WOODLAND TRUST

Resources to support your school's tree pack

TEACHER NOTES: INTRODUCTION

This resource pack is designed to accompany the Woodland Trust's free trees for schools and provides additional activities associated with the planting of your trees. It contains teacher notes and pupil worksheets as well as factsheets for the species in your pack. There are many more activities and ideas available on the Woodland Trust website **woodlandtrust.org.uk**. Where appropriate, curriculum links are provided, but each give plenty of scope for adapting resources, particularly for younger age groups.

We hope these materials help you enthuse and inspire your pupils about the natural world.

Worksheet	Suggested time of use	Where to use	Curriculum areas
1. Twigs all look the same. Or do they?	Winter (same time as planting hedge or copse pack)	Indoors or outdoors (easier indoors)	Science
2. Exploring a hedge	Spring to autumn after planting. Please take special care to avoid nesting birds during the peak bird nesting season 1 March to 31 July.	Outdoors	Science
3. Measuring your hedge	Spring to autumn after planting and ongoing. Please take special care to avoid nesting birds during the peak bird nesting season 1 March to 31 July.	Outdoors	Science, Mathematics
4. How species rich is your hedge	Any time in spring to autumn. Please take special care to avoid nesting birds during the peak bird nesting season 1 March to 31 July	Outdoors	Science, Mathematics
5. Food chains	Any time	Indoors	Science
6. Wild tales	Any time	Indoors	Literacy

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Twigs all look the same. Or do they?

TEACHER NOTES

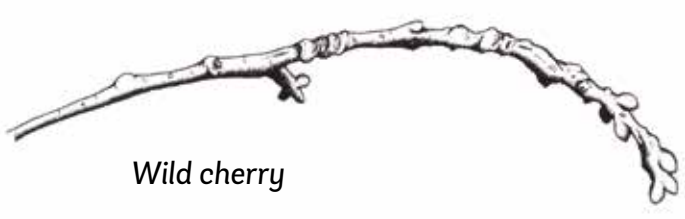
This activity is designed to be carried out in winter so it can be used at the same time as planting your trees. It involves close observation and drawing of twigs so it is ideal for classroom use, but it could also be adapted into an outdoor observation and discussion exercise during your planting activity.

If desired, the saplings from your tree pack can be used for this exercise. The saplings should only be kept in the classroom for a couple of hours and then returned to a cool area if not to be planted immediately. It is important that the roots stay moist at all times.

Each species in your free tree pack is identified by a coloured label. These labels correspond to the information sheet in your planting pack, attached to your tree pack. You can also download lots of useful hints and tips for successfully planting and caring for your trees at **woodlandtrust.org.uk/plant-trees/advice/**

If you are doing this activity with younger children, you may choose to use just the twig identification sheet and some simple guide questions from the pupil worksheet. Some of the latter questions can be used for more able children.

When examining the twigs you may see marks where last year's leaves fell off. You may also be able to see tiny holes in the bark (lenticels) which allow air to move in and out of the tree's tissues.



Wild cherry

Question: Can you think why some trees might lose their leaves in winter?

Answer: The most obvious response to this question is that trees lose their leaves because it is too cold for them to grow. In fact, trees lose their leaves in winter mainly to preserve water. In winter when the ground is frozen no water can move up the tree and it effectively suffers drought.

Losing leaves in winter also helps trees conserve energy. Lower light levels limit photosynthesis (the process used by plants to convert sunlight into energy), so trees have less energy during the winter months. By moving into dormancy and shutting down a lot of its activity, the tree can survive through the winter. Evergreen trees normally have waxy needles which are specially designed to save water. They do have the advantage of being able to photosynthesise in warmer, sunnier days of winter.

Twig ID sheet

The twig ID sheet at the end of these notes is a really useful tool to help children identify winter twigs. It features many common British trees and can be used as an extension activity.

Curriculum links: SCIENCE

Year 1: Plants – identify and name a variety of common plants including deciduous and evergreen trees.

Seasonal changes – trees in winter.

Year 2: Living things and their habitats – identify and name a variety of plants.

Plants – find out why plants need water to grow.

Year 3: Plants – identify the functions of different parts of flowering plants and explore the requirements of plants for life.

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Exploring a Hedge

TEACHER NOTES

This activity is designed for use with your newly planted trees and should be carried out when the shrubs are in leaf.

If your trees have plenty of healthy leaves, children can work in pairs and pick a leaf to study. Otherwise, suggest they make their observations without picking leaves.

Can you find out more?

The last exercise on the worksheet gives pupils the opportunity to make their own investigation into a chosen species.

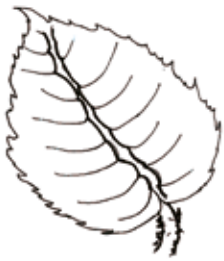
Further information about British trees can be found at **woodlandtrust.org.uk/learn/british-trees**

Leaf ID sheet

The leaf ID sheet at the end of these notes is another really useful resource. It features many common British trees and can help children identify trees by their leaves.

Elder

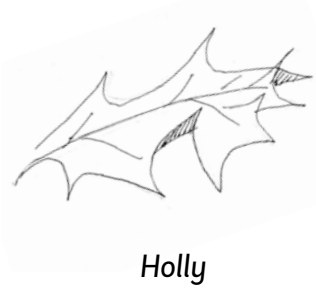
Hawthorn



Hazel

Blackthorn

Dogwood



Holly

Curriculum links: SCIENCE

Year 1: Plants – identify and name a variety of common plants and identify and describe the basic structure of a variety of plants including trees.

Year 2: Living things and their habitats – identify and name a variety of plants in their habitats.

Plants – find out why plants need water to grow.

Year 3: Plants – identify the functions of different parts of flowering plants including leaves.

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Measuring your hedge

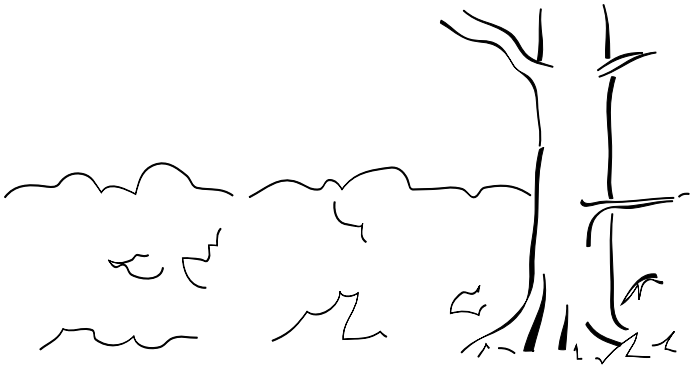
TEACHER NOTES

This worksheet can be used on several repeat visits to a newly-planted hedge to monitor its growth and progress in its first few months and years. It also encourages observation of any wildlife in and around the vicinity (birds etc). If the hedge is visited two or three times over the first year, it should have grown a little between measurements, but it may be worth checking this before taking your class back for repeat visits.

According to the age/ability of your group the measuring activity can be a simple exercise where pupils estimate the height of the hedge and then measure it. For a more advanced activity pupils can measure each shrub, then work out the average height of each species.

Year 6 Mathematics includes 'calculate and interpret the mean as an average'. Pupils can take a series of measurements across the length of the hedge and explore mode and range of the data before estimating the average height of the hedge across its length.

Working in groups, pupils can each measure a different species of shrub. This will build up a long-term picture of the different rates of growth of the different shrubs. This information can then be pooled and explored in class according to age and ability. As well as mathematics, this information can form the basis of a scientific enquiry.



Curriculum links: SCIENCE

Year 2: Plants – observe how seeds grow into mature plants.

Year 3: Plants – explore the requirements of plants for growth and how they vary from plant to plant.

MATHEMATICS

Year 1: Measurement – compare, describe and solve practical problems for lengths and heights eg longest/shortest and measure and begin to record heights.

Year 3: Measure and compare lengths (cm).

Year 6: Statistics – calculate and interpret the mean as an average.

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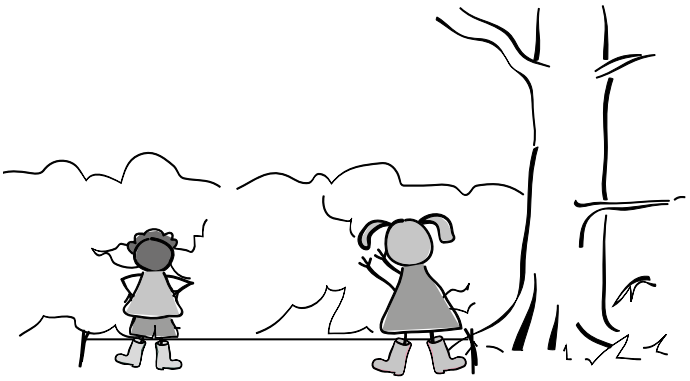
How species rich is your hedge?

TEACHER NOTES



This outdoor exercise encourages pupils to imagine what their trees will look like in a few years time. A mature hedge in your school grounds, nearby park or local woods can be used for this activity. It will be a more rewarding exercise for children if it contains a mixture of different shrubs.

Hedges are habitats

The worksheet questions ask the children to describe the habitat, predict what animals they might find, and then explore the habitat.

Places to direct them to look for animals include:

The surrounding area: are there any birds nearby?

On leaves: any caterpillars, other insects, or even evidence of insect damage of leaves or fruit?

Under leaf litter: a good place to find many minibeasts. Ask children to replace any leaves they have overturned.

Curriculum links: SCIENCE

Year 2: Living things and their habitats – identify and name a variety of plants and animals in their habitats.

MATHEMATICS

Year 3: Measure and compare lengths (cm).

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How species-rich is your hedge?

TEACHER NOTES

Hedges are an important part of the UK's landscape. Many were planted during a series of enclosure acts in the 18th and 19th centuries, when the concept of common use of land was replaced with enclosed fields in private ownership. But at least half of our hedges are older than this. Some are hundreds, even thousands of years old!

For this exercise pupils need to count the number of different types of shrub in a 30-metre stretch of hedge (estimated at about 40 pupil paces, but a long tape measure could be used for accuracy).

The more species found in a 30-metre stretch, the better the hedge is for wildlife. Pupils can repeat this exercise on different hedges in different locations and compare results.

One of the aims of this exercise is for pupils to look closely at the difference between the shrubs in the hedge. By collecting leaves, they should be encouraged to describe the difference between them. Pupils should be shown the difference between woody shrubs like hawthorn or hazel, and herbaceous plants like grass or dandelions (woody vs soft stem).

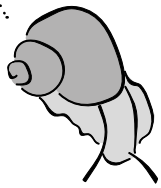
Question: Why do pupils think a hedge is better for wildlife if it has more shrub species growing in it?

Answer: More species of shrub will be able to support a greater variety of insect, bird and mammal.

Extension activity

To find out more and get advice on how to complete a more comprehensive hedgerow survey, please go to **www.hedgelink.org.uk**

There is lots of helpful information here and pupils can upload their findings to help build up a picture of the hedgerows around the UK. You can then also see how your hedge compares to others in your region and around the UK!



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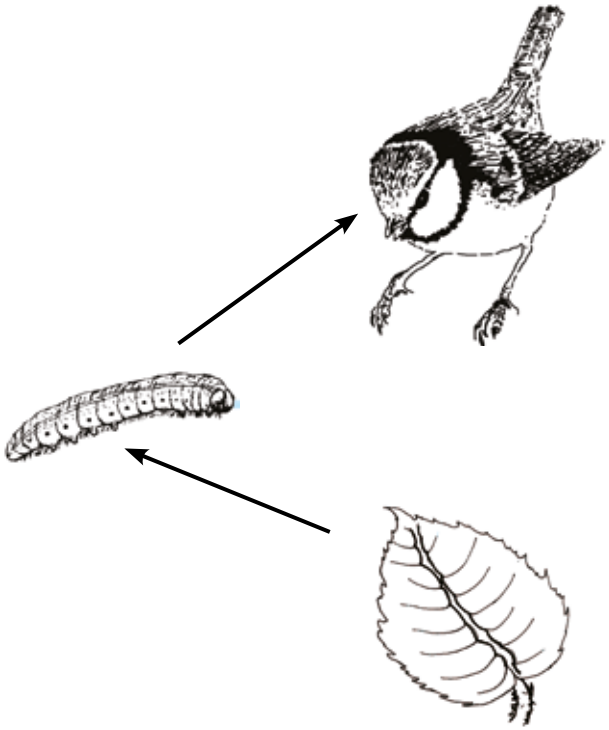
Food chains

TEACHER NOTES

It would be helpful if the paper-based activity could be followed by an outdoor experience, perhaps searching for wildlife in the vicinity of the newly-planted hedge, or in and around a more mature hedge or group of trees.

Food chains

Green plants	caterpillar	bluetit	fox
Green plants	snail	thrush	fox
Dead leaves	worm	badger	



Question: Explain why you think plants are such an important part of food chains.

Answer: Pupils should describe how food chains all start with a green plant, or something that has come from a green plant like leaves or fruits.

This material gives the possibility to develop an understanding of food webs if wished, starting with the idea that animals such as foxes rely on several food sources. One additional concept that is introduced is the different parts of plants (leaves, living and dead and fruit) that may be eaten by animals.

Curriculum links: SCIENCE

Year 4: Animals, including humans – construct and interpret a variety of food chains.

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Wild tales

TEACHER NOTES

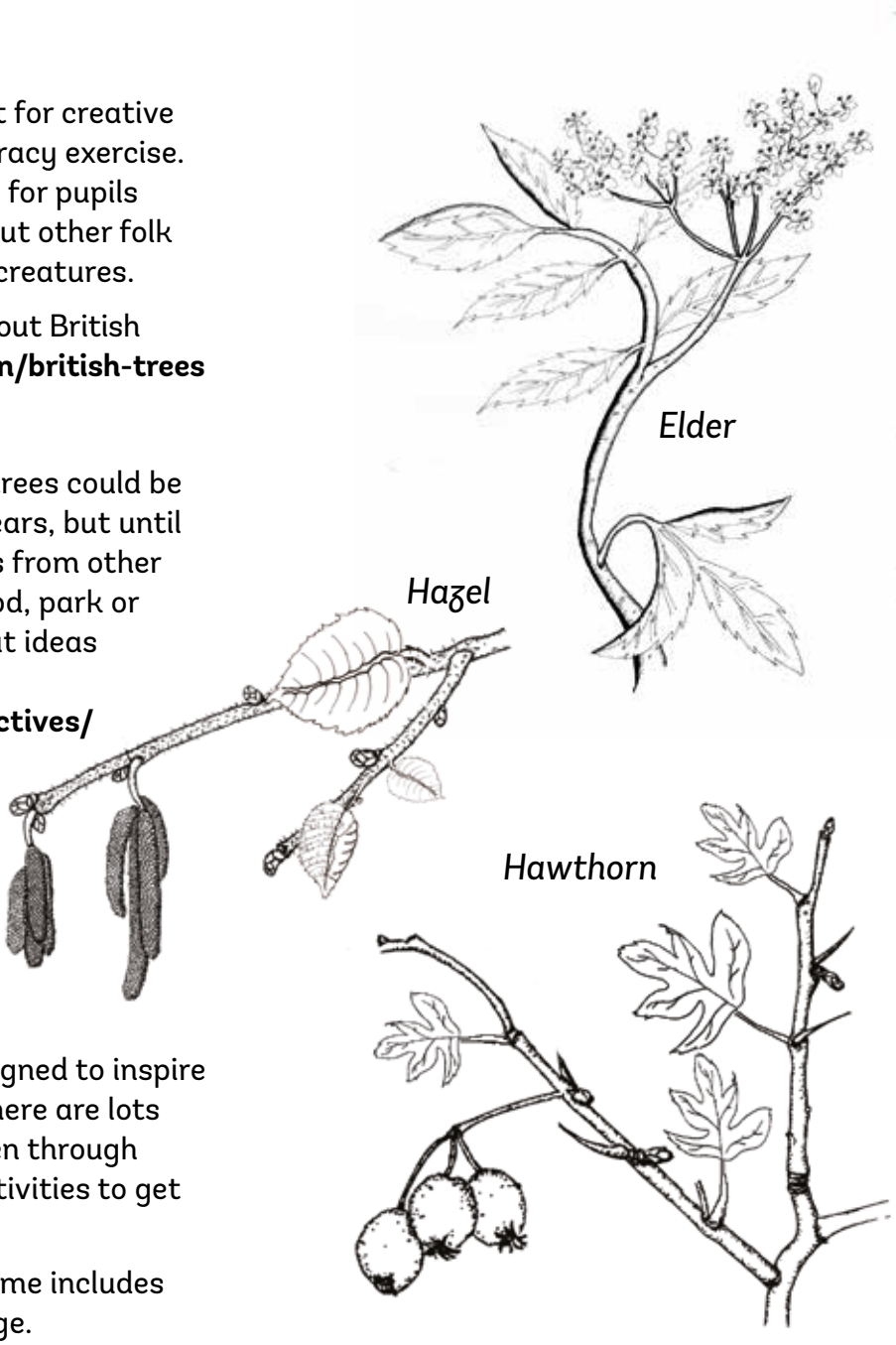
These folk tales are a starting point for creative writing and could form a useful literacy exercise. An alternative/extension activity is for pupils to carry out their own research about other folk tales linked to trees and woodland creatures.

Pupils can find folklore and facts about British trees at **woodlandtrust.org.uk/learn/british-trees**

Outdoor art ideas

Material harvested from your free trees could be used for craft activities in future years, but until then you'll need to collect materials from other sources. Why not try your local wood, park or school grounds. We have some great ideas for outdoor art activities at **woodlandtrust.org.uk/naturedetectives/activities/**

These activities include leaf faces and muddy smiles, leaf fireworks and ice art. You can also encourage your pupils to create some fantastic art in the style of Andy Goldsworthy.



Our seasonal play booklets are designed to inspire children with outdoor play ideas. There are lots of great activities to engage children through the seasons, with plentyof craft activities to get involved with.

Our Green Tree Schools Award scheme includes the Woodland Ambassador challenge.

This activity involves visiting a local wood, learning about trees and creating a display, assembly or presentation to tell your wider school community why woods and trees are so important.

Find out more at **woodlandtrust.org.uk/award**

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Winter twig ID sheet

Ash | Field maple | Birch | Alder | Elder | Hazel | Beech | Horse chestnut | Rowan

Oak | Lime | Lilac | Hawthorn | Blackthorn | Larch | Sycamore | Dog rose | Elm

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Leaf ID sheet

Alder

Ash

Beech

Birch

Elder

Field Maple

Hawthorn

Hazel

Holly

Horse Chestnut

Oak

Rowan

Sycamore