

Hedgeucation

This work-sheet aims to enthuse and educate children, about the unique hedgerows that make Devon so special. Hedgeucation addresses many topics within the national curriculum and provides a useful teaching tool both in the countryside and classroom. Through the fun games and activities found throughout these pages, you can explore the hedgerow world and discover for yourself why Devon can be so proud of its hedges.



Devon's Special Hedge

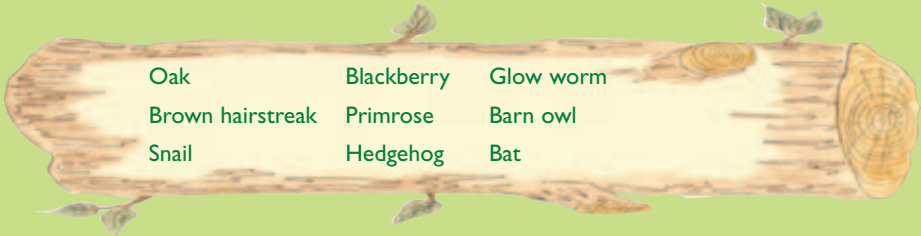
The Devon Hedgerow is unlike any other hedge in Britain, because it is planted on an **earth bank** often faced with stone or turf, which usually has bushy shrubs growing along the top. A Devon hedge will often have a **hedgerow tree** – a song post for a tuneful thrush, a **ditch** – teeming with aquatic life such as newts; and a **field margin** – an area of natural weeds and grasses not sprayed with agricultural chemicals, full of wildflowers and colourful insects.

In fact over 600 plant species, 1500 insects, 65 birds and 20 mammal species have been recorded at some time living or feeding in hedgerows!

Can you match the animals, plants, birds and insects above to the part of the hedge where they would like to live? Why would they like to live there? (answers on back page) Now colour them in.

Hedgerow Bingo

This game is played just like normal bingo, except that you need to guess the answer by listening carefully to the descriptive clues. You will need to make up a number of different bingo cards and clues for each item, see below for an example.



- ◆ I am a tree, my leaves have bumpy edges and I produce acorns in the autumn.
- ◆ I provide a tasty meal in the autumn for many birds, mammals and insects. You might eat me in jam with apple. I stain your fingers purple when you pick me.
- ◆ Don't let my name confuse you, I am a beetle the female of which cannot fly, but has a behind that glows at night to attract a mate.
- ◆ I am Devon's special butterfly, which needs blackthorn to feed upon.
- ◆ I am a predator that feeds along hedgerows looking for voles and other small mammals.
- ◆ My feathers are very special, as when I fly I don't make a sound.
- ◆ I'm a slimy creature, whose shell helps protect me from harm. I'm a favourite food of the thrush and the French.
- ◆ My name comes from the habitat you're studying, but I'm not a pig as my name suggests.
- ◆ I fly at night and hunt along hedgerows for small insects. I need bushy hedgerows to find my way around as I use sonar which bounces off tall hedgerow trees.

The winner is the first person to get a line - "hedgerow" or to complete their card - "hedge".

Foodweb Game

For this game you need a ball of string and a bunch of friends. This game shows the **inter-relationships** among all the plants and animals in the hedgerow. Ask your friends to form a circle. Pick a child with fiery red hair (or golden blonde will do) to play the sun. The sun should stand in the middle of the circle, glowing brightly and holding the ball of string.

The string represents energy/food.

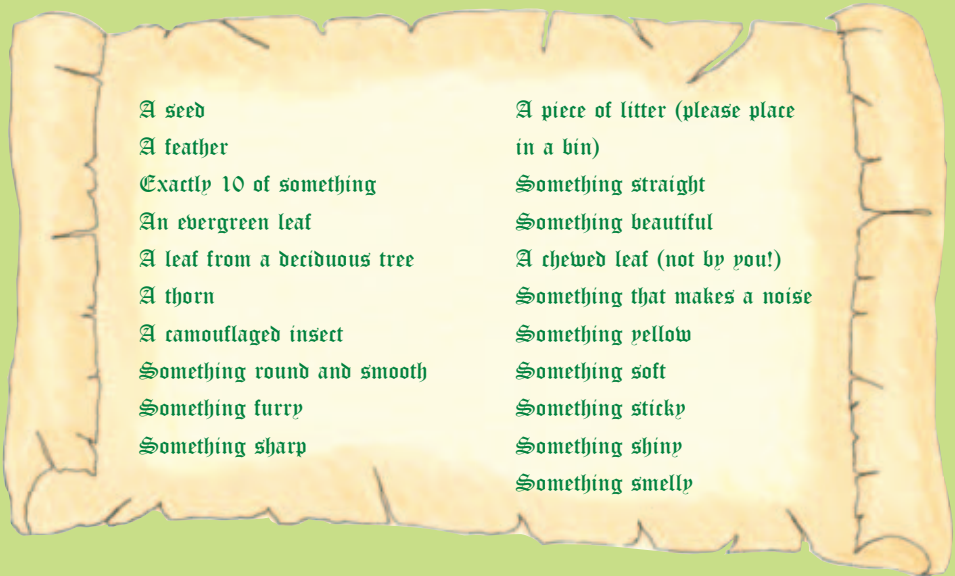
Begin the game by asking "what harnesses the energy from the sun to make food?" The player who shouts "Plants" is then given the ball of string (the sun still holding the end). Ask the 'plant' to think of a name of a plant found in a Devon hedgerow e.g. Primrose.

"What might eat the primrose?" "Snail". Pass the ball on. "What would eat the snail" "Thrush". Pass the ball on and so on. Continue connecting your friends with string and you will begin to see a food web emerge, carry on until all the players are strung together to form your very own hedgerow **ecosystem**.

To demonstrate how each individual is important to the whole community, take away one of the plants and animals from the food web e.g. all the insects are wiped out by accidental drift of pesticides onto the hedgerow. All the insects should then let go of the string and those who feel their string become loose should also let go and so on, until the string has fallen to the floor. This shows how all living things are connected and are dependent on each other.

Hedgerow Scavenger Hunt

Look carefully at your hedgerow, at all the different layers and habitats that make up the hedge. What are the different textures and patterns that are in the hedge? To help you explore your hedgerow, see if you can find all the things on this list. Remember to collect only things that can be returned safely and without damage.



Hedge Sounds

Find a quiet spot by your hedge, sit down, open your ears and listen! Do you hear the birds singing? Can you hear the farmer in his tractor? Listen very carefully, do you hear the wind blowing through the hedge trees? When you really listen hard, you'll discover that hedges can be quite noisy places to sit. See if you can map the noises.

Take a blank piece of paper and a pencil. Mark an X in the middle of the paper, that's you and the hedge, then draw all the sounds you hear, making sure you draw them in the direction that you hear them.

Hedge Postcards

Look closely at a hedgerow. How many different colours can you see? Can you find orange or blue? How many shades of green are there? To help you remember your colourful hedge, make a hedgerow postcard. You will need a piece of card (10cm x 5cm, will be fine) and a strip of double sided sticky tape to stick across the middle. Remove the protective tape and place in a bin. Then cover the sticky side with small pieces of leaves, twigs and petals without harming the hedgerow. Try and build up as many different colours and shades as you can.



National Curriculum Hedgerow Activities

Science

The Life Cycle of the Brown Hairstreak Butterfly

Of all the minibeasts that visit the hedgerow, butterflies are the most colourful. Butterflies are not only pretty, but have an amazing life cycle too! The Brown Hairstreak is a very rare butterfly, but can, if you are lucky, be spotted flitting around hedgerows in Devon.

We can divide its lifecycle into four main stages:

- Stage 1** The butterfly lays a single egg on the new shoots of blackthorn.
- Stage 2** The egg develops into a caterpillar, which feeds on blackthorn leaves.
- Stage 3** When the caterpillar grows to nearly 2cm long, it changes into a chrysalis or pupa.
- Stage 4** After just over four weeks, the adult butterfly emerges from the chrysalis, and feeds on honeydew produced by aphids and sap oozing from ash trees.



Questions

1. Why is hedge trimming every year damaging to the life cycle of the brown hairstreak butterfly?
2. Name another insect with a similar life cycle, draw a diagram to illustrate the various stages of its life cycle.

English Language

Who's who in a hedge?

The aim of this game is to guess what you are by asking your friends or fellow classmates a series of yes or no questions. You will need enough blank stickers for your group and a pen. On each sticker write an animal, bird or insect that you would associate with a Devon hedgerow e.g. wood mouse, snail, fern etc.

Now stick one sticker on the back of each player so that they are unable to read it, and everyone else can. Now discover what hedgerow character you are, by asking your friends only yes or no questions. For example:

Have I got fur? Do I fly? Do I eat snails?

When you know what you are, explain to your teacher / adult, why you think you are that animal, insect etc.

Hedge Poems

First make a list of all the descriptive words you can think of for hedgerows e.g. green, prickly, shady, bushy etc. When you have a list, write a poem using some or all of these words that describes a hedge you know.

Geography

Hedge Condition

Examine a set of Devon Hedges and look for and record those that:-

- ◆ Have been laid within the last few years
- ◆ Have been kept trimmed to shape
- ◆ Are overgrown and have had no management within the last few years
- ◆ Have hedgerow trees
- ◆ New hedgerows which have been built and planted in recent times
- ◆ Have fallen derelict and developed gaps because of lack of management.

What is the proportion of hedges in each condition?

Show your results in maps and tables.

Art

Hedgerow Poster

Design a poster which will help promote the importance of hedgerows for wildlife, farming, landscape and historical reasons.

Or, design a poster to encourage farmers to adopt good hedge cutting practices or traditional methods of hedge management i.e. steeping / laying.

History

How Old Are Your Hedgerows?

By following Hooper's Rule you can, sometimes, roughly date the age of your hedgerow. Choose some hedgerows and then count the number of woody shrub species in a 30 metre length. Hooper's Rule states that one woody shrub species represents 100 years! So if a section contained hawthorn, oak and hazel, the hedgerow would be about 300 years old. Remember, that this rule does not work on all hedges. Hedges on Exmoor and in the Blackdown Hills are very ancient but mainly consist of just beech trees. Now date your hedgerow.

Woody shrubs present in 30m stretch	Approximate age of hedgerow	Historical period

What's in a Name?

The word hedge comes from the Anglo-Saxon word 'haeg' or 'haga'. This was once the word for our commonest hedgerow tree the Hawthorn, which made up much of an Anglo-Saxon hedge. Settlements that were surrounded by hedges were often called after them. Can you think of any place names with Haw, Haugh, Haigh or Hay in their title? Have a look on a map and see if you can find any.

In the past many more people worked on the land, helping farmers to plant and care for hedges. Do you know anyone with the surname Hawes or Hedges? Their ancestors may have been involved with hedges in the past.

Science

Hedgerow Harvest

Many birds, insects and mammals feast on the hedgerow harvest in autumn and winter. This vital food will help to keep them alive during the cold winter. Eight hedgerow foods are shown below, can you identify each one from the list of names?

Sloes Blackberries Old Man's Beard Rosehips Haws Elderberries Acorns Hazelnuts

Write in the name of the creature who might like to eat the food and colour the hedgerow foods in.



Further Information on hedgerows can be found at
Devon Hedge Group – www.devon.gov.uk/hedges
Defra – www.defra.gov.uk/farm/conservation/hedgerows.htm
or in the following publications:-

- ◆ Devon Hedges – Conservation & Management, Devon County Council & the Devon Hedge Group. Available from Devon County Council - see details below
- ◆ British Trust for Conservation Volunteers (BTCV) Hedging handbook Tel: 01491 821600

For further details on this leaflet contact

County Ecologist
Devon County Council
Lucombe House
County Hall
Exeter EX2 4QW

Tel: 01392 382257
Fax: 01392 382135
Email: hedges@devon.gov.uk

For a list of farms which, with Defra support, host educational visits, explore:
<http://cwr.defra.gov.uk> and select 'Educational Access Sites'.

Acknowledgements

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The **Devon Hedge Group** is a forum of organisations and individuals that aims to foster support for hedge conservation in Devon, through promoting management that optimises the value of hedges for farming, wildlife, landscape, archaeological and cultural purposes.

Defra, is a government department, who through the Rural Development Service (RDS) and England Rural Development Programme (ERDP) Agri-Environment Schemes helps to promote and deliver good hedge management.

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Line drawings provided courtesy of English Nature. Leaflet Design by Peter Burgess.



- ◆ **Primrose** – nestled among the grasses in the bank.
- ◆ **Badger** – inside the bank where they live in their sett.
- ◆ **Song Thrush** – either perched high in the hedgerow tree where it can sing, or deep in the lower bushes where it can build a safe nest.
- ◆ **Dormouse** – scurrying along the bushy branches, where feeds on berries, nuts and insects.
- ◆ **Newt** – splashing around inside or close to the ditch.
- ◆ **Tawny Owl** – in the hedgerow tree where it can watch for prey below.
- ◆ **Brown Hairstreak Butterfly** – fitting around blackthorn bushes where the butterfly will lay its eggs.
- ◆ **Slow-worm** – curled up in a dry hole deep within the bank.

Devon's Special Hedges Answers