GRASSLANDS

All lessons are linked to the film Grasslands

Learning for Grasslands

Overarching Learning Intentions

The aim of this package of lessons linked to the film 'Grasslands' is to help young people understand how grasslands work and how much they do for our natural environment. The lessons aim to give young people an empathy and wonder about the magic and beauty of grassland and also its role in supporting biodiversity, combatting climate change and contributing to their health and wellbeing.

INTRODUCTION

'Grasslands' shows how the Threave landscape restoration project is allowing the recovery of key grassland habitats such as wildflower meadows, encouraging a diversity of insects, birds, and wildlife.

Healthy grassland is vital to biodiversity, as well as carbon and water storage, and maintains soil health. Grassland that is depleted by overgrazing and over-fertilisation leads to poorer land and animal health long-term, and increased water run-off that can contribute to flooding.

To help restore the grassland, the project is using 'holistic planned grazing', which moves cattle and sheep across the land in a way that allows the grass and soil time to recover between grazing and is sympathetic to the time of year and the way the land and wildlife is responding.

The project is using cutting-edge technology in the form of GPS collars for the livestock (https://www.nofence.no/en-gb/). The invisible boundaries are programmed in using an app. When the livestock comes near this 'fence' they hear a noise – if they keep going they get a small electric pulse, teaching them where they can and can't graze. The farmer can change where the boundaries are as needed. This has also allowed the project to take down 8000m of the old fencing on the reserve, opening up the landscape and allowing wildlife to move freely.

POINTERS FOR TEACHERS

This series of interdisciplinary lessons/learning activities cover 2nd and 3rd level curriculum areas of Science, Outdoor Learning and IDL/ Expressive Arts.

They are best presented to young people after watching the 'Grasslands' film as it gives an introduction to grassland/ meadows and pollinators. The lessons are suggestions and to be interpretated by teachers creatively and in relation to learners' knowledge and needs. The lessons can be taught as part of a Learning for Sustainability/ IDL topic or independently by subject.

CURRICULUM LINKS

SCIENCE	TECH/HWB	LITERACY	EXPRESSIVE ARTS/ SOCIAL STUDIES
SCN 2-01a - I can identify and classify examples of living things, past and present, to help me appreciate their diversity. I can relate physical and behavioural characteristics to their survival or extinction.	**TCH 2-05a** - I can investigate how product design and development have been influenced by changing lifestyles.	**LIT 2-04a -** As I listen or watch, I can identify and discuss the purpose, main ideas and supporting detail contained within the text, and use this information for different purposes.	**EXA 2-03a -** I can create and present work that shows developing skill in using the visual elements and concepts.
SCN 2-02a - I can use my knowledge of the interactions and energy flow between plants and animals in ecosystems, food chains and webs. I have contributed to the design or conservation of a wildlife area.	**TCH 2-07a** – I can make suggestions as to how individuals and organisations may use technologies to support sustainability and reduce the impact on our environment.	**LIT 2-05a** - As I listen or watch, I can make notes, organise these under suitable headings and use these to understand ideas and information and create new texts, using my own words as appropriate.	**EXA 2-05a** - Inspired by a range of stimuli, I can express and communicate my ideas, thoughts, and feelings through activities within art and design.
SCN 2-02b - Through carrying out practical activities and investigations, I can show how plants have benefited society.	**HWB 2-26a** - I am experiencing enjoyment and achievement on a daily basis by taking part in different kinds of energetic physical activities of my choosing, including sport and opportunities for outdoor learning, available at my place of learning and in the wider community.	**LIT 2-06a** - I can select ideas and relevant information, organise these in an appropriate way for my purpose and use suitable vocabulary for my audience.	**EXA 2-07a** - I can respond to the work of artists and designers by discussing my thoughts and feelings. I can give and accept constructive comment on my own and others' work.
SCN 2-03/3-03a - I have collaborated in the design of an investigation into the effects of fertilisers on the growth of plants. I can express an informed view of the risks and benefits of their use.	**MNU 1-03a** - I can use addition, subtraction, multiplication and division when solving problems, making best use of the mental strategies and written skills I have developed.	**LIT 2-07a** - I can show my understanding of what I listen to or watch by responding to literal, inferential, evaluative and other types of questions, and by asking different kinds of questions of my own.	**SOC2-08a/3-08a** - I can discuss the environmental impact of human activity and suggest ways to be more responsible. I can identify the possible consequences of an environmental issue and make informal suggestions about ways to manage the impact.

SCIENCE	TECH/HWB	LITERACY	EXPRESSIVE ARTS/HWB
SCN 2-17a - Having explored the substances that make up Earth's surface, I can compare some of their characteristics and uses.		**LIT 2-25a** - I can use my notes and other types of writing to help me understand information and ideas, explore problems, make decisions, generate and develop ideas or create new text. I recognise the need to acknowledge my sources and can do this appropriately.	**SOC 3-08b** – I can consider the advantages and disadvantages of a proposed land use development and discuss the impact this may have on the community.
SCN 3-01a - I can sample and identify living things from different habitats to compare their biodiversity and can suggest reasons for their distribution.		**LIT 2-26a** - By considering the type of text I am creating, I can select ideas and relevant information, organise these in an appropriate way for my purpose and use suitable vocabulary for my audience.	**SOC 3-I0a** - I can investigate the climate, physical features and living things of a natural environment different from my own and explain their relationship.
SCN 3-05b - I can explain some of the processes which contribute to climate change and discuss the possible impact of atmospheric change on the survival of living things.			**SOC 2-13a/3-13a** - I can explain how the physical environment influences the ways in which people use land by comparing my local area with a contrasting area. By comparing settlement and economic activity in two contrasting landscapes, I can reach conclusions about how landscapes influence human activity. I can explain my findings clearly to others.
SCN 4-01a - I understand how animal and plant species depend on each other and how living things are adapted for survival. I can predict the impact of population growth and natural hazards on biodiversity.		**LIT 2-28a** - I can convey information, describe events, explain processes or combine ideas in different ways.	
SCN 4-12b - Through investigation, I can explain how changes in learned behaviour due to internal an external stimuli are of benefit to the survival of species.			

Outdoor Learning

LEARNING INTENTION

Young people gain an experiential first hand understanding of grassland habitats through observation, exploration and investigation. They develop their connection with local grassland areas, and can identify actions that could support and improve grassland habitats.

Overview

The Outdoor Learning activities for 'Grassland' are designed to give teachers and outdoor educators a starting point for successful learning in the outdoor environment. They can be adapted to suit the site you have available and the time of year, and also list equipment and resources to aid preparation. There is a link to a risk benefit assessment that covers the outdoor learning sessions, which you can adapt if required. We hope all of these will be useful either directly or as inspiration and support for taking learners outdoors.

Relevant Topic / IDL links

Minibeasts, Living Things, Habitats, Environment, Ecosystems, In the Garden.

Time of year

Spring/summer - term four and term one

Site

Any area of grass! Ideally, the potential to compare two or more grassland areas that have different uses and management, for example a playing field, a grass verge or less frequently mown area, and/or grassland in a nature reserve or relatively untouched area. To focus on invertebrates, a larger area of summer grassland will give more interest and variety. Areas can either be close to each other to enable comparisons to be made on the same day, or if further apart they can be visited on different different days and then the observations compared. Remember to get landowners' permission and check any environmental or wildlife conservation restrictions first (see Risk Benefit Asessment in the panel to the right).

WATCH GRASSLANDS
All lessons are linked to the 'Grasslands' film

LINKS

Safety

Risk Benefit Assessment

Warm-up activity - settling into the outdoor environment

Sound map - see Warm-up activity sheet

LEARNING ACTIVITY 1

INVESTIGATING GRASSLAND HABITATS – GRASSLAND HEALTH INDICATORS (SOIL AND PLANTS)

Info

Healthy grassland has a wide variety of plants with healthy leaves and strong roots that lock carbon into the soil and help the soil absorb water. It supports a wide variety of invertebrates, including pollinators, as well as larger animals and birds.

Like all habitats, grassland's health is dependent on soil health. It takes hundreds or thousands of years to create healthy soil, but over-grazing, over-use of fertilisers, lack of plant diversity and compaction by machines and animals all degrade soil quality very quickly.

The 'Grasslands' film shows how efforts are being made to improve soil health by changing how often and when cattle graze the land. To assess how well this is working, regular monitoring of soil and grassland health is carried out.

Aim

To assess the health of an area of grassland, looking at soil and plant health and diversity. To compare the health of different areas of grassland.

Activity

Split the class into smaller groups. Each group is given a quadrat (see Resources in sidebar on the next page), to place in a different area of grassland. If possible, find a site with a variety of different types of grassy areas, for example a playing field or mown area next to a verge or unmown area – or spend some time in one then move to a different location.

Demonstrate first - place the quadrat on the ground, looking closely at the area within the quadrat.

Use the Grassland Health Scoring Sheet (see resources sidebar on the right) to help assess the health of your area.

Give your area of grassland a health score. Compare with other areas - what do you think influences the health of your patch?

Plenary

Gather round and compare scores. Ask the learners to try to predict the scores of different areas first, if applicable.

In turn, share what you have observed and something you have discovered from the activity.

Resources

The World Beneath our Feet – connecting soils and the curriculum PDF – Smarter Scotland

Meadow ID Guide PDF – Save our Magnificent Meadows

Grassland Health Scoring Sheet

Equipment

- Quadrats - something to mark out an area 1m^2 or another consistent size, for example metre sticks, string and pegs, hula hoops
- Trowels or small garden forks
- Bottles of water, cup to measure 100ml
- Rulers
- Grassland Health Scoring Sheets
- Pencils/pens/clipboards

LEARNING ACTIVITY 2

INVESTIGATING GRASSLAND HABITATS – GRASSLAND BIODIVERSITY (MINI-SAFARI)

Info

Grassland and meadows support a huge variety of invertebrates, mammals, birds and micro-organisms, which are all essential parts of our ecosystem, and food webs. Some creatures, for example some species of butterflies and bees, are indicator species – these help tell us a lot about how healthy our wider environment is.

When monitoring our grassland, we do surveys of pollinators, butterflies, dragonflies and invertebrates every year.

Aim

To investigate the different life an area of grassland supports, particularly invertebrates. To enjoy spending time in grassland.

Activity

Place learners into groups, or work as individuals. Their task is to hunt for invertebrates (minibeasts) in the grassland area. Encourage them to look very carefully and get right down among the grass. If they find something, they can gently tip or move it into a collection pot using a soft paintbrush, for a closer look.

Task 1: Sweep-nets – demonstrate how to sweep the nets gently through long grass, then carefully investigate the contents, tipping or brushing gently into collection pots.

You might expect to catch leaf-hoppers, true bugs, beetles, shield bugs, grasshoppers, day-flying moths.

Task 2: Pitfall traps – see 'How to Make a Pitfall Trap' in resources – these are easy to make and can be made in the morning and checked in the afternoon, or made in the evening and checked in the morning.

When checking the trap, carefully lift it out of the hole and gently tip the contents into a light-coloured tray or large tub. Gently investigate what has been caught – you might expect to catch grubs or larvae, beetles and spiders.

Task 3: Recording – ask the learners to draw what they have found, either on individual pieces of paper or one big sheet. This is a great way to encourage them to look carefully. Ask them to make notes around the drawing – where they found it, the colour, any other observations. They can use the ID sheet to find out what it might be.

Let the invertebrates go where you found them, being careful not to keep them in tubs too long, especially on a warm day.
* Do not put slugs or snails into a pot with other creatures – they can get stuck in the slime!

Questions to ask

- What do you notice about it? What else..?
- Why might it be that colour?
- What part of the grassland does it live in?
- What challenges do you think it might face?
- What might eat it?
- What might it eat?

Equipment

- Sweep nets if available (large fine gauge nets with short handles) for long grass
- Trowels or small forks
- Magnifying glasses
- Small paintbrushes for moving invertebrates
- Small tubs for looking at invertebrates
- ID sheets (see Resources section on the next page)

Plenary

Gather round the drawings that have been made. In turn, ask learners to point to a drawing they like or are curious about. Ask them why they like it or find it interesting.

Ask learners questions like "What was the most interesting thing you found today? Why?"

Extension

These drawings can be taken back into the classroom to form part of a grassland wall display.

Resources:

Meadow ID Guide PDF – Save our Magnificent Meadows

Invertebrate ID Guide PDF – OPAL

Scottish Butterfly ID chart PDF – Butterfly Conservation

How to make pitfall trap https://www.bnhs.co.uk/youngnats/to-do/build-a-pitfall-trap/

There are many more invertebrate ID resources online to suit different ages and stages

Science/Maths

LEARNING INTENTION

These learning experiences focus on the importance of grazing levels to our grasslands. There is a 'right amount' of grazing which brings the most benefits to biodiversity, soil health, and land management, depending on the climate and location. We will use art, maths, and games to understand how we can change our grazing practices across the world for the better.

Overview

Within the Science section of our Learning for Grassland Materials there are three Learning Activities. These activities consider how important grassland diversity is, and how effective low intensity grazing can be used to benefit this important habitat.

Learning Activity 1 asks learners to map and categorise a natural outdoor space using descriptive words and colours. Does their map look like a mosaic of micro-habitats, or big blocks of colour – and what might that mean for biodiversity?

In **Learning Activity 2**, learners will use maths to understand how farmers can manage cattle to benefit the grassland biodiversity. With the right number of cattle, for the right length of time, farmers can increase the health of the habitat.

Learning Activity 3 will help learners to understand how cows can be managed without fences, using technology, as described in the film. They will alter playground games to see how their behaviour can be learned and changed, just like it was for the cows.

WATCH GRASSLANDS
All lessons are linked to the Grasslands Film

POINTERS FOR TEACHERS

Since these lessons talk about grazing and cattle, there may be some questions from pupils or even parents, especially in rural areas with a big farming economy. The evidence linking intensive grazing to loss of soil is readily available, but you can also get in touch or point them to a regenerative farming network to find out more. There is one for Southwest Scotland, and a quick internet search will find them..

SCIENCE/MATHS

LEARNING ACTIVITY 1

GRASSLAND DIVERSITY

POINTERS FOR TEACHERS

Older pupils can identify the most popular species in each square and use that for their key instead. You could also measure each square of the graph paper using quadrats (2 1m sticks can measure this out if you have no quadrats). If doing it this way, pupils shouldn't colour in squares that are mostly manmade structures – e.g. pavements. See how much area is blank at the end.

Info

Pupils will use graph paper to block a map of a local grassland (the school grounds may work), developing a key of descriptive words.

Task 1: Pupils explore the site that they will map and categorise areas depending on physical characteristics. Encourage them to use descriptive words like yellow, lush, or short. Each word will be part of their key and will relate to a colour.

Task 2: Explain to pupils that they will use graph paper to create the map, using the key developed. Each square should be one colour, depending on the most prominent characteristic of the area it corresponds to. You may need to help pupils decide a scale (one stride could be one square, and make sure pupils can orientate their map by assigning a corner of the graph paper to a corner of the site). This can be done collectively, all with the same key, and put together to create a giant map – or individually. You can discuss at the end what they found, if they observed more of nature and diversity than usual, and how they think their map might look if they did it in, for example, a car park or a nature reserve. What might those differences mean for the biodiversity of those areas?

LEARNING ACTIVITY 2

GRAZING CAPACITY

Info

Each unit of grassland has a maximum number of cows it can support, as the Grasslands video showed. This depends on how long the cattle will be grazing in the area, but also how productive and diverse the area is. If you overgraze an area, you can damage the soil underneath – but if you graze an area the right amount, you can build soil, which is important for our future.

Task 1: Remind the pupils about the film. Explain to them that a healthier and more biodiverse grassland will build the amount of soil in the grassland over time. Ask them if they know what soil is made of (organic matter plus inorganic matter – basically, dead plants and animals or poo, and broken-down rocks or shells). Soil can take hundreds of years to form even as much as 1cm. Unfortunately, it only takes one or two years to damage or lose it – and the way that humans now farm often removes rather than builds our soil. We need to manage our land right to make sure we have soil for the future.

Ask the pupils to work through the Grazing Capacity Maths sheet and answer the questions as best they can. You can change the numbers and create your own version to suit the level of the pupils – just make sure to replace all of the same numbers and make sure the best field for grazing is the wildflower meadow in the sun (field 3).

The pupils should find that grazing on wildflower meadows with the right number of cows gives us the best results. But if we keep our cows on any land in our examples for too long, they will overgraze and damage the soil!

LEARNING ACTIVITY 3

LEARNED BEHAVIOURS

Info

Animals can respond to new things in their environment, which keeps them safe or benefits them. Pupils can also demonstrate learned behaviour – as we will find out!

Task 1: Ask the pupils why we might want to remove fences in our farmland and countryside. If they're not sure, remind them of the film. If they had fences on the edge of that paper, could wildlife easily move through their fields? Unfortunately not! But we must still be able to stop our cattle from overgrazing land or we will lose our soil, so we have to come up with a new way of keeping our cows in one place. Does anyone remember the neck collars from the video and how they worked? If not, explain that the collar warns the animal with a noise and then a small shock follows if the cow goes beyond the boundaries that are created via an app that the farmer can use. The cows learn to associate the noise with the shock, and so move away from the invisible boundaries to avoid the shock – they have learnt to alter their behaviour. Let's play a game in the school grounds to show pupils how that happens.

Task 2: Go outside and tell the pupils to stand behind a line or landmark. Then choose a child to be 'it' (or 'the monster'), and all the other children have to move towards the person who is 'it' (the person stands about 15 metres away, facing the opposite direction, and freezing whenever that pupil turns around. If they are still moving, the pupil names them and they go back to the start. it is important in the first couple of goes that there is no clue when the pupil turns around – they can do it at any time! The first pupil to reach the 'monster' becomes the monster for the next round.

Task 3: Once the pupils have completed a few rounds, tell them that from now on the monster must roar before turning around. You may need to practice to make sure the monster knows they can only turn AFTER they roar! Play this for a few rounds.

Task 4: Ask the pupils how they changed their behaviour once the monster roared – hopefully they will say that they knew to stop when the roar happened. Explain that they have developed 'learned behaviour'. They learnt that a roar meant they had to freeze, even if the monster hadn't turned around quite yet. They responded to a change in their environment by changing their behaviour – and that kept them (hopefully) safer!

Now apply this to the cows. The cows have learnt that the sound from their collars meant that they would soon get a shock, so they backed away even if they couldn't see a fence.

Extension Activity

Ask the pupils to change another playground game to make the class learn a new behaviour, or even to make one up!

Expressive Arts / IDL / Literacy

LEARNING INTENTION

To build up an understanding about biodiversity in grasslands and how this has changed through time. Through a series of creative activities and looking at how artists have depicted grasslands in the past, we will build up an understanding and empathy for the natural world.

Overview

The Threave Landscape Restoration project aims to re-stablish a variety of species in their grasslands. The following series of lessons are interdisciplinary with a creative focus on the tasks to evoke understanding and empathy.

Learning Activity 1 encourages learners to look at paintings from the 19th century by the French artist, Claude Monet. Then learners are asked to compare the biodiversity and variety of wild flowers and grasses to modern day grasslands through a series of creative tasks.

Learning Activity 2 focuses on how animals use the grasslands and explores, through a series of playful tasks, grasslands from an animal's perspective.

Learning Activity 3 is linked to the new "no fence" technology used at the Threave Nature Reserve for its herd of native Galloway cows. It encourages problem-solving and improvement of the existing technology and the use of "cow collars".

WATCH GRASSLANDS
All lessons are linked to the Grasslands Film

POINTERS FOR TEACHERS

In the film, Hew talks about the feeling of running through a wild meadow. Depending on where your young people live and how the fields are farmed, many young people may not have experienced running through a meadow. So, it might be worth taking them to a meadow near the school (there will be considerations such as nesting birds and landowner's permission – see Outdoor Learning section) or showing them a clip from a film of young people running through a flower meadow. You can also show your young people paintings of wild flower meadows from the past. The 19th century artist Claude Monet painted the landscape as it was in 1870s. This illustrates how much biodiversity there used to be in our grasslands.

LEARNING ACTIVITY 1

EXPRESSIVE ARTS/ HEALTH

Activity

To find out a little more about grasslands in the past let's do some research into the landscapes painted by Claude Monet. First, do an image search on the internet for Monet and have a really close look at the meadows in his paintings. Can you see lots of different flowers and grasses? Find out when and where the paintings were painted. How many years ago were they painted? Do the fields around where you live look like these paintings or have they changed from the past?

Task 1: Make a powerpoint and share your discoveries about meadows in the past with the class.

If you have fields close to your school, you could compare a grazed field which has lots of cattle in it with a meadow. If you don't have access to fields you can compare the fields of now with the fields from the past using images in your powerpoint.

Now re-watch the 'Grasslands' film – what do the fields look like in the film? So, if the fields around where your school is don't look like the Monet paintings of meadows have a think, share, and discuss within your group why most of our fields don't look like that anymore.

Task 2: Monet was a very famous artist and was part of a painting movement called the Impressionists. He used a technique of painting that helped communicate the changing light and colour within a landscape which used dots or sweeping marks of different coloured paint to describe the interaction of light and colour.

Using watercolour paints on thick A2/A3 paper, create a wildflower meadow like the one seen in the film or Monet's paintings. Through different marks made on the paper describe the variety of flowers and grasses. Try to create in your painting the very best meadow in Scotland or even the world!! You could also collaborate with your research group on the creation of a bigger painting, perhaps compete with other groups to see who can create the biggest and the best.

Task 3: Discussion – think about cows grazing on a field that is mostly green grass, then think about what it must be like to be a cow grazing on a meadow full of different types of grasses, flowers and herbs. Think about your diet if you ate just one type of food how would that make you feel? Would you feel as healthy as you would by eating a varied diet of lots of different vegetables, salads, fish, bread and meat? How does a varied diet make you feel?

POINTERS FOR TEACHERS

Try to make sure your young people constantly change the water they are using for their watercolour paintings, so it doesn't get muddy. If possible, encourage them to use soft brushes. It is suggested that you could have a little bit of experimental paper to try techniques with water and paint marks. For instance, they can also use sponges and wet the paper a little before putting the marks and colour onto the page.

LEARNING ACTIVITY 2

IDL/SCIENCE/LITERACY

Info

Watch the 'Grasslands' film. Did you notice all the amazing insects, birds and wildlife in the film? What animals did you notice who lived in the meadows or who depended on the rich variety of grasses, flowers, and soil for habitat and for food? Did you hear all the insects in the film? Let us try to imagine what it is like to be one of those animals or insects.

Task 1: Close your eyes and imagine you are a bumble bee flying through a diverse grassland full of lots of lovely flowers and herbs. What does the grassland look like from your perspective (viewpoint)? what does it smell like? What does it sound like? What is your job as a bee? Do you have any predators you need to be looking out for?

Then imagine yourself a different type of animal – a hare perhaps, or a cow. Or a bird who uses grasses to build their nest. Close your eyes and imagine being all these animals. What are they thinking? Feeling? Experiencing?

Task 2: Blog/Diary Writing – now you have imagined what it might be like to be one of these animals, insects, birds and flowers who live within the grasslands. Let's help other people imagine with you, can you help them be that animal too? You can do this through the following creative learning activities.

Choose an animal/bird/insect and write about your day as if you were telling the story.

For instance, if you were a cow, what is it like wearing the collar and what is the funny beeping sound you hear before you get a strange tingle from the invisible fence? In your blog remember to set the scene by saying who you are, where you are, and describe what is around you. Then tell us about your day. What do you eat? Who are your friends are? How are you feeling? What is it like when you interact with other animals, insects or humans?

To help you imagine, you might want to draw a picture first and then write your blog or you might want to write the blog first and then draw an illustration to go with it.

Suggested Format – typed as a digital file or handwritten like a diary page.

Task 3: Cartoon strip – your teacher will show you what a cartoon strip looks like. There are boxes for drawings that sit next to each other to tell a story. Sometimes the drawings have speech bubbles coming out of the character's mouths. Now have a go and create a cartoon strip of a day in the life of a cow, bee or ground-nesting bird.

Suggested Format – A3 pencil and paper, you can use coloured pencil if you want.

Task 4: News Report – you will need to work as part of a pair. Imagine you are a news reporter for the BBC News who is visiting this grasslands restoration project. Ask the other person to choose an animal e.g. a cow. Now imagine you are a news reporter interviewing that animal. Imagine that animal can communicate with humans. What would they say? How would they answer the questions you ask? What questions would you ask? You can make it funny or serious, it is up to you. Now either record the news interview and play it back to the class or perform the news report in front of the class. You may need to write a script or practice it a little first.

When other people read your blog, diary page, cartoon or news report, they will be able to see the world as a cow too or other animal too.

POINTERS FOR TEACHERS (TASK 1)

This is an exercise that helps your young people get into the "creative zone" and fosters empathy for the animals and how they live and survive. It also helps encourage imaginative thought in terms of different perspectives on an environment or inter-species.

POINTERS FOR TEACHERS (TASK 2)

The drawings don't need to be perfect it is really an exercise for young people who prefer drawing to be able to imagine what it is like to be one of the animals, insects or birds. You can question them as they are drawing so they expand their thinking as they are creating the cartoon strip.

LEARNING ACTIVITY 3

TECHNOLOGY

POINTERS FOR TEACHERS

It would be great to lead a class discussion on how the technology of the cow's collar works and its impact on the restoration of grasslands. The activities are a suggestion but might help young people better understand the technology behind the collars. Learners may have never seen an instruction sheet before so it might be an idea to bring some sheets in for them to look at as well as show them some images from the work of product designers or inventors.

Info

Watch the 'Grasslands' film again and listen very carefully to how the cow's collars work. This is cutting-edge technology that is just in its early stages of being tested. Have a group or class discussion about the use of the collars and the technology behind them. Think about how the collars work. How do the cows know how to keep their distance from the fences? If you were a cow what would you think of the collar? Why are the collars good for the restoration of grasslands? How do they help the environment and help wildlife thrive?

Task 1: Make a diagram or poster explaining how the collars work and how they are good for encouraging meadows to grow and supporting other wildlife and plants.

Suggested Format – A4/A3 paper and coloured pencils.

Extension Activity

Can you design a better collar for the cows to wear? How would it work? Can you improve on the existing design to make its technology and design even better for the environment and the cow? Create an instruction sheet with drawings and notes to describe how your collar would work.