#### **Farming, wildlife and your school grounds.**

**Teacher’s notes.**

**Age group:** Key stage 2

**Activities:** Introductory PowerPoint, followed by practical task.

**Time:** Min 1 hour

The aim of this activity is for children to learn about how farmers not only grow our food but also look after the wildlife on their farms. Many of the ways farmers look after and improve the habitats on their farms can easily be adapted on a smaller scale to use in your school grounds.

**Contents.**

Lesson plan page 2

Supporting notes for PowerPoint page 3

Planning a farm visit page 7

Farmer Time page 7

Leaf Education page 7

#### **Lesson Plan.**

|  |  |  |
| --- | --- | --- |
| **Lesson Title:** | **Farming and Wildlife** | **Year Group**  5 and 6 |
| **Curriculum** | * Geography, Science, PSHE * Eco Schools and John Muir Awards | |
| **Learning objectives:** | * To understand that farmers grow our food * To understand that farmers also look after and improve the wildlife habitats on their farms * To demonstrate how some examples from the world of farming could be applied on a smaller scale in the school grounds | |
| **Resources checklist:** | PowerPoint presentation about farming and wildlife  Aerial photos of school  Plan/map of school  Coloured pencils/markers | |
| **Programme:** | **Starter:** Using PowerPoint images  What do farmers do?  Types of farms and the food they produce.  What are the wildlife habitats on farms?  How can farmers improve the biodiversity of their farm?  **Main:**  Mapping existing habitats in school grounds.  Planning how the grounds could be improved to encourage more wildlife. (Using inspiration from farmers and assuming that money is no object!)  **Plenary:**  Summary and discussion. Plan future activities for the school’s wildlife. | |
| **Safety note** | Consult school’s policy on working in the school grounds. Don’t forget hand washing if children have been handling natural materials and soil. | |
| **Extension** | * As part of survey of school grounds you could include plant and insect surveys -Citizen science projects like Polli:nation, OPAL and Earth Watch can support this. * Further study of habitats, adaptations and food webs. * Children create their own base map by measuring and surveying the school grounds. * Map work skills extended to include grid references. * Invite organisations like Wildlife Trusts, RSPB or Bat groups to help create more habitats with the children, bat boxes, nest boxes etc. * Work out actual costings to put ideas in place. * **Practical tasks:** Making a bird’s nest ring / bird feeders /planting seeds (meadow mix, bird feeder mix) building bug hotels /nest boxes [www.countrysideclassroom.org](http://www.countrysideclassroom.org) for lots of ideas * **Go on a farm visit and sign up for Farmer Time** | |
|  |

**Supporting notes for PowerPoint.**

Slide 1 – Farming and wildlife. 71% of land in the UK managed by farmers, it’s easy to see what an important role they play in helping to protect and encourage wildlife and habitats. Farmers work affects what our countryside looks like and how it functions, both for food production and conservation.

Slide 2 - What do farmers do? What do the pupils think? Are any of them connected to farms? Have any of them been to a farm?

Slide 3 – Farmers grow our food. If you have eaten some food today, then that has come from a farmer somewhere in the world.

In the UK we have different types of farm. Some farmers specialise in one type, others have a mixture of enterprises.

Do the pupils know what food we get from each of these farms?

*Images:*

*Arable - farming for crops like wheat, oats, barley and oilseed rape.*

*Poultry – rearing hens for meat or eggs. There are two types of chicken, those that are good at laying eggs (layers) and those that grow well to produce meat (broilers)*

*Livestock – animals reared to produce meat. Sheep, goats, pigs and beef cows.*

*Dairy – cows that produce milk.*

*Fruit and Vegetables - Large scale production of fruit and veg.*

Slide 4 – Farmers also look after the wildlife on their farms. A farmer’s business is based on producing a product to sell, but many farmers like to do this in a wildlife friendly way. As well as enjoying encouraging the wildlife to live on the farm, taking a wildlife friendly approach can also help the farmer.

What can the children see in this picture of a farm in Leicestershire? What is farming activity? Where are places where wildlife can live? What is a habitat?

A good habitat will provide food, shelter and water for the creatures that live there.

*Image: Mixed arable and livestock farm.*

Slide 5 – Walls and hedges. Hedges and walls are wildlife corridors linking larger habitats. They also provide great sources of food and shelter for insects, small mammals and birds.

For the farmer, walls and hedges provide secure boundaries between fields and shelter for livestock.

*Images: mature hedge, drystone wall, chaffinch, robin and stoat.*

Slide 6 – The edges of fields. This farmer has added to the wildlife value of her hedge by allowing long grass and shorter grass to grow alongside the crop. Different lengths of grass attract different creatures. Voles and shrews like long grass; owls like to eat voles and shrews! Many of our food crops require pollination by insects so providing habitats for pollinators is important.

These strips of grass are called headlands. They provide homes for beneficial insects that help reduce the pest insects in the crop. They also act as buffers to help reduce run off or drift of products applied to help the crop grow.

*Images: Grass headland, rabbits, vole, ladybird and cinnabar moth caterpillars*

*Slide 7 –* Wet Areas and Ponds. These are fantastic habitats for insects, mammals and birds, providing a wealth of food supplies and shelter for creatures adapted to live in and around water.

For the farmer, ponds provide water for animals and crops. Some farmers save huge lagoons of water for crops.

*Images: Wetland area, pond, kingfisher, newt and tadpoles, lapwing and dragonfly.*

Slide 8 – Trees and Woodlands. Are another super habitat for wildlife. As well as the creatures that live in the trees themselves, rotting wood provides a home for minibeasts and fungi.

For the farmer, trees and woodland provide shelter for animals, wind breaks for crops and a supply of timber. They also help with drainage and flood control.

*Images: woodland, mature in field tree, tawny owl, badger and woodlouse*

Slide 9 – Grazing land and hay meadows.

Dung beetles live in the droppings from farm animals and they in turn attract insect-eating birds and mammals. A hay meadow with a good variety of plants and flowers will also attract lots of different insects, birds and mammals.

Grazing land provides food for livestock. In hay meadows the grass grows long in the summer. It is then cut and dried, making hay. The farm animals eat hay in the winter when the grass is not growing. Having grazing animals as part of a crop rotation can improve the quality of soil. The animal dung adds nutrients and helps to improve soil structure.

*Images: hay meadows, swallows, buzzard, ox eye daisy and burnet moth*

Slide 10 – Areas created for wildlife. Many farmers use less productive parts of their farms as special places for wildlife. For example, a wet corner of a field or a steep slope that makes cultivation tricky, may be a good place to plant wild bird food. Headlands can also be sown with special seed mixtures for wildlife e.g. pollen and nectar mix. The government will encourage this work by providing financial support.

Tussocky grass strips in the middle of crops are called beetle banks: these provide homes for beetles and other beneficial insects that eat the pest insects in the crop. They also provide more corridors to link up habitats around the farm.

Some farmers are using agro-forestry as a way of farming in a wildlife friendly fashion. The crops are grown in strips between rows of trees. This system can also work for grazing livestock between trees.

*Images: grass headland, wild bird food, beetle banks, agro-forestry and pollen and nectar area.*

Slide 11 - what would you do? How could you use some of these ideas in your school grounds? Good aerial images can be found on www. magic.defra.gov.uk

*Images: aerial photo.*

Slide 12- Design your wildlife friendly school. Just like a farmer you must start by recording on your base map the features you already have. This might not be much, or you may already have lots of wildlife areas, but there is always room for more wildlife.

After you have worked out what is already there, then start to plan features to connect larger habitats – your wildlife corridors.

Finally think of any new features you would like to add.

Imagine school has just won the lottery and you can spend as much money as you like. Really let the children use their imaginations (meadows on roofs, fish tanks instead of windows, bird boxes all around the roof, swimming lakes and huge willow labyrinths are some of more expensive suggestions children have come up with!)

After the initial sharing of ideas, you may like to work out some costs, or try a few low-cost DIY solutions so the children can do something for the wildlife at school straight away.

*Image: example plan*

Slide 13, 14 and 15– Some suggestions. Examples from schools.

*Images: Plant hedges and trees, wildflower meadows, plants for pollinators, long grass areas. Willow is fast growing and is a great habitat (as many insects live in willow as they do in oak trees) Make minibeast hotels, hedgehog houses and bird feeders. But don’t forget to allow space for you all to enjoy the wildlife, include places to sit and places to explore and play.*

**Planning a farm visit**

You may have organised farm visits for your students before, but if you feel you need a little bit of help have a look at;

**“How to plan curriculum linked and safe visits to farms: A handbook for teachers”** available on the Countryside Classroom website at https://www.countrysideclassroom.org.uk/resources/1416 .

This should give you all the information you need. If you would like further support, don’t hesitate to contact your LEAF Education Regional Consultant (details in the hand book or https://leafuk.org/education/contact-us )

**Farmer Time**

Farmer Time is all about harnessing the power of digital communications to inspire, engage and educate young people about not only the journey from farm to fork but also the everchanging, diverse agricultural industry. Children regularly chat live to their matched farmer from their classrooms through FaceTime or Skype, discuss ideas, ask questions, share knowledge and gain a ‘real-time’ understanding of the issues farmers face every day.

Visit: www.leafuk.org/farmertime/home

**LEAF Education**

LEAF Education is a charity working throughout England and Wales to inspire future generations about food, farming and the countryside. The team of experienced Regional Education Consultants work closely with teachers and farmers to facilitate links and learning opportunities.

LEAF Education is part of LEAF (Linking Environment and Farming). LEAF is the leading global organisation delivering more sustainable food and farming. LEAF works with farmers, the food industry, scientists and consumers to inspire and enable sustainable farming that is prosperous, enriches the environment and engages local communities. LEAF promotes Integrated Farm Management, a whole business approach that delivers sustainable farming. LEAF also organises LEAF Open Farm Sunday, the farming industry’s annual open day for the public.