

SEEING THE WORLD THROUGH NATURE

SCHOOL WORK SHEETS

BLOCK 8:
WHICH BIRDS
LIVE IN
FARMLAND?





Download the project's app

To complete some of the tasks outlined in the school work sheets you will need our special smartphone app.
To download this app, please go to the online app store (App Store for iOS or Google Play for Android)
and enter the name "Meet the Birds" in the search field.



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BLOCK 8

WHICH BIRDS LIVE IN FARMLAND?

Background: Build a scene in the classroom with a poster or desk depicting a meadow. After coming back from field activities, the decoration in the classroom can be completed (with the participation of the children) by adding images of birds that were observed, or their signs (e.g., a nest, eggs, food remains, etc), to the poster or desk. In an accessible spot, place binoculars, a camera, a scope and bird and plant guides. Focus on tactile feedback by taping or gluing plants, feathers, soil and shells to the poster. During field activities encourage children to locate aromatic plants, which can also be attached to the poster. Focus on birdsong, and see how many different types of birds you can hear singing.

DETAILED PROBLEMS	What characterises farmland?	What birds breed in farmland?	How are organisms connected in nature? What role do birds of prey play?
Activities in the field	<p>Go for a trip with the children to look for farmland features and to inspect the area where you are. First have a look at the map and set a route. The length of the walk depends on you and the abilities of the children. It can be 500 m or even 1 km. Use the sheet 'Become a field and meadow detective' (S8/A/1).</p> <p>While in the field, go to a meadow. See what plants there are there. Let the children smell, touch and watch. Let them lie on the meadow, close their eyes and listen to the voices of nature. Talk about what richness you experienced there. Why is this place suitable as a home for birds?</p>	<p>During the trip, identify as many bird species as possible. Use the bird sounds from the app and the observation chart (S8/B/1).</p> <p>The birds of fields and meadows make characteristic calls. Go for a trip to listen to them, or play mp3 files. Use the sheet 'What can you hear in the grasslands?' (S8/B/2).</p> <p>Farmland birds also include owls, such as the Barn Owl. Due to its nocturnal life, this bird is difficult to spot, but you can detect its presence in a different way. Use the sheet 'On the trail of the Barn Owl' (S8/B/3).</p>	<p>If during your trip to the countryside you find the nest of an owl, try to collect its pellets. Look for the pellets under the nest – this is where it's the easiest to find them.</p> <p>The collected pellets can be stored in signed bags (marked with the species, date and place of finding), but it is best to first dry them well. It is enough to put them in an oven for 15 minutes, just as with a cake, and to bake them at 200°C.</p>
Indoor observations and experiments	<p>The field activity can be an excellent opportunity to think about changes that are taking place in farmland. Use the sheet 'Field ponds' (S8/A/2).</p>	<p>Many bird species that are typical of fields and meadows build their nests on the ground. To protect their broods against predators, eggs have cryptic colours. Use the sheet 'Why do birds' eggs have different colours?' (S7/B/3).</p> <p>The eggs of birds that nest directly on the ground are more pointed. Check this with the sheet 'Is the shape of a bird's egg important?' (S7/B/2).</p>	<p>Analysis of pellets is an important source of knowledge on the diet of owls. Work with the sheet 'What is hidden in an owl pellet?' (S8/C/1).</p>



School Work Sheets Block 8

Artistic tasks	Make your own little meadow (S8/A/3) using the plants collected during the trip.	Make a Barn Owl mask (S8/B/4) .	Worksheet 'Make a meal for a Lapwing' (S8/C/2) .
Linguistic and written tasks	Read the text about farmland and think about why the changes that it is facing are not favourable for birds of agricultural landscapes (S8/A/4) .	Read the passage on young Barn Owls (S8/B/6) .	
Mathematical tasks	Using posters prepared by the children in S8/A/3, get the students to count the various features typical of farmland. Exercise the use of the concepts: under, over, right, left, near (use worksheet 'Sense of direction' S8/A/5)	Worksheet 'Listen and count the birds of fields and meadows' (S8/B/5) . Together with the children, count how many birds they can hear. Are all of them of the same species? During the lesson on bird identification, you can do a maths exercise (S8/B/6) .	
Games and competitions	<p>Explain why trees provide good shelter for birds by inviting the children to play the game on trees and birds (S8/A/6). Once the children are familiar with the calls of field and meadow birds, you can carry out a voice identification competition.</p> <p>Play the Corncrake game with children (S8/B/7). This game stimulates the senses of hearing and touch, builds a child's confidence in natural surroundings and enhances motor dexterity. It is also a good opportunity for a child to talk about the behaviour of this mysterious bird.</p>		



BECOME A FIELD AND MEADOW DETECTIVE

Guidelines for teachers: Students should be paired up for a competition to see which pair can record the greatest number of organisms. Visually impaired students should be paired with students without a visual impediment.

What you will need

- Observation cards
- Pencil
- Something solid to write on

Tasks and questions

- 1 How do you know that you are in the countryside? Does it sound different to the area around your school?
- 2 Going through rural areas, look for fields, meadows and pastures, and see what plants you can smell and what animals you can hear. If it is windy, can you hear the wind moving through the grass? See how many types of bird you can hear. Can you tell how far away they are by their song?
- 3 One of the pair should record their observations in the table (see next page). With the appropriate picture, mark this element you observed on your route.
- 4 You can count some of the items. Thanks to this you will know their quantity.

Consider:

- What grows in the field, meadow and pasture?
- What is the difference between field, meadow and pasture?
- How do the field, meadow and pasture change during the year?
- What birds did you encounter?
- When is the field the most bird-friendly?

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OBSERVATION CHART

Detective's name:

Town:

Route start point:

Route end point:



POND

(MK)



SCRUB

(MK)



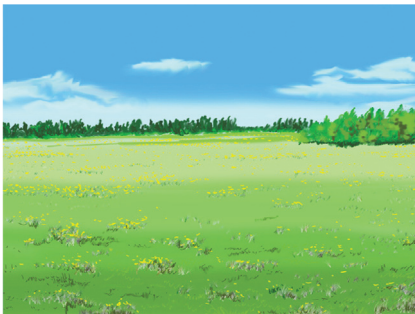
TREE

(MK)



MEADOW

(MK)



MEADOW (PASTURE)

(MK)



FIELD

(MK)



COTTAGE

(MK)



COWSHED (SMALL)

(MK)



COWSHED (VERY LARGE)

(MK)



FIELD PONDS

Guidelines for teachers: Read the following descriptions of two ponds aloud, and ask students to notice the differences before asking them the questions below on the ponds.

Pond 1 is situated in the open, the banks are rocky. A path follows the edge of the pond and two people sit on a bench overlooking the pond. There are no plants visible on the surface of the pond, the water is clean and clear.

Pond 2 is situated in a field, the edges are surrounded by trees on one side and a reedbed on the other side. The water is dark and looks deep. The banks are covered by plants and vegetation.



Take your time to answer the questions below:

- 1 In which pond will animals find better shelter?
- 2 Which pond can offer more food?
- 3 Where are more plants growing?
- 4 Which pond is more animal-friendly? Do you know why?
- 5 Would you like to swim in one of these ponds?
- 6 Which pond is more human-friendly?



MAKE YOUR OWN LITTLE MEADOW

Guidelines for teachers: Help students to make their own little meadow by gluing and taping flowers and plants to a poster.

What you will need

- Card
- Double-sided tape
- Scissors
- Glue
- Blotting paper in various colours
- Cut-outs
- Cloth
- Pieces of felt
- Buttons, etc, according to your own ideas
- Meadow plants collected from the field

Tasks and questions

- 1 Attach the double-sided tape to the bottom of the page.
- 2 Peel the protective foil off the double-sided tape.
- 3 Create your own meadow by sticking to the tape cut plants that grow in the meadow. Remember not to pluck protected plants nor to take all plants from just one site.
- 4 Create your own meadow by sticking to the tape plants that you have prepared.
- 5 Are they all the same? Talk about your work, about similarities and differences.

Discuss

- Do the meadows found in nature differ from each other?



AGRICULTURAL LANDSCAPES

Guidelines for teachers: To facilitate blind and visually impaired students, the text below, to be read for discussion, could be printed in Braille or read aloud to the class.

In recent years the number of birds living in fields and meadows has decreased drastically. This is because the places suitable for them to live in are disappearing. Small, diverse areas where there was plenty of food and shelter were converted into huge wheat or maize fields. Trees and shrubs, pastures and small ponds disappeared. People started to remove plants they did not sow (i.e., wildflowers and weeds) which are valuable food sources for farmland birds. They also started to destroy insects that ate their crops. For that, they use special chemicals.

On the fields, they use specialised machines that speed up the harvest. Back when the work on the field was dependent on the strength of human hands, it took much longer and the plants were harvested gradually, so the birds could raise their offspring without too much disturbance.

What is good for man is not always good for nature

- 1 Read/listen to the text carefully.
- 2 Answer the following questions:
 - When did the numbers of birds living in fields and meadows decrease?
 - What changes have occurred in the agricultural landscape?
 - How do farmers remove unwanted plants and animals?
 - Why can machines endanger birds?
 - What agricultural landscape favours the birds?
 - Why did the number of birds of fields and meadows decrease?
- 3 Lead a discussion about how farmers and governments can make improvements for biodiversity.



SENSE OF DIRECTION

Guidelines for teachers: This task uses the posters made by the students in exercise **S8/A/3**. If you did not complete this exercise you may make one large tactile poster on which the questions for this exercise may be based.

Ask the students the following directional questions:

- Looking at the poster you made, form five questions about what is next to, above, below, to the left and to the right of other things on the poster.





TREES AND BIRDS

Guidelines for teachers: If there are visually impaired students in the class it is advisable to skip this exercise and instead focus on explaining the importance of trees for birds.

What you will need

- Groups of three plus a leading person or leader

Rules

- 1 The participants of the game match up into groups of three. Two students hold hands, thus forming a tree. The third student, pretending to be a bird, stands in the middle, between the students holding hands. The tree role may be suitable for the visually impaired. However, the bird role may not be suitable for fully blind students.
- 2 In the game, we use three terms or passwords: birds, cutting, planting.
- 3 The leader says one of the three passwords.
- 4 On hearing the word 'birds,' the students who represent the birds run out of trees and look for new ones, and the students who represent the trees lift their hands up and wait for a new bird to come. When the bird arrives they lower their hands.
- 5 On hearing the word 'cutting,' the students who represent trees squat down, and birds fly away from the tree and fly around.
- 6 On hearing the word 'planting,' the students representing the trees which were cut down get up and form trees again, and the students representing the birds look for new places to land.

Questions



















- 1 Why are trees in the field important to birds?
- 2 How can we increase the number of trees and shrubs in the agricultural landscape?



OBSERVATION CHART BIRDS OF FIELDS AND MEADOWS

Guidelines for teachers: This exercise works best if students are arranged into pairs in which at least one student in each pair is not visually impaired and can fill out the sheet.

Pay careful attention. What birds can you see and hear? Where are they? How many of them are there? Record your observations in the table.

BIRD	WHERE DID YOU SEE IT?	HOW MANY?
 Skylark (JV)	    	
 Stonechat (RM)	    	
 Meadow Pipit (RM)	    	

Legend:



in grass



in flight



in trees




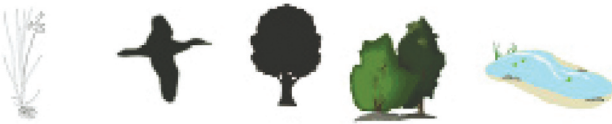








among shrubs











on water



 <p>Yellowhammer (JV)</p>		
 <p>Pied Wagtail (RM)</p>		
 <p>House Sparrow (JV)</p>		
 <p>Woodpigeon (RM)</p>		
 <p>Reed Bunting (RM)</p>		

Continued next page....



 <p>Linnet (RM)</p>		
 <p>Rook (RM)</p>		
 <p>Mistle Thrush (RM)</p>		
<p>Other...</p>		
<p>Other...</p>		



WHAT CAN YOU HEAR IN THE GRASSLANDS?

Guidelines for teachers: Teach your students common farmland bird calls using our special smartphone app. Take the students to a suitable habitat and ask them to answer the questions below.

Tasks and questions

- 1 Prepare for the trip by listening to the calls and songs of birds characteristic of the meadow (e.g., Meadow Pipit, Skylark, Yellowhammer, Stonechat, Rook, Lapwing).
- 2 During the trip, listen carefully to bird calls from the meadow.
- 3 Working with your partner, write down where you heard the call.
- 4 Which call do you like the most?
- 5 Which one is the easiest to remember?



(MK)



ON THE TRAIL OF THE BARN OWL

Guidelines for teachers: Divide the students into pairs. Visually impaired students should be paired with students without a visual impediment. You may allow students computer time to search for information on Barn Owls, or provide materials from which they can learn about owls.

What you will need

- Observation cards
- Pencil
- Clipboard, or something solid to fit under the sheet of paper while writing
- Voice recorder
- String bag
- Latex gloves
- Marker pen

Tasks and questions

- 1 Prepare for the search by looking for information about the occurrence and habits of Barn Owl in Ireland (desk study).

Consider:

- Have you ever seen or heard a Barn Owl in your area?
 - Are there places in the neighbourhood that a Barn Owl would like?
 - Has anyone ever told you that they have seen or heard a Barn Owl nearby?
- 2 If you want to check whether a Barn Owl is in a churchyard, you can conduct an interview with a priest who looks after the church. You could also ask local farmers, if you know any. Think about what you can ask them first. It is best to prepare your questions beforehand.
 - 3 Note the answers or record the interview on the voice recorder.
 - 4 If possible, you can explore the church or ruin and see if there are traces of Barn Owl, in the form of casts or feathers. You can also ask an adult to do it for you. Remember to have permission from the building owner or manager and to take extreme caution, and never go alone.
 - 5 Remember that if you find something, wear latex gloves when collecting it. Place the items carefully into the string bag. Make a note of the place and date on the bag.
 - 6 If it turns out that a Barn Owl is there, please report this observation to BirdWatch Ireland.

If it is possible to get an owl's flight feather, ask the children to move it quickly through the air and note how it sounds. Then do the same with a flight feather from another bird species (such as a duck) and ask the children to say whether it sounds different.



(RM)

← **Barn Owl feathers** A Barn Owl is pictured in the hand with a wing outstretched. The wing is a golden caramel colour with dark horizontal barring. The body is also a golden caramel colour with grey blotching on the back. The tail is light brown with several dark horizontal bars.

Barn Owl pellets Brown cylindrical shapes, about the size of a thumb. The white edges of bones can be seen sticking out through the mass of fur.



(CK)

Discuss:

- What can you do to help Barn Owls?
- How can you convince people not to be afraid of Barn Owls?



BARN OWL MASK

Guidelines for teachers: : If necessary, masks should be cut out by teachers, or preprepared at home with the assistance of parents.

What you will need

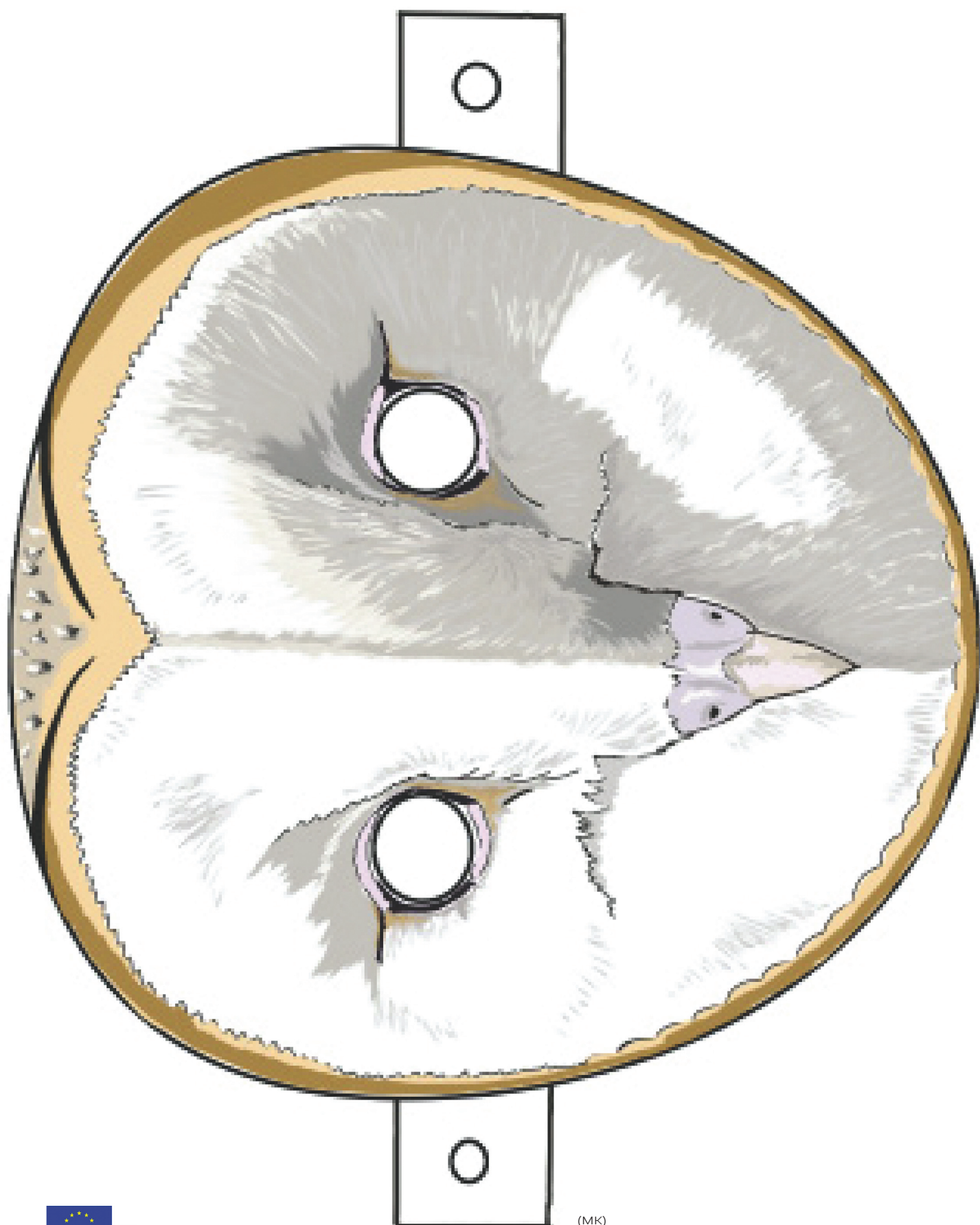
- Printed mask (see next page)
- Scissors
- Cord/ribbon/elastic band
- Hole-punch for paper

Procedure

- Cut out the owl's face and eyes, including tabs.
- Make holes for a band in the places indicated.
- Tie a cord, ribbon or elastic to the holes in tabs.
- Put on the mask and pretend to be a Barn Owl :-)



(RM)



(MK)



LISTEN TO AND COUNT THE BIRDS OF FIELDS AND MEADOWS

Guidelines for teachers: Classroom exercise: Ask your students to listen to the meadow birds and count how many types they hear. Play common meadow bird calls to them from our special smartphone app, such as Skylark, Woodpigeon, Blackbird, Goldfinch, Lapwing and Cuckoo, making sure to include a mix of some birds that sing in flight and some that sing while perched.

Tasks and questions

- 1 Many species of birds sing in the meadows and fields. Can you name any?
- 2 How many different birds did you hear?
- 3 Do you know how many of these birds sing in flight, how many sing from the ground, and how many sing from trees?



(MK)



MATHS WITH BARN OWLS

Guidelines for teachers: : Read the following paragraph and ask the students the questions that follow.

Young Barn Owls grow very fast, so they need a lot of food to give them the energy to grow. Parent owls, while raising their chicks, seek food for up to 10 hours a night. A pair of owls with four youngsters must provide about 25 pieces of food every night. The variety of different foods depends on what the parents can find in the immediate neighbourhood of the nest, but generally includes shrews, mice and voles.

Tasks and questions

- 1 How much food must a pair of Barn Owls provide for their chicks in a week?
- 2 How much food will a female Barn Owl provide over the course a week, and how much will the male provide?
- 3 If Barn Owls spend 10 hours looking for food each night, how many hours will they spend looking for food over the course of a week?



FUN WITH CORNCRAKES

Place:

Preferably a meadow, but it can be a schoolyard or a gymnasium

What you will need

- Comb
- Plastic card (telephone, credit, etc)
- Blindfolds/scarves

Procedure

- Designate one person to be a Corncrake.
- The Corncrake receives a comb and a card. By running the plastic card along the teeth of the comb, they can make sounds similar to the voice of the Corncrake, a rasping 'crex crex' sound (listen to the recording on our special smartphone app).
- The other students move away and cover their eyes with blindfolds/headscarves (visually impaired children do not need to do so).
- When the children are ready, the Corncrake begins to 'sing'.
- Using their sense of hearing, the students try to reach the Corncrake, following the sound they can hear.

Discuss:

- Was it difficult to find the Corncrake?
- How did you get to the bird?
- Was the sound helpful to you?



(DB)



WHAT IS HIDDEN IN AN OWL PELLET?

Guidelines for teachers: Visually impaired students may be able to complete this task with the aid of magnifying glasses. Blind students will be unable to dissect the pellets, but may be able to examine both the pellets and their contents by touch.

What you will need

- A pellet from a Barn Owl, Short-eared Owl or Long-eared Owl
- Skewer sticks or toothpicks
- Tweezers
- Small boxes, for example for cheese or margarine
- Water
- Paper towels
- Latex gloves

Tasks and questions

- 1 Put on the latex gloves.
- 2 Carefully place the pellet into the box and pour the water in.
- 3 Move the pellet so that it soaks well in the water.
- 4 Using a pair of tweezers and a toothpick, pull the pellet apart and remove all of the items you find inside it.
- 5 Place the items you find on a paper towel.
- 6 Use water to clean everything that you found. Be careful not to break them.
- 7 Carefully examine the contents of the pellet.
- 8 What did the bird eat for lunch?

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.....

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Think about:

- What other birds produce pellets?
- Why do the owl's pellets contain so much fur?
- Is the bird a predator?



MAKE A MEAL FOR A LAPWING

Guidelines for teachers: Read students the following paragraph and then ask them the questions below.

Lapwings are wading birds that breed in wet meadows. They have green upperparts and white underparts and have a long feather-crest on top of their heads. They eat insects and small creatures, which they find in the long grass. See if you can guess which food items Lapwings might eat from the following list:

- grass
- worms
- spiders
- reeds
- snails
- mice
- fish
- flies
- frogs
- vegetables

Tasks and questions

- 1 Do you know what food items Lapwings like the most?
- 2 Among these items, select those that a Lapwing eats and prepare a Lapwing lunch.



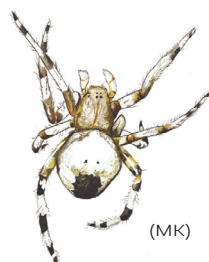
GRASS

(MK)



WORM

(MK)



SPIDER

(MK)



REEDS

(MK)



SNAIL

(MK)



POTATOES

(MK)



MOLE

(MK)



FISH

(MK)

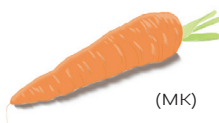


FLY



FROG

(MK)



CARROT

(MK)



MOUSE

(MK)

These materials for teachers working with blind and visually impaired children have been prepared within the project “Seeing the World Through Nature.” These are based on the educational resources that resulted from the project “Empowering Teachers and Pupils for a Better Life Through Nature,” and the suggestions contained therein have been adapted to work with children with impaired vision in order to enable them to learn as much as possible about nature through direct contact with it.

Non-governmental organisations involved in bird protection, partners in international federation BirdLife International, participated in the project. The Polish Society for the Protection of Birds (OTOP) was the leader of this educational initiative, which also involved the associations BirdWatch Ireland, BirdLife Malta and BirdLife Cyprus. The Polish Association for the Blind was the partner cooperating in the field of adaptation of source materials for the needs of teaching blind and visually impaired children.

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BIRDWATCH IRELAND is the largest independent conservation organisation in Ireland. A registered charity, its aim is the conservation of wild birds and their natural habitats. It has over 15,000 members and a network of 30 local branches. It manages nature reserves which protect threatened habitats and their wildlife, works to conserve Ireland's biodiversity, and carries out education, survey and research work. For more information, go to www.birdwatchireland.ie

