

RESOURCE 2

HEDGE MANAGEMENT AND BIODIVERSITY ON FARMS



Pupils will use this resource to explore how restoring, establishing and managing hedges can improve biodiversity and reduce farmers' carbon footprint.

<p>Learning Outcomes</p> <p>Unit 1: Soils, Crops and Habitats</p>	<p>Pupils will be able to:</p> <ul style="list-style-type: none"> • define the terms habitat, ecosystem and biodiversity; • describe how farmers can minimise the impact on ecosystems and improve biodiversity by: <ul style="list-style-type: none"> » restoring and establishing hedges; » creating and managing habitats; • describe ways farmers can reduce their carbon footprint; and • evaluate the benefits to farmers of initiatives to enhance biodiversity, for example financial incentives and sustainable agriculture.
<p>Cross-Curricular Skills</p>	<p>Pupils will have opportunities to develop skills in:</p> <ul style="list-style-type: none"> • Using ICT • Communication
<p>Thinking Skills and Personal Capabilities</p>	<p>Pupils will have opportunities to develop skills in:</p> <ul style="list-style-type: none"> • Working with Others • Thinking, Problem-Solving and Decision-Making • Self-management
<p>Resources</p>	<ul style="list-style-type: none"> • Internet access • Video 2: Hedge Management • Resource 1: Hedge Management is the way Forward for Farmers • Resource 2: Campaign Poster • Hedge Management PowerPoint



CONTEXT

Some agricultural practices have had a negative impact on biodiversity. These include wetland area drainage, livestock overgrazing and forest and hedge clearance for farmland. Existing measures are in place to help improve biodiversity in the countryside and farmers are encouraged to use good management practices that help protect wildlife and habitats.

This resource will enable pupils to become confident with aspects of the Care and Management of the Countryside part of Unit 1: Soils, Crops and Habitats. The activities encourage pupils to consider **key terms** such as habitat, ecosystem, biodiversity, carbon footprint and sustainable agriculture and **key concepts** such as:

- how farmers can manage hedges to improve biodiversity;
- the range of benefits that hedge management will provide for the farmer and the environment; and
- sustainable agricultural practice that reduces the carbon footprint.

SUGGESTED TEACHING AND LEARNING ACTIVITIES

LAUNCH

Display the Hedge Management PowerPoint slides 2, 3 and 4 to describe the learning intentions, context and definitions for this resource.

This discussion activity involves exploring hedge management as an essential component of an agri-ecosystem.

Display slide 5 and encourage your pupils to discuss these questions in small groups:

- What is biodiversity?
- How do farmers manage their hedges?
- Can you identify any benefits of good hedge management on the farm?

Ask your pupils to report back and establish prior knowledge.



You might also find it useful to setup an online collaborative whiteboard such as Google Jamboard or Padlet and invite the pupils to contribute what they know or understand about hedge management and biodiversity.

Display slide 6 and use **Video 2: Hedge Management** to introduce the topic. Ask your pupils to consider these questions:

- Can you describe how the farmers have enhanced biodiversity on their farms through their management of hedges?
- How does hedge management reduce the farmers' carbon footprint?
- Are there any financial incentives for the farmer to enhance biodiversity?
- In what ways are farmers demonstrating sustainable agriculture?

Encourage your pupils to use **Resource 1:**

Hedge Management is the way Forward for Farmers to record their answers.



ACTIVITY

- Display slide 7. Tell your pupils they will take the role of a **Department of Agriculture** representative who has been assigned the task of raising awareness of the importance of hedges on farms. They will create a **poster** to highlight the benefits of hedge management. They could complete this task in a variety of ways, for example by creating:
 - » a paper **A4 page poster**;
 - » a **digital poster**, to be presented onscreen or printed out, using a tool such as Adobe Photoshop CC (provided as part of the C2k Education Network) or Google Drawings (go to the [Google Drawings website](#) and sign in using your Google account); or
 - » an **interactive digital poster**, to present on screen, using a tool such as Microsoft SWAY (provided as part of the C2k Education Network) or Google Slides (go to the [Google Slides website](#) and sign in using your Google account).
- Using **Resource 2: Campaign Poster**, set the context for the task by asking your pupils to complete the **definitions** of **key terms**.
- The job description for the task is included in Resource 2 and this website may also be useful: [Managing hedges for wildlife | Department of Agriculture, Environment and Rural Affairs \(daera-ni.gov.uk\)](#)
- When your pupils have completed their posters, encourage them to complete **Two Stars and a Wish**.

TWO STARS AND A WISH: HOW DOES IT WORK?

- Ask your pupils to place their work on their desk and then in groups move around the classroom to view others' work.
- For each piece of work they review, encourage your pupils to write down on a Post-it note two things they like and one wish that they think would enhance the work.
- Then, ask them to return to their own piece of work to read through and discuss what others have written on their Post-it notes.
- Ask them to make a list of stars and wishes for their work and then write a short evaluation of how they intend to enhance their work next time.

DEBRIEF

Conclude by reviewing the **learning outcomes**, **key concepts** and **terms** from the start of the activity with the pupils.



If you used an online collaborative whiteboard in the launch activity, return to the whiteboard and ask your pupils to use a different coloured font to add any new ideas or information they have learned.



RESOURCE 1: HEDGE MANAGEMENT IS THE WAY FORWARD FOR FARMERS

When watching the video, use this page to record your answers to these questions:

Describe how the farmers have enhanced biodiversity on their farms through their management of hedges:

How does hedge management reduce the farmers' carbon footprint?

Are there any financial incentives for the farmer to enhance biodiversity?

How is sustainable agriculture illustrated in the video?



RESOURCE 2: CAMPAIGN POSTER

Complete the key definitions:

BIODIVERSITY

A measure of the
n_____ of different types
of plant and animal
s_____ in an
area.



ECOSYSTEM

An area where a
c_____ of
organisms live and are
affected by a range of
environmental factors.



HABITAT

The place where an
o_____ lives.



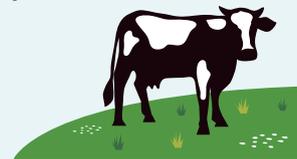
KEY FACTS TO REMEMBER:

Sustainable farming practices enable farmers to produce food in a way that will not harm their ability to do so in the future.

It's a way of farming that will allow sustained production while preventing or limiting the harm to the environment.

Many habitats are being lost in Northern Ireland through agricultural intensification, including wetland area drainage, livestock overgrazing, forest and hedge clearance for farmland. This is affecting biodiversity.

It is important to increase biodiversity.



ACTIVITY 1

You have been employed by the Department of Agriculture to produce an A4 poster for their upcoming campaign to promote hedge management on farms.

Job Description:

- complete a poster that will encourage farmers to restore, establish and manage hedges;
- use your knowledge from the video to include the following on your poster:
 - » how farmers can manage hedges to improve biodiversity;
 - » the range of benefits that hedge management will provide for the farmer and the environment; and
 - » how hedge management reduces the farmer's carbon footprint.
- ensure that you catch farmers attention with your information. Be creative!

You will take part in a Two Stars and a Wish peer assessment activity at the end.