Wye
National Nature Reserve
Environmental Education Pack worksheets

www.naturalengland.org.uk

NATURAL ENGLAND

Introduction

This booklet of worksheet ideas forms part of a National Curriculum linked education pack aimed at Key Stage 2 pupils. Some of the activities are adaptable for younger or older age groups, if required.

The worksheets support a combination of activities that are either suitable for Wye National Nature Reserve or the school classroom.

Please note it is not necessary to print one copy of this booklet per child, as a number of the worksheets are designed for shared usage. Worksheets can be printed as individual pages by selecting the page number under the software printing options.

Please note: a colour version of the wildflower identification chart is also available on the CD.

It is expected that teachers/group leaders will make full use of the booklet, printing as many copies as are required to complete the activities described. However, copyright of the text and images within the booklet and education pack remain the property of Natural England, and should not be uploaded to the internet or reproduced for purposes other than those for which it is intended, without prior permission.

A teacher or group leader should visit the reserve and complete a suitable and sufficient risk assessment of all the tasks/activities that will be carried out on the reserve and communicate the findings to those involved.

Learning about butterflies at Wye NNR

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Landscape, features and habitats

Mapping the landscape and its features

Draw your map here

Make sure you include the following on your map:

- title
- key
- scale
- north line/compass rose
- natural features
- man-made features
- direction to your house (blue arrow)
- direction to your school (red arrow)

Historical Studies

Historical treasure hunt

Historical treasure hunt result sheet

The landscape of Wye NNR was formed towards the end of the last Ice Age, between 9000BC and 8000BC. Try to find some evidence of people using the reserve during the Iron Age (approximately 3000BC).

Clue 1

In the woodland is a small hill. How do you think it got there? What do you think it may have been used for?

.....

.....

.....

.....

.....

Clue 2

Head further into the wood and look for a deep ditch and a bank. Why do you think these ditches were dug? Remember that people may have used different methods to identify their land boundaries from those we use today. Also animals would need to be kept within their owners land.

.....

.....

.....

.....

.....

Imagine it took seven men one year to dig 1000 yards of a ditch. They were paid one old pound between them. One old pound = twenty shillings.

How much did each man earn?

.....

How long would it take the same number of men to dig a ditch 3000 yards long?

.....

How long would it take 14 men to dig a ditch 3000 yards long?

.....

Clue 3

Most trees lose their leaves in the autumn but some keep them and these are called evergreen trees. See if you can find a tree like this and make a sketch of one of its branches in the box below.

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Historical Studies

A woodsman's workplace

A medieval woodsman's working area

Make a sketch of the shelter and the kiln.
You might even be able to find a small piece of charcoal near the kiln to use as a drawing material.

What do you notice about this area?

.....

.....

.....

.....

Can you identify the trees?

.....

.....

.....

.....

.....

Habitats

Hazel dormouse

Description

This small rodent looks different from common mice because it has a long, fluffy tail. One of the smaller members of the dormouse family, the hazel dormouse has bright golden fur on its back and a pale underside.
The dormouse has large eyes because it usually only feeds at night.

Habitat

The dormouse lives in thick, deciduous woodland, coppice and thick shrubs. Hazel coppice is the preferred habitat.

Biology

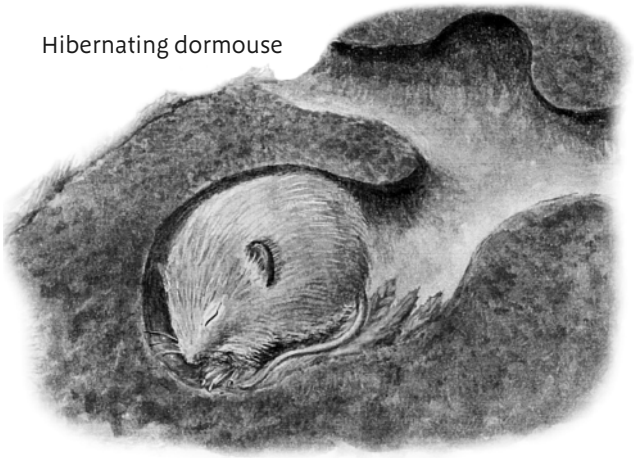
Dormice sleep a lot of the time. Their popular English name is thought to come from the French word 'dormir' which means 'to sleep'. Dormice sometimes hibernate for as much as seven months of the year.

Dormice eat many different types of food. They eat flowers and pollen during the spring, insects in the summer and fruits, berries and nuts, particularly hazelnuts, in the autumn. Large quantities of hazelnuts and blackberries are eaten in order to store up fat to keep them alive during the winter. This variety of food must be available within a small area because dormice do not like to cross open ground.

Dormice build round nests made of shredded honeysuckle bark or clematis, in which to sleep during the daytime, usually situated in a bush or bramble patch.

As well as their grass-woven nests, dormice sometimes use holes in tree cavities and dormouse boxes for nesting. They breed in the summer, producing on average 4 young at a time and they can raise two litters a year. The young dormice stay with their mother until they are about ten weeks old.

Hibernating dormouse



When the cold weather begins in October, the dormice build their nest under the ground or on the woodland floor under a pile of leaves. They then curl up and go to sleep until April. This is called hibernation. During hibernation, dormice slow down their bodily functions and go into a really deep sleep. While they are like this they even feel cold to touch.

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Habitats

Hazel dormouse worksheet

Draw a picture of a dormouse here

Using the information from the factsheet find the answers to the following questions:

1. Why is a dormouse called a dormouse ?

.....

.....

2. What do dormice eat?

.....

.....

3. Where do they make their nests?

.....

.....

4. How many babies do dormice have each year?

.....

.....

5. Write your own question about the dormouse here for your buddy to answer.

.....

.....

.....

.....

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Habitats

Habitat study

List of natural landscape features from Activity 1:

Choose a habitat:.....

Circle the words which best describe the habitat:

a)	dark	shaded	light
b)	wet	damp	dry
c)	open	semi-sheltered	fully sheltered

Now use your imagination to create some WOW sentences about the habitat.

.....

.....

.....

.....

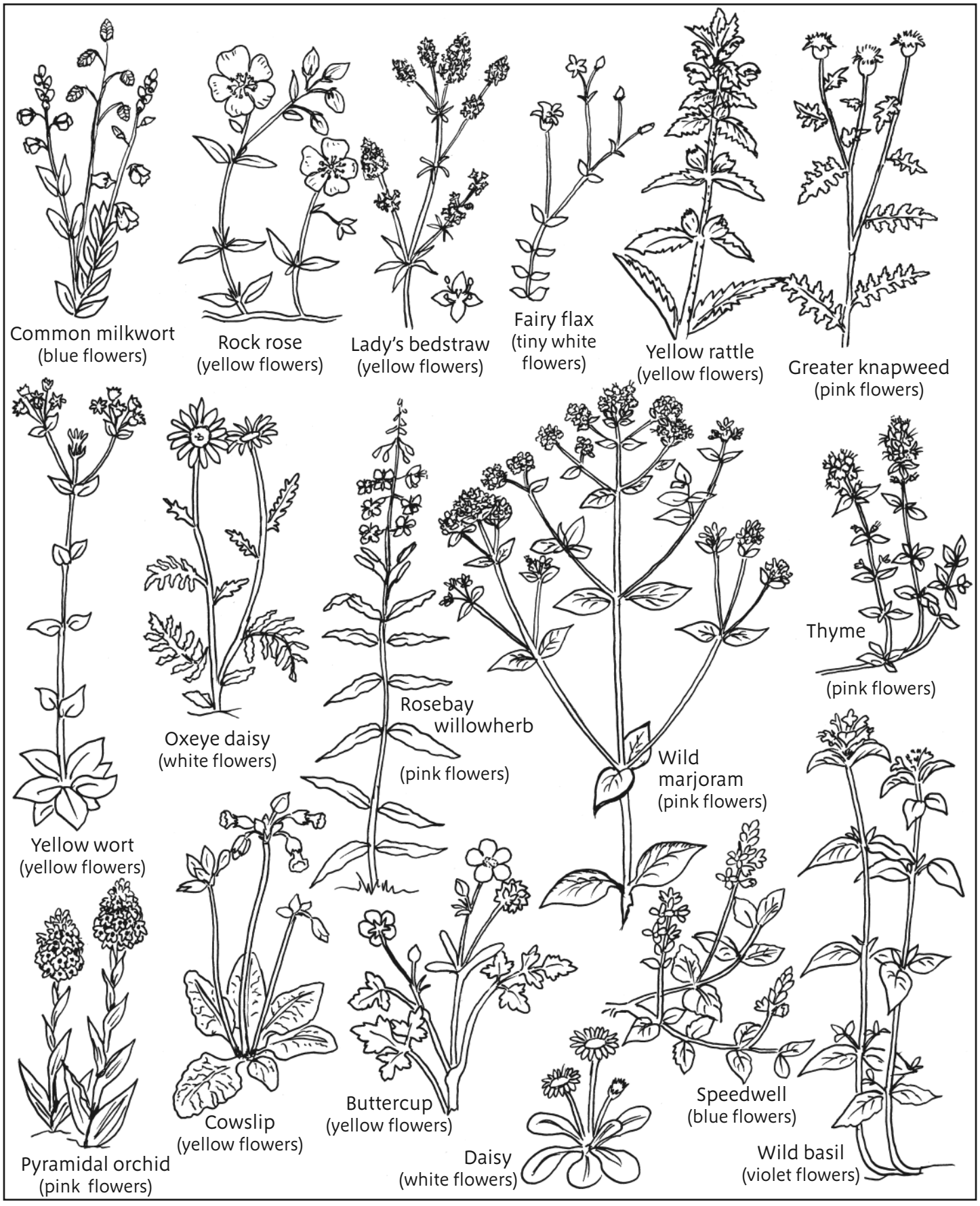
Summer grassland activity

- Throw the quadrat down on the grassland
- Then count the number of different plants found within the quadrat and the frequency of them.

Plant name or description	Frequency

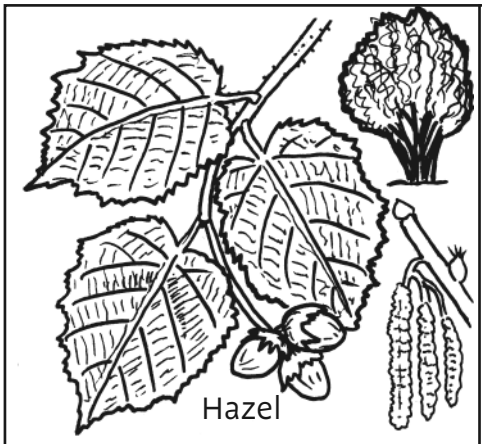
Habitats

Wildflower identification sheet

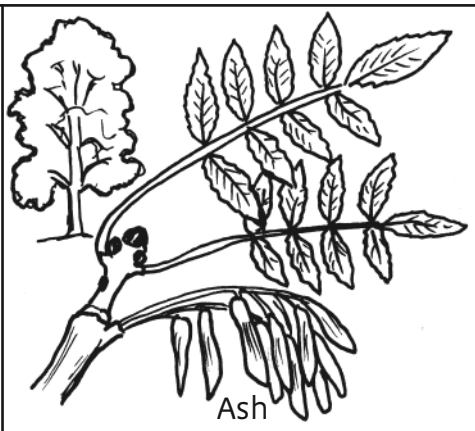


Habitats

Tree identification sheet



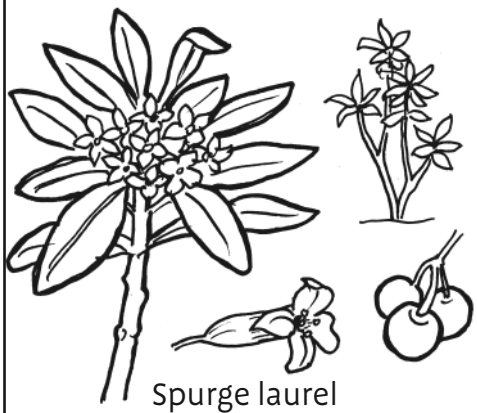
Hazel



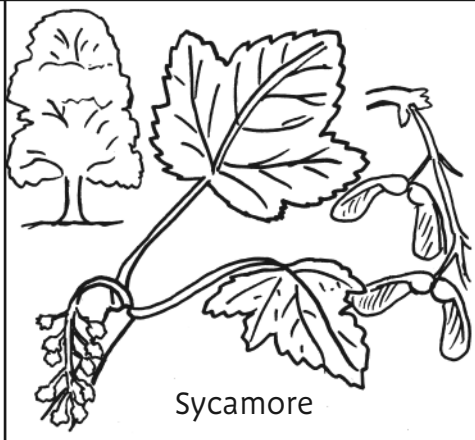
Ash

Hawthorn

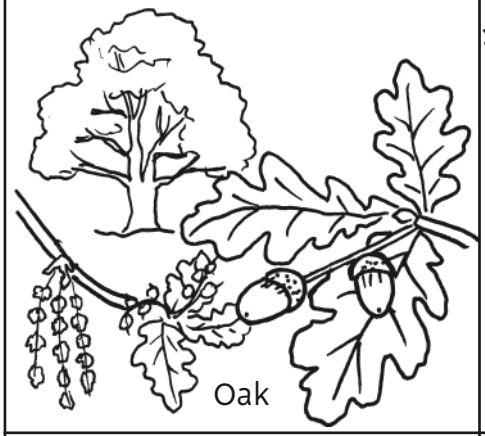
Spindle



Spurge laurel

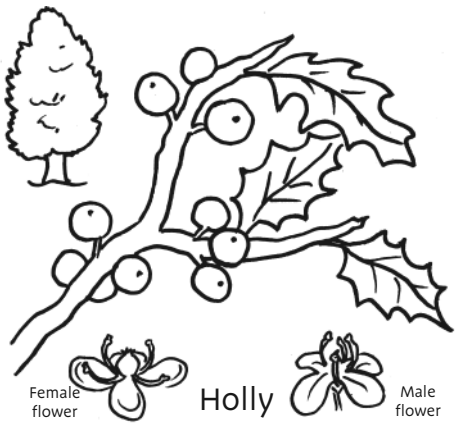


Sycamore

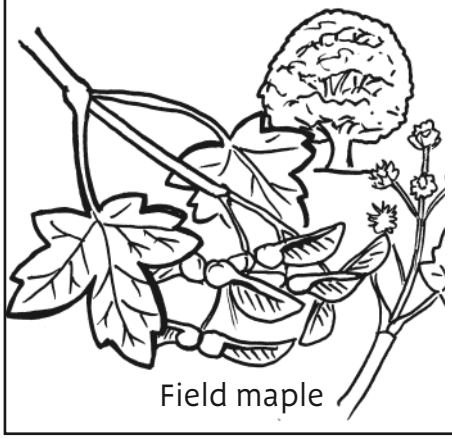


Oak

Blackthorn

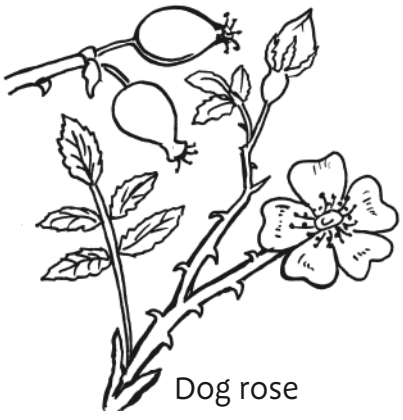


Holly



Field maple

Bramble

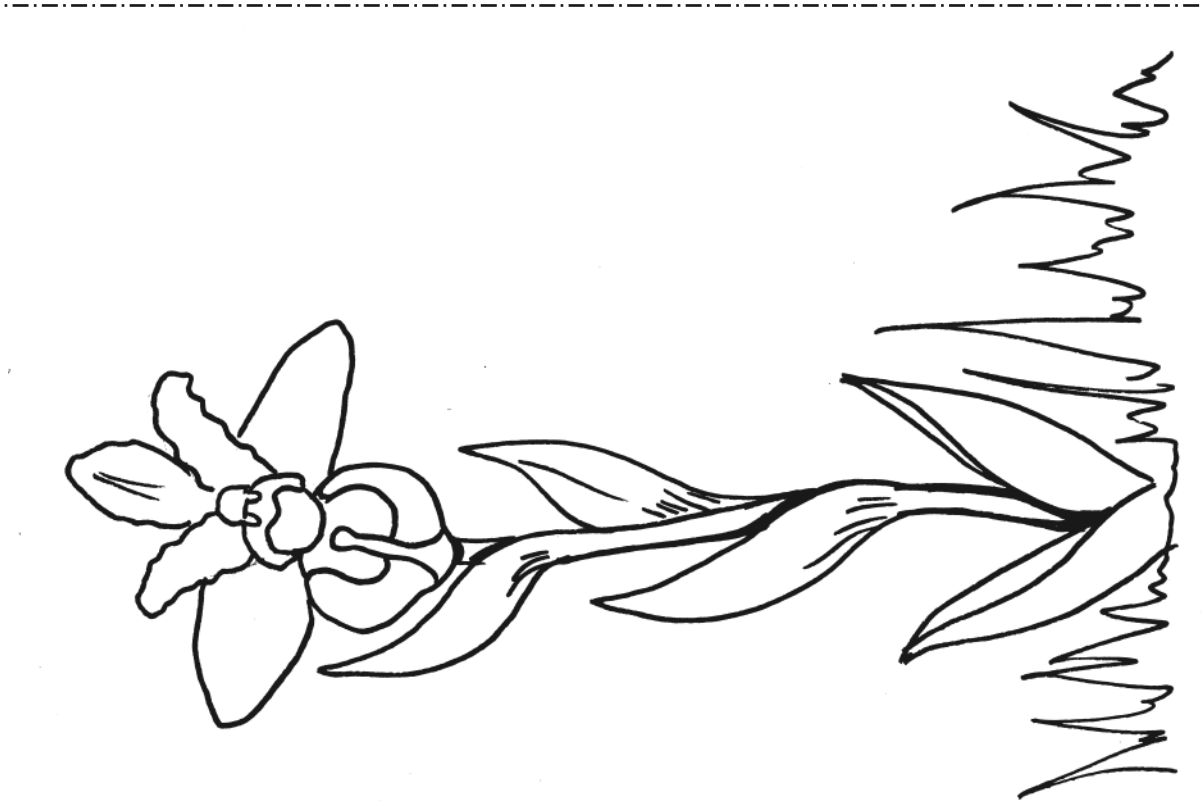


Dog rose

Habitats

Food web identity tags (sheet 1)

Grass



Early spider orchid

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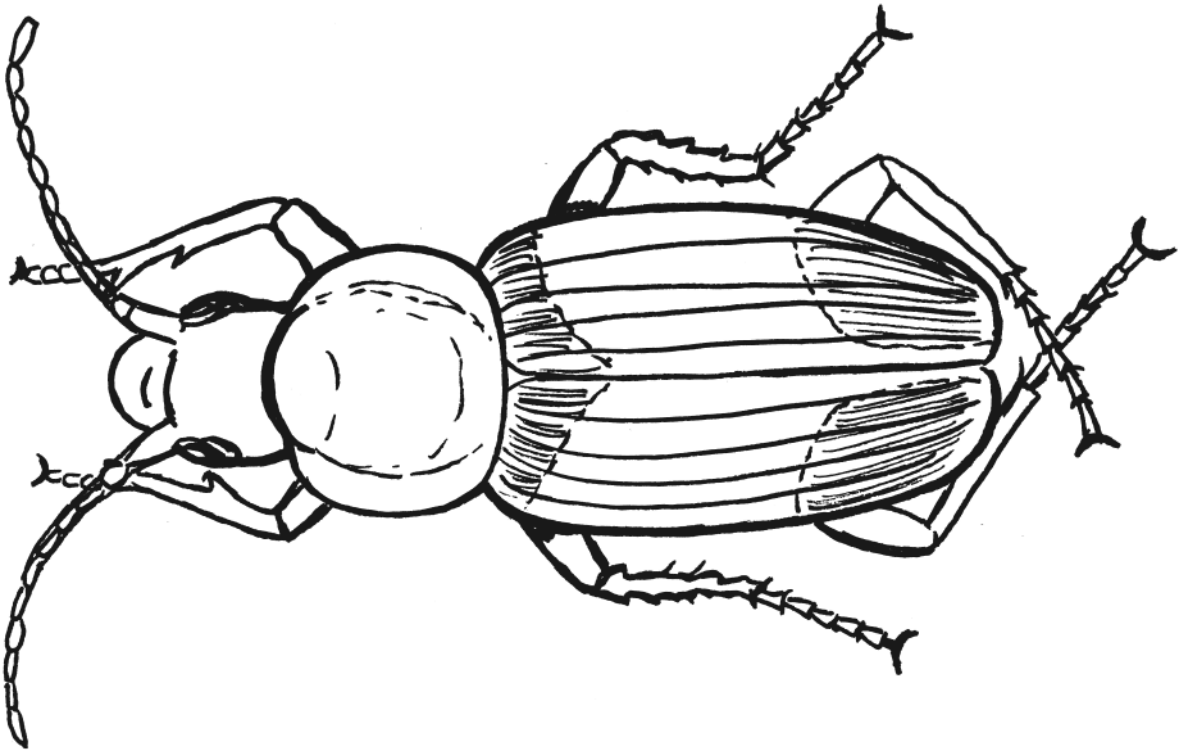
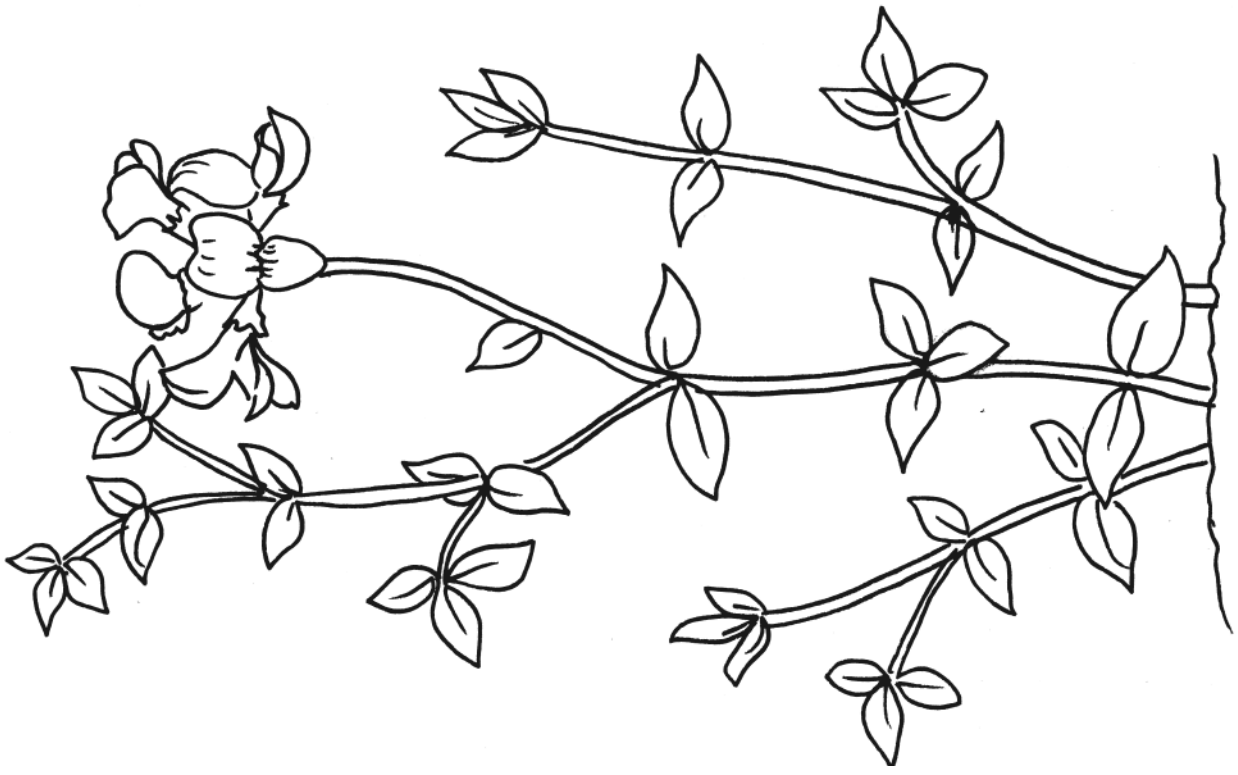
Habitats

Food web identity tags (sheet 2)



Beetle



Birds foot trefoil

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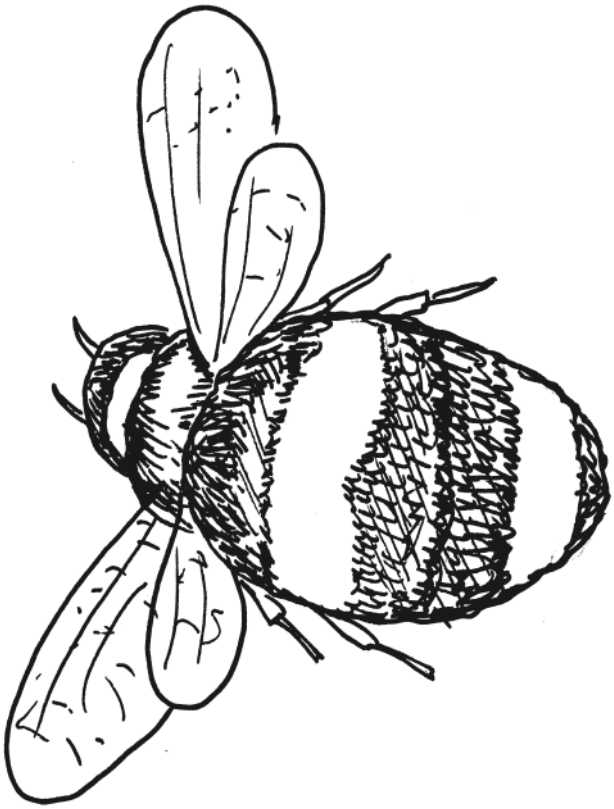
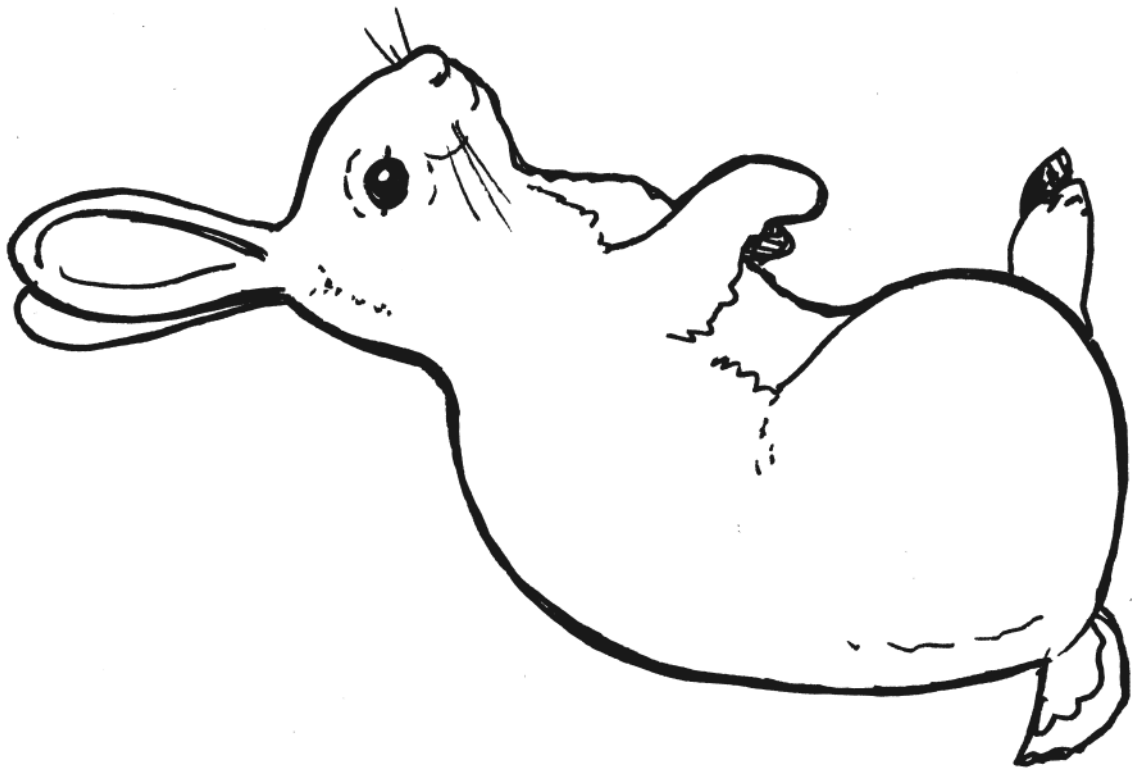
Habitats

Food web identity tags (sheet 3)



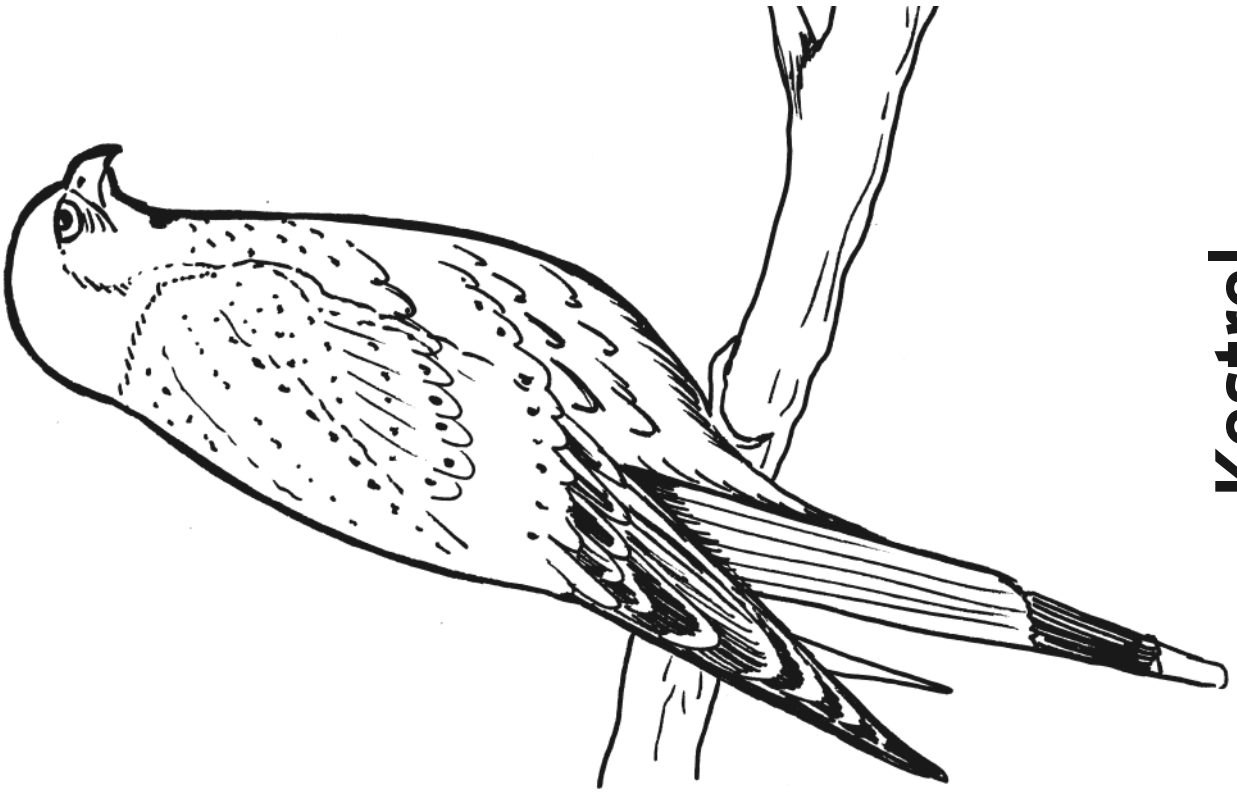
Bee



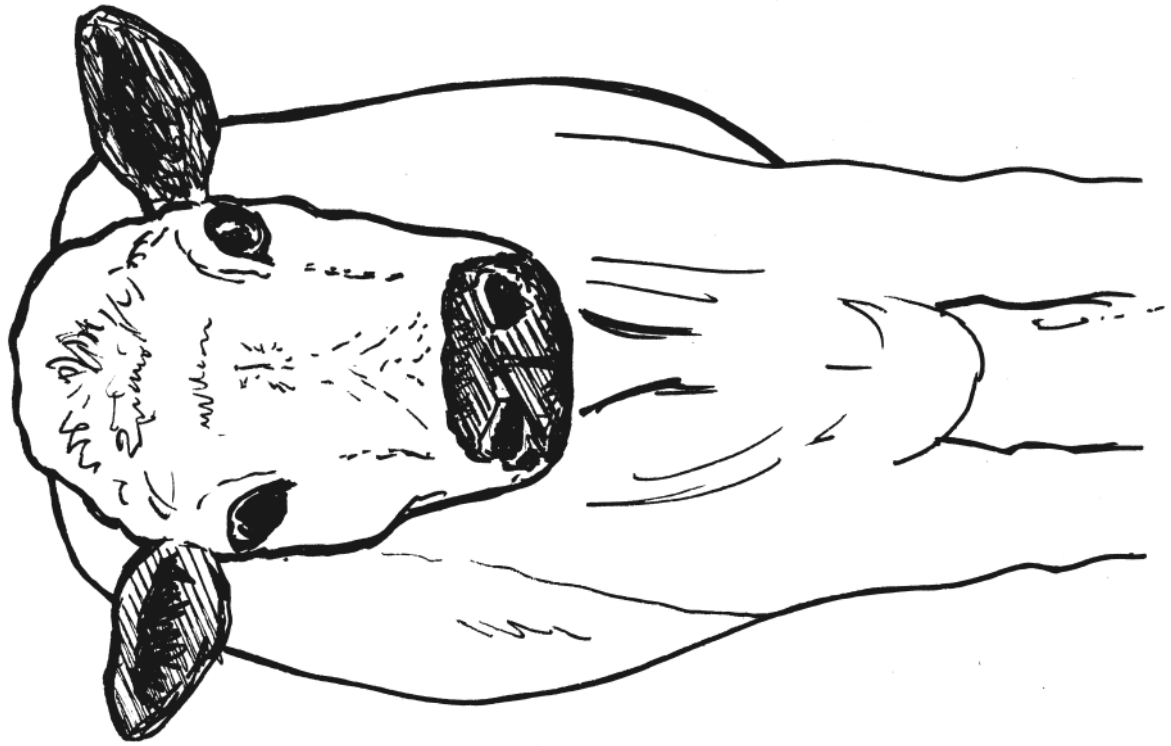
Rabbit

Habitats

Food web identity tags (sheet 4)



Kestrel



Cow

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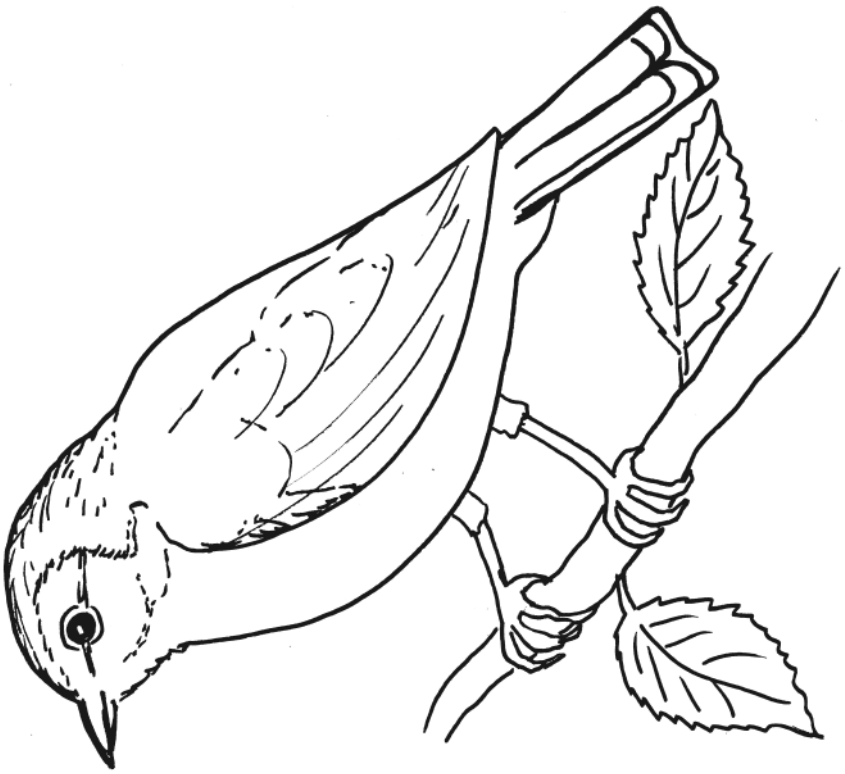
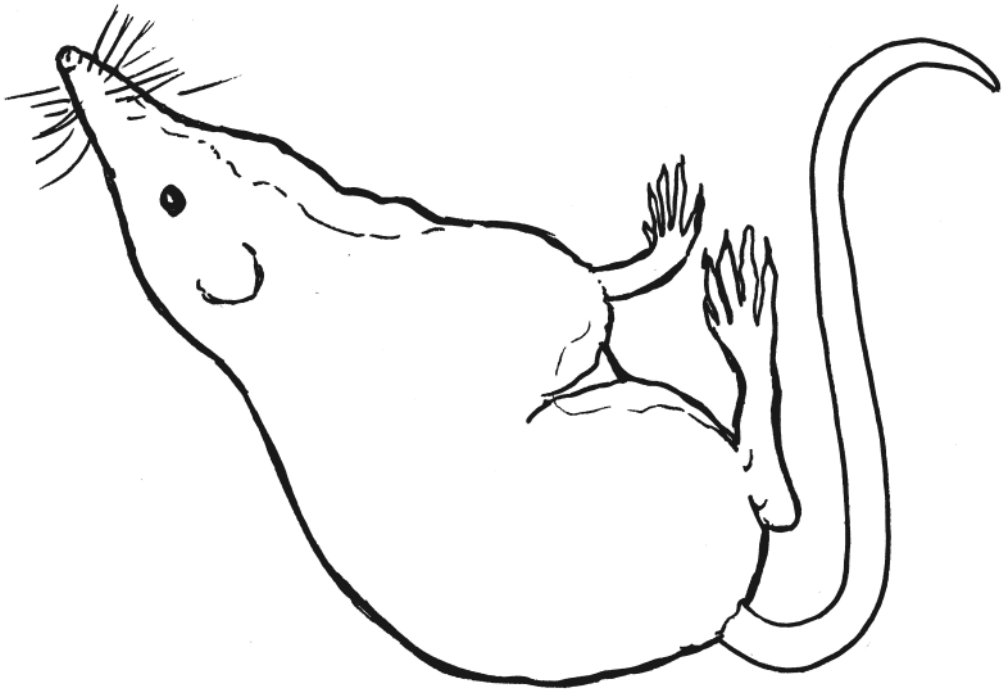
Habitats

Food web identity tags (sheet 5)



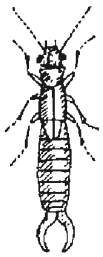
Willow warbler



Common shrew

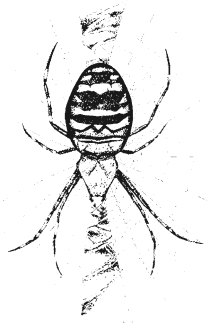
Minibeasts

Minibeast ID chart

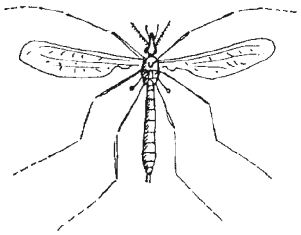


Earwig

Millipede

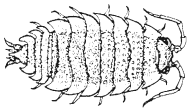


Spider

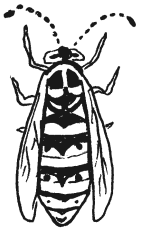


Crane fly

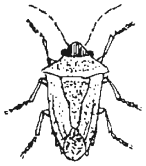
Hover fly



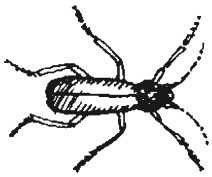
Woodlouse



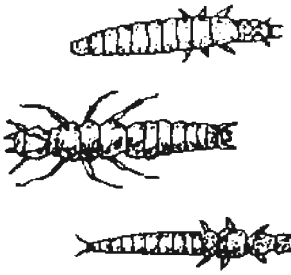
Wasp



Shield bug

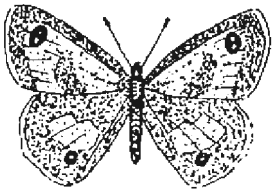


Beetle

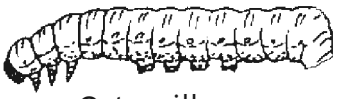


Various beetle larvae

Ant

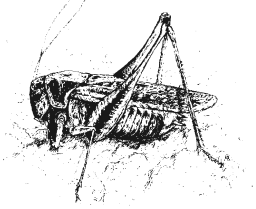


Butterfly



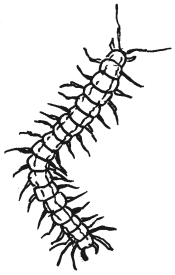
Caterpillar

Butterfly or moth pupa

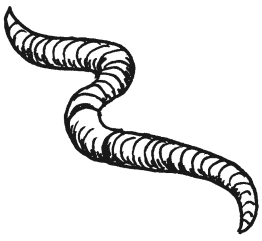


Cricket

Grasshopper



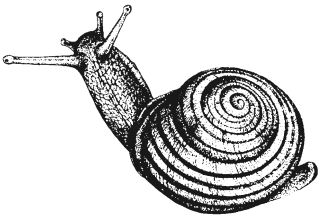
Centipede



Worm

Dragonfly

Bee



Snail

Slug

Weevil

Wireworm

Minibeasts

Minibeast record sheet

Minibeast hunt results

Habitat description	Minibeast name or description	Frequency

Minibeast passport information

In preparation for making a minibeast passport back at school, record the following information:

Name/description of minibeast or what family does the minibeast belong to?

.....

What habitat was it found in?

.....

What colour is it?.....

How many legs does it have? .....

How does it move?.....

Does it have wings?.....

What is its body shape?.....

How many sections does its body have?.....

What is its coat like? Eg smooth.....

How does it defend itself?.....

What does it eat?.....

Does it appear singly or in a group?.....

Why does it live in this habitat?.....

.....

.....

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Minibeasts

Minibeast passport identity card

PASSPORT

MINIBEAST NAME:

WYE NATIONAL
NATURE RESERVE

Picture of Minibeast's habitat

FOLD

FOLD

Detailed picture of head

Name: .....

Family: .....

Habitat: .....

Why is this habitat chosen:

.....

FOLD

Colour: .....

Coat: .....

Number of Legs: .....

Moves by: .....

Body shape: .....

Number of body sections: .....

Wings: Yes/No

This minibeast eats: .....

Found in a group: Yes/No

Defends itself by: .....

.....

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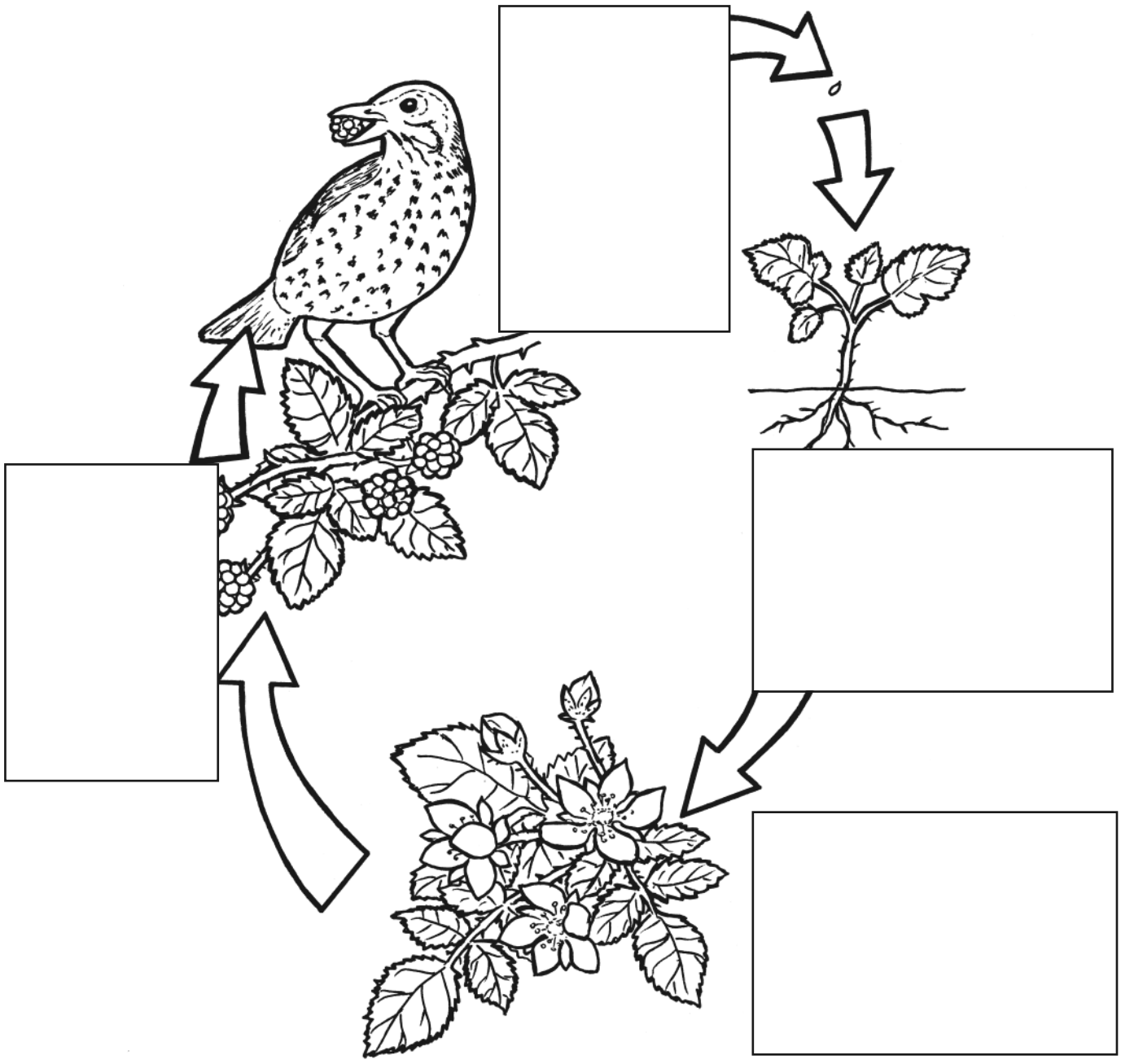
Plant and animal lifecycles

Bramble lifecycle

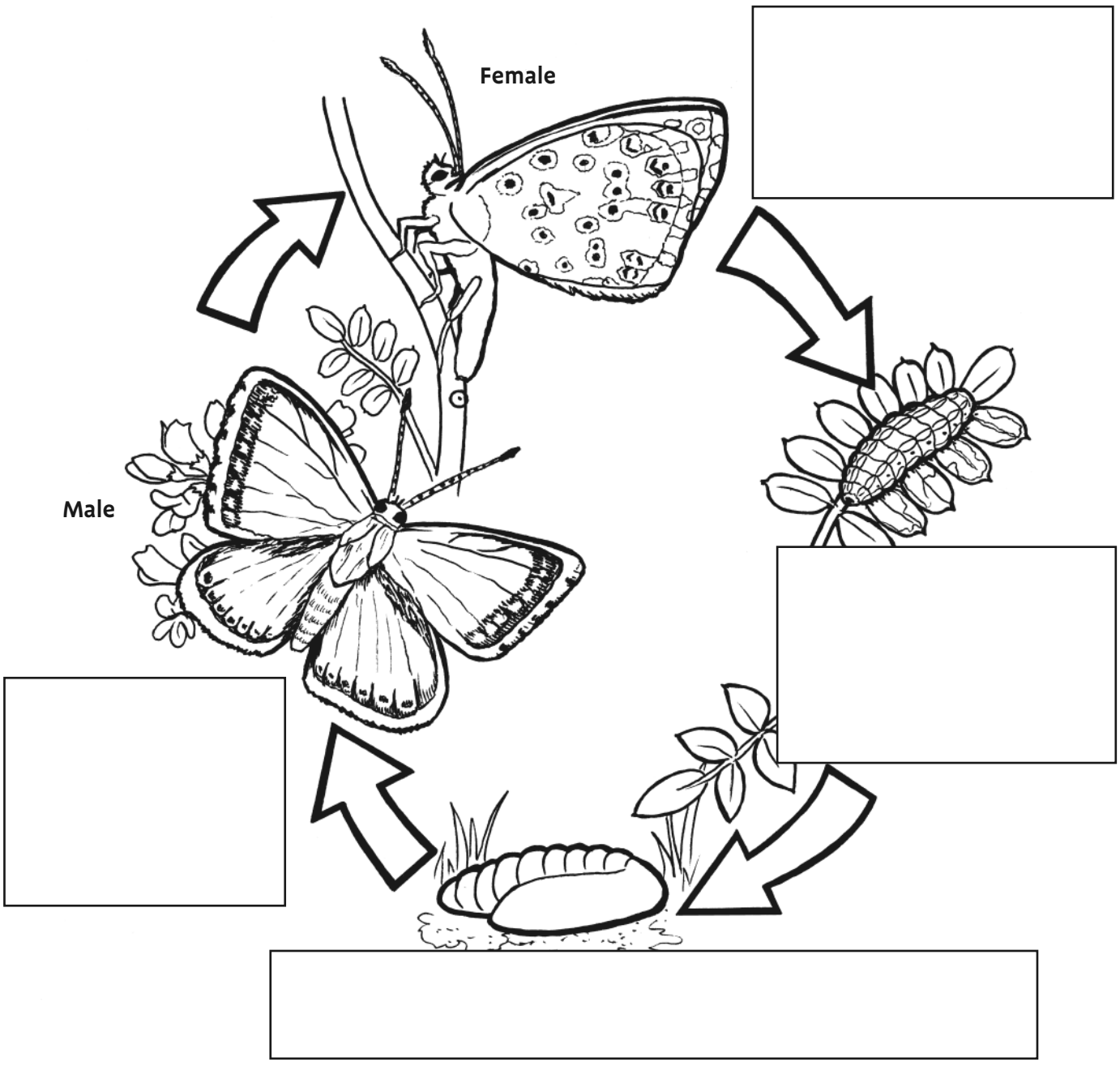


Choose the title that matches each stage in the lifecycle of the bramble, and write two facts about each stage in the box next to the correct drawing.

- **Flowers and pollination:** three years from seed the bramble plant produces white flowers. Nectar and pollen attract insects such as including bumblebees, honey bees, hoverflies, wasps, butterflies, moths, flies and lacewings. They help to pollinate the plants by passing pollen from one flower to another.
- **Dispersal:** seeds are dispersed by many different types of animals including birds (such as blackbirds, thrushes, chaffinches, starlings, robins and pheasants) as well as mammals (including foxes and mice).
- **Fruit:** by late summer and early autumn, the blackberry fruit is ripe and its seeds are fully developed.
- **Germination:** the blackberry seed settles into the soil and usually in the second year after being dispersed, with a little warmth and water, it germinates into a bramble plant.

Plant and animal lifecycles

Chalkhill blue butterfly lifecycle



Choose the title that matches each stage of the lifecycle of the chalkhill blue butterfly, and write two facts about each stage in the box next to the correct drawing.

- **Chrysalis**: after 9 to 10 weeks the caterpillar/larvae turns into a chrysalis. The chrysalis protects the caterpillar during its transformation into a butterfly.
- **Eggs laid by adult**: in July and August eggs are laid by the adult female butterfly singly on a stem of horseshoe vetch or in nearby vegetation.
- **Adult emerges**: after 4 weeks the metamorphosis is complete and an adult chalkhill blue butterfly emerges from the chrysalis. Male and female butterflies then mate and the lifecycle begins again.
- **Caterpillar:** the caterpillar/larvae hatches from the egg the following spring and starts to feed on the leaf of the horseshoe vetch.

These worksheets form part of a pack containing a series of National Curriculum linked activities suitable for Key Stage 2 pupils. Some activities are adaptable for younger or older age groups, if necessary.

The worksheets support activities suitable for use in the classroom and on Wye National Nature Reserve.

A detailed map of the site is included within the pack to help you find your way around. The worksheets and information sheets in this booklet can be printed from the CD included with the pack, which also contains the main pack folder pages, colour flower identification sheet and a hazard identification sheet as pdf documents.

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NATURAL ENGLAND

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