriaware.ie

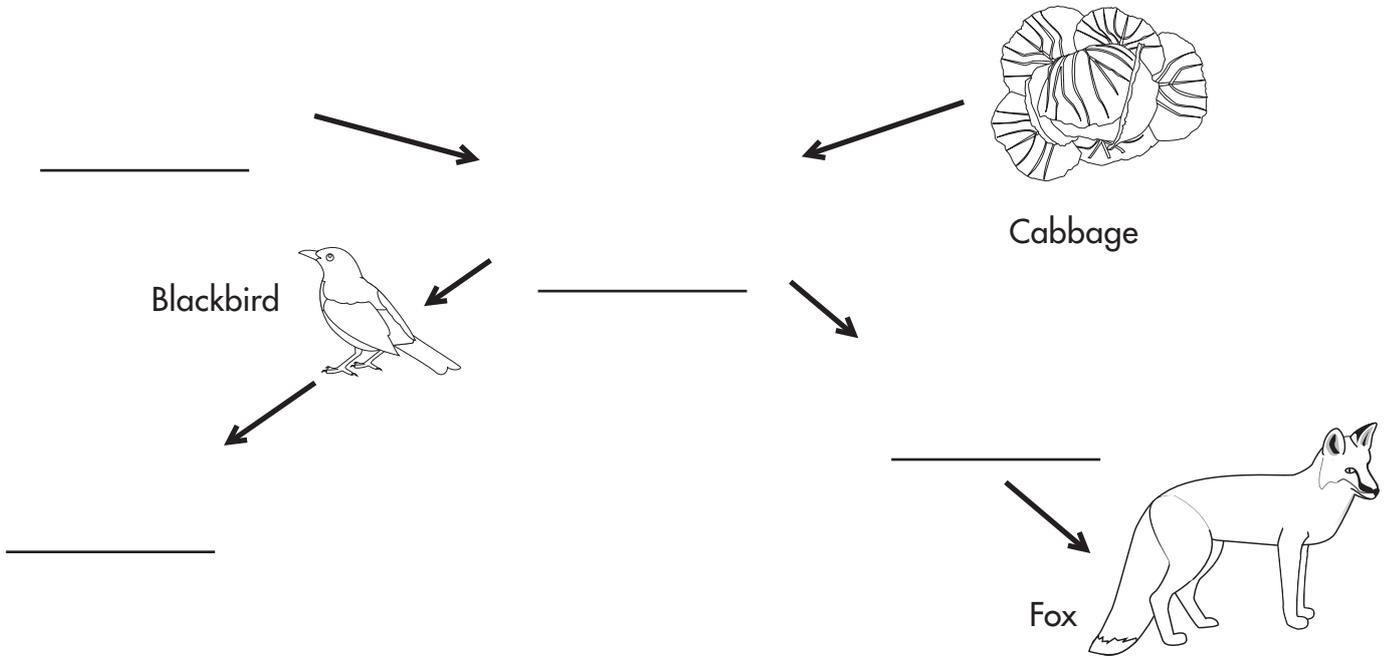


The hedgerow

Name: _____

Date: _____

1 Redraw and label the missing links in this food web



2 Fill in the blanks using the words below

hedgerow order many energy sun web

A food chain is the _____ by which creatures make their food and get _____ from. One common feature is many food chains is the _____. When _____ food chains link together this is called a food _____. Many food webs exist in the _____.

* To be used with teacher guidelines, page 26