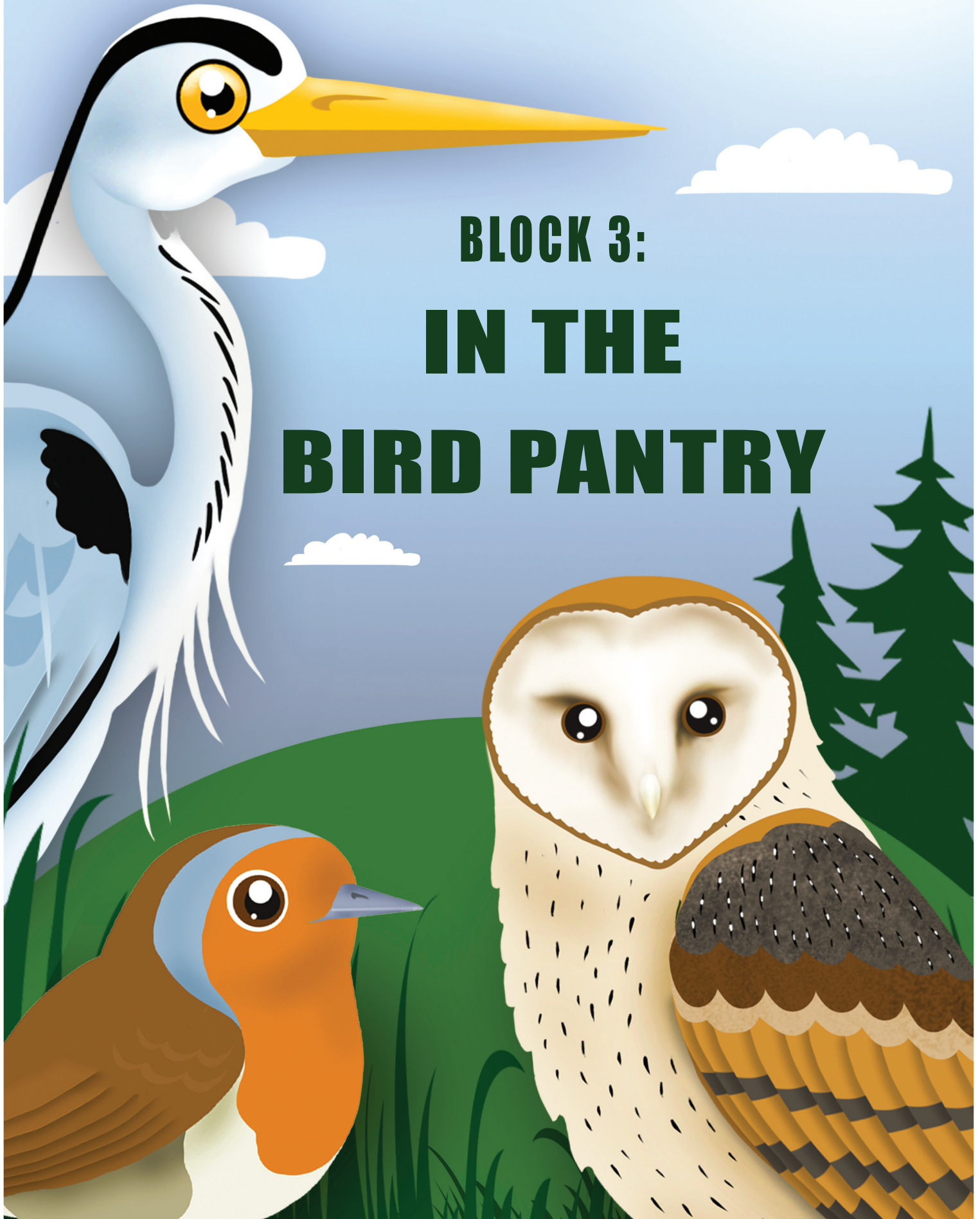


SEEING THE WORLD THROUGH NATURE

SCHOOL WORK SHEETS

BLOCK 3:
IN THE
BIRD PANTRY





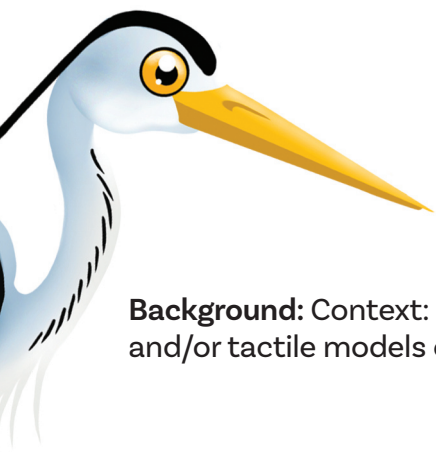
Download the project's app

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.



Co-funded by the
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BLOCK 3

WHAT DO BIRDS EAT?

Background: Context: place a bird feeder on the wall of the classroom, and on it place illustrations and/or tactile models of birds and their food. Designate a place where bird food will be stored.

DETAILED PROBLEMS	Is our environment a good place for birds to find food? What plants should we provide for birds in the garden?	What food can we provide for birds in winter? What foods should we not give them? How to prepare and position bird feeders.	What birds are visiting the feeder? What birds have come to Ireland for the winter?
Activities in the field	<p>If you have not had the opportunity to do this before, check whether your housing estate and garden are bird-friendly. Use the observation card from Block 5.</p> <p>During field work, observe the birds and their behaviour. Perhaps it will be possible to see how they search for food.</p> <p>Conduct an inventory of plants that can provide food in autumn and winter. Use the observation card (S3/A/1) or prepare it with children based on materials from the Internet. Plan and make new plantings.</p>	<p>It's time to prepare feeders (S3/B/1) and plan their distribution in the garden. Don't wait until winter to place food out. Birds have to get used to the places where they can dependably find food.</p>	<p>Place the feeder so that you can watch it freely from windows, which can provide many valuable insights. In the table (S3/C/1), the most common species found at garden bird feeders are listed – learn to recognise them.</p> <p>Take a trip to places where birds spend the winter (reservoirs, ponds in the park, rivers, coast). During the trip, watch and listen out for birds, noting what do they do and how they behave.</p>
Indoor observations and experiments		<p>Food for birds – prepare a bird pantry or restaurant (S3/B/2).</p> <p>Collect various products that can feed birds during the winter (S3/B/3). Look carefully at them and/or feel them. Check their size and hardness. Consider the shape of birds' beaks and how this affects what they can eat.</p>	<p>If we provide birds with suitable food, observation of the feeder will provide many interesting insights about the appearance, preferences and behaviours of our feathered friends.</p>
Artistic tasks	<p>Let the children use the knowledge from field observations. Create a bird-friendly garden design.</p>	<p>Help birds find delicacies (S3/B/4) – combine the silhouettes of birds with suitable foods.</p>	<p>Prepare an album showing all the birds that visit your feeder. Collect photos, drawings and descriptions in it.</p>



School Work Sheets

Linguistic and written tasks	Write or draw a request to the school headquarters or other chosen institution regarding the purchase of plants that provide attractive food for birds.	Check what stocks are hidden in the bird pantry (S3/B/4) . Choose only those that can feed birds.	
Mathematical tasks	Design a garden rich in fruits that are bird delicacies. Repeat the tree names and shrubs and explain the concepts of parallel, in a row and equally spaced planting, as well as adding dividing spaces.	Use mass metering and measure bird treats.	Prepare a children's puzzle with bird silhouettes – ask the students to arrange and identify them. On the board, place a schematic drawing of the feeder and a few birds, including species that do not occur in your area in winter (e.g., Swallow, Cuckoo).
Games and competitions	For the discovery of children's personal concepts, or to use the knowledge gained, run a field game (S3/A/3) .		Arrange a shadow theatre in which the actors will be the silhouettes of birds from the feeder you are observing.



LET'S LOOK FOR BIRDS' FAVOURITE FOODS

Guidelines for teachers: Birds love eating fruit and plant seeds. Explain to your students that these nutritious, high-energy snacks are perfect for many bird species.

Encourage your students to speculate why a plant would produce fruits only for them to be eaten by birds. After they have discussed this, explain that plants produce brightly-coloured, easy-to-spot fruits that contain seeds, so that when they are eaten by birds and other animals, the plants' seeds will be dispersed.

Before the session, explore your school garden for the plants shown below. During the session, show your students these plants, allowing them to explore the flora through smell and touch. Alternatively, you could bring some fruit- or seed-producing plants into the class or a collection of seeds and fruit for the students to explore.



Rowan



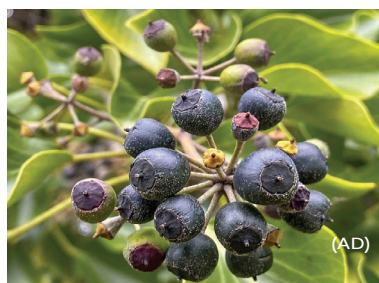
Hawthorn



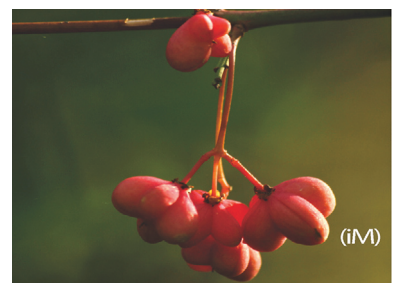
Wild Rose



Blackthorn



Ivy



Spindle



Hazelnut



Walnut



Apple



Guelder Rose



Wild Cherry



Sea Buckthorn



Sunflower



Teasel



Thistle



Grasses



Goosefoot



Sorrel

Follow-up discussion with the class

- How many different types of plants liked by birds did your class find on the school grounds or explore in the classroom?
- Which plants could be planted in the school garden? Explain to your students that different plants need different environmental conditions.



LET'S DESIGN A GARDEN FEEDING AREA FOR BIRDS

Guidelines for teachers: Design your own bird-friendly garden! Encourage your students to describe their own gardens or courtyards at home. What do they think that birds and other animals would like about their garden? Now discuss with your students where they think that a bird, such as a Robin should live. What environmental conditions do they need?

- The possibility of shelter
- Lots of food in the area
- Access to water
- Safety (away from people and predators)

After this, direct your students to discuss with their partners/group their ideal garden. They should make a note of what they would put in this garden and why.

- 1 What plants would they put in the garden – fruit-producing plants, plants popular with pollinators, trees, etc.
- 2 What source of water would they put in the garden, and why? They could put in a bird bath or a pond that would attract more wildlife.
- 3 Would they put a bird feeder in their garden?
- 4 How would they minimise disturbance in their garden, so that birds can visit there without being threatened by people or predators (e.g., cats)?

Objectives and questions

- 1 There are five Dogwood bushes, eight Hawthorn bushes and seven Wild Rose bushes. Place them parallel to one another so that in each row there would be the same number of bushes belonging to the same species. How many bushes will not fit in your garden? Which ones?
- 2 The class decides to plant Rowan trees along a fence that is 10 m long. The distance between two trees is to be 2 m. How many trees will they need?
- 3 Design your own bird-friendly garden.
 - Give its dimensions
 - Select a variety of different plants
 - Arrange the plants in your garden



FIELD GAME - A BIRD'S HOUSE

Place:	A fenced area by a school or kindergarten
Number of participants:	Between 11 and 19 people
Necessary objects:	Stickers or cards with bird names or pictures

The rules: Let's divide the participants into bird families (no more than four people per family). Each family should choose a card containing bird species' names at random. Each bird family's objective is to find the best house for them, the best place of living.

The place should fulfill these four conditions:

- It provides good shelter
- There is lots of food in the area
- It has access to water
- It is safe (as far away from people and predators as possible)

The players have 10-15 minutes to complete the task. Next, everyone comes back to their teacher, who announces a competition for the best place chosen. The whole group walks from one house to another and marks them according to the rules.

It is an opportunity for talking about different bird species' life strategies.

The final mark should determine how useful the chosen "house" is for the given species to live in.

For kindergarten pupils, we propose leaving out the part in which the chosen places are marked according to the criteria.



HOW TO MAKE A BIRD FEEDER

In this activity, teachers will need to work with students to create bird feeders. Depending on the student-to-teacher ratio, this could either be an individual or a group activity.

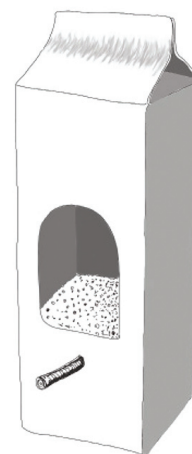
Alternatively, students could do this activity at home with the help of their parents.

Option 1

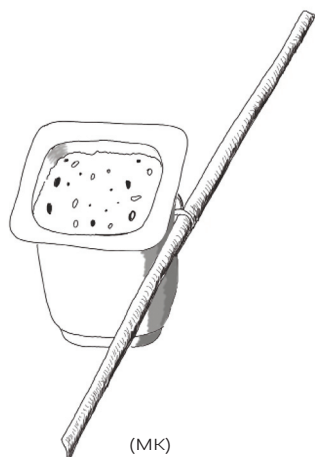
What you will need A big cardboard juice or milk box (it has to be coated on the inside and outside), plastic bottle tops, wooden sticks, non-toxic paints, wire or cord.

Objectives and questions Cut holes in the cardboard box so that at the bottom of it there is a space several centimetres deep. Pierce a hole in the front of the cardboard box and put a stick in it, so that birds can perch while feeding. By the upper edge of the box, pierce another hole and then tie wire through it.

Usage This bird feeder can be used for providing seeds, grain and dried fruit.



(MK)



(MK)

Option 2

What you will need A plastic cottage cheese or yoghurt pot, wire or cord, scissors.

Objectives and questions Make three holes below the upper edge of the container. Thread the cord through these holes and tie it.

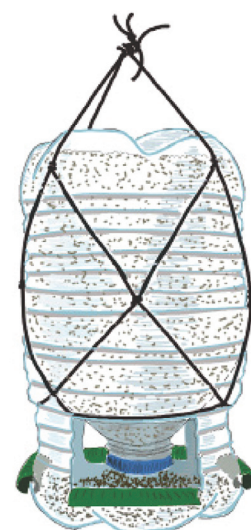
Usage You could fill this birdfeeder with fat or seeds and hang it under the roof.

Option 3

What you will need A large water or milk bottle, waterproof marker, scissors, wire or cord.

Objectives and questions Mark the place on the bottle where the opening of the birdfeeder will be. Match the size of the opening to that of a common bird in your area. Cut the opening, using the scissors. Unscrew the bottle top, coil the cord around the tip of the bottle and put the bottle top back on. Tie the remaining cord to make a kind of hanger out of it, allowing you to hang the bird feeder from a branch.

Usage This birdfeeder could be filled with cereal, seeds and fruit.



(MK)

Task

Why not get your students to decorate their bird feeders and have a competition, with students voting on which bird feeder they think is the best? Allow them to explore the bird feeders by touch and ask them to judge whether the feeder is of sufficient size and whether it will be stable enough for the birds (remember, birds are light!).



CREATE A “BIRD RESTAURANT”

Prepare a menu for a “bird restaurant.” Study the food preferences of birds that you can observe near your school or that are known to your students. Use information that can be found at www.birdwatchireland.ie.

Start a class discussion. Think about the different feeding requirements of birds that stay in the country during winter and of the ones that fly away to other regions of Europe or to Africa and Asia.

Decide which food you can gather to prepare reserves to place in a bird feeder.

BIRD	SUMMER FOOD	WINTER FOOD
Great Tit	Insects, caterpillars, spiders	Sunflower seeds, eggs and pupae of insects hidden in branch crevices, beech seeds
Blackbird	Earthworms, beetles, snails, centipedes	Berries and soft fruit
House Sparrow	Oats, wheat, plant buds, germinating leaves, insects	Plant seeds, fruit, kitchen waste
Grey Heron	Fish, frogs, water beetles	Same as during summer
Barn Swallow	Small insects (wasps, bees, ants, beetles, flies)	Same as during summer
Starling	Insects and their pupae, earthworms, snails, berries, seeds, juicy fruit	Same as during summer
Magpie	Beetles, spiders, earthworms, lizards, frogs, snails, cereal seeds, carrion, waste food found in bins	Weed seeds, different berries and fruit, food waste, roadkill










MENU FOR A “BIRD RESTAURANT”

Guidelines for teachers: In this activity, it may be a good idea to bring different types of bird food into the class. For example, you could bring in foods from the table provided below and allow students to explore these foods through touch and smell.

You could then explain to the students the importance of these foods for birds, following the text provided in the adjacent boxes of the table. In a group discussion, the students could then try and guess which species of birds eat each which types of food.

ATTENTION! ALL FOODS ARE SERVED WITHOUT SALT, SUGAR AND OTHER PRESERVATIVE SUBSTANCES! WHY?

Collect plants that are eaten by birds in winter in your classroom. Use them to make winter food treats for birds.

	Sunflower seeds – great food for Great Tits, Blue Tits, Coal Tits, Greenfinches, House Sparrows, Yellowhammers and Collared Doves.
	Linseed – House Sparrows and Greenfinches can manage to eat these seeds. Other birds that come to the bird feeder may also learn to eat them.
	Cereal seeds – wheat, maize and oats are foods for House Sparrows, Bullfinches, Greenfinches and Chaffinches, but only when they cannot find anything else to eat in the bird feeder. In order to help the birds, the seeds can be broken up with a hammer. Oats, buckwheat and barley can also be given to birds.
	Millet – a great addition for House Sparrows, Greenfinches, Chaffinches and Goldfinches.
	Fruit – both fruits that grow on trees and bushes and fruits that are given in bird feeders are eaten by Fieldfares, Mistle Thrushes, Blackbirds and Waxwings. Sparrows, tits and many finches will also not refuse fruit. Rowan berries, Wild Rose hips and Ivy, Blackthorn, Hawthorn and Spindle berries are all great for birds. Many birds will also gladly eat apples.
	Nuts – may be given in shells (hazelnuts, walnuts and peanuts) or without shells. Woodpeckers and Jays will manage to crack the shells and eat the nuts. Nuts without shells should be ground up a bit. If they are prepared in this way, the nuts will be eaten by all birds that come to the bird feeder.
	Fat, lard, fat balls – these are foods that are mostly used by tits. These insectivorous birds need a lot of energy because of their active lifestyle.



WHAT FOOD STORES ARE IN THE PANTRY?

Guidelines for teachers: a list (in Braille) of food items, some of which are suitable for birds, should be produced for the students to read through. The students should be instructed to speak up when they identify a food item in the list that birds like to eat.

This could even be made into a competition, with students receiving a point for each food item identified, with bonus points if they can remember which birds like the food item.

Some food items edible by humans: Linseed, fruit, nuts, cereals, millet, walnut

Some food items edible by birds: Berries of Guelder Rose, Rowan, Hawthorn, Spindle



PREPARE BIRD TREATS

Guidelines for teachers: Fat balls are high-energy, nutritious snacks for the birds that visit your garden or schoolyard. They're also really easy to make! In this activity, teachers should distribute the ingredients and help the students make the fat balls.

What you will need

- Pine or spruce cones with a piece of string to hang on a twig
- Aluminium foil
- Bowl
- Sunflower seeds
- Cereal grains or oatmeal
- Crushed nuts
- Lard

Tasks and questions

- 1 Measure:
 - a 3 scoops of sunflower seeds
 - b 2 scoops of cereal grains or oatmeal
 - c 1 measure of crushed nuts
 - d 1 measure of lard
- 2 Place all products in a bowl and mix well
- 3 Fill the gaps in the cones with as much of the mixture as possible
- 4 Wrap each prepared cone in aluminium foil
- 5 Put the prepared cone in the fridge to harden
- 6 How can you use the finished bird treats?

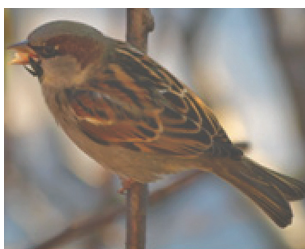


TABLE OF DIFFERENT BIRD SPECIES (A)

Birds on the feeder

- Small-sized birds

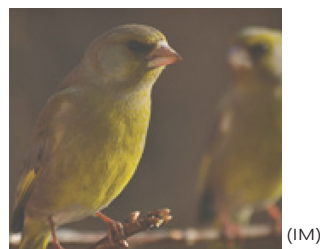
Guidelines for teachers: You may use models of birds or tactile pictures. Partially-sighted students may benefit from printed images. Remember to have clear images with sufficient contrast and not many details.



House Sparrow



Tree Sparrow



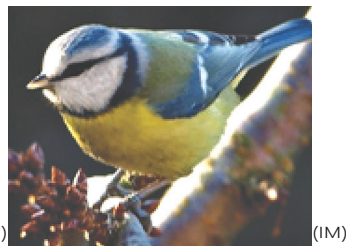
Greenfinch



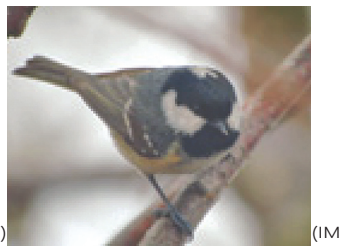
Siskin



Great Tit



Blue Tit



Coal Tit



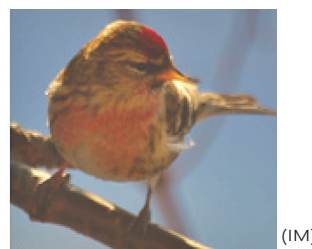
Long-tailed Tit



Brambling



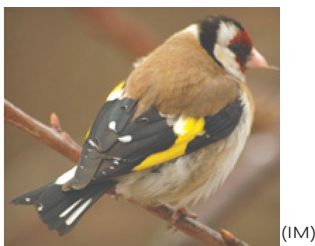
Chaffinch



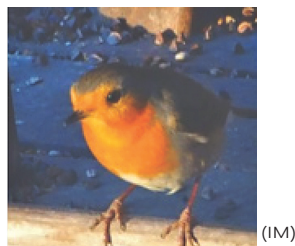
Redpoll



Treecreeper



Goldfinch



Robin



Wren



Yellowhammer



TABLE OF DIFFERENT BIRD SPECIES (B)

Birds on the feeder

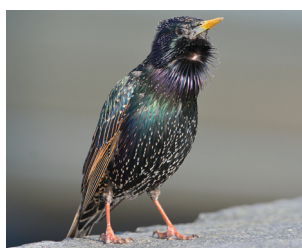
- Birds larger than a sparrow

Guidelines for teachers: You may use models of birds or tactile pictures. Partially-sighted students may benefit from printed images. Remember to have clear images with sufficient contrast and not many details.



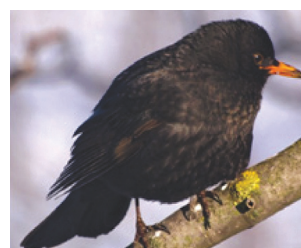
(IM)

Bullfinch



(RM)

Starling



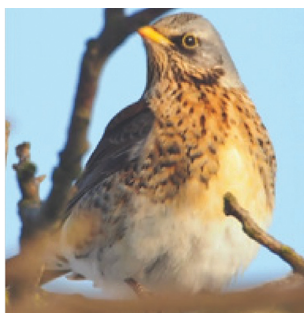
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Blackbird



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Jay



(IM)

Fieldfare



(IM)

Sparrowhawk



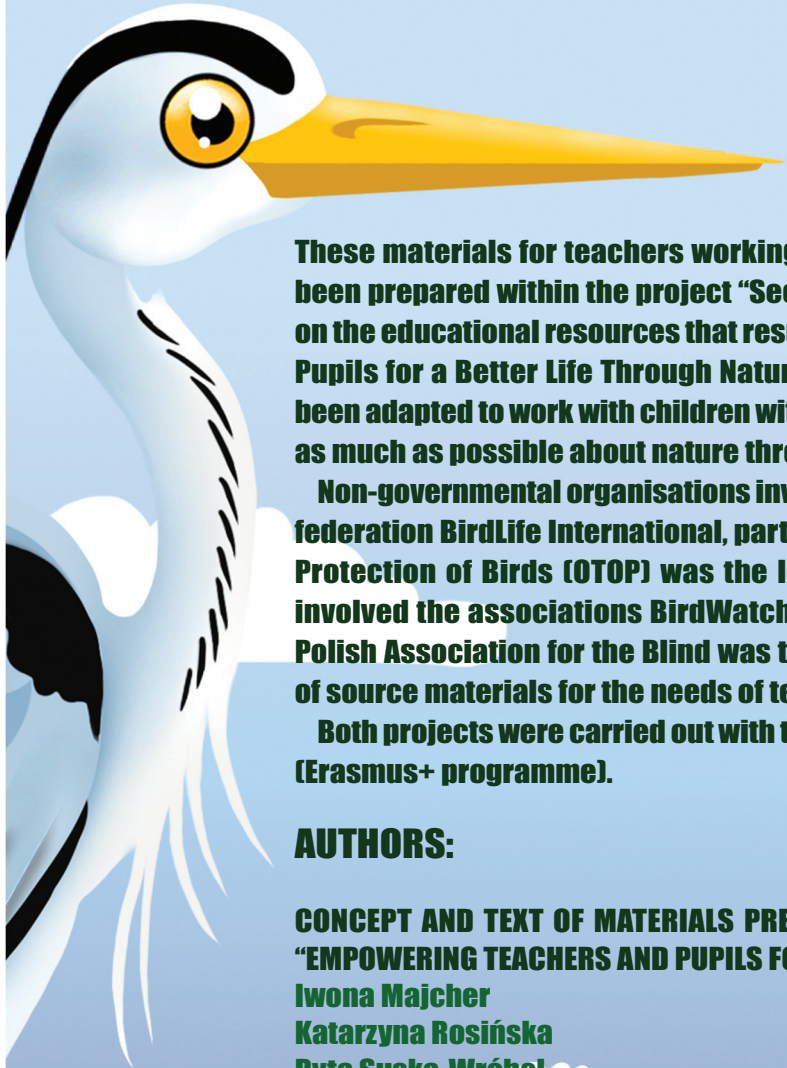
(IM)

Collared Dove



(IM)

Great Spotted Woodpecker



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.

Both projects were carried out with the financial support of the European Commission (Erasmus+ programme).

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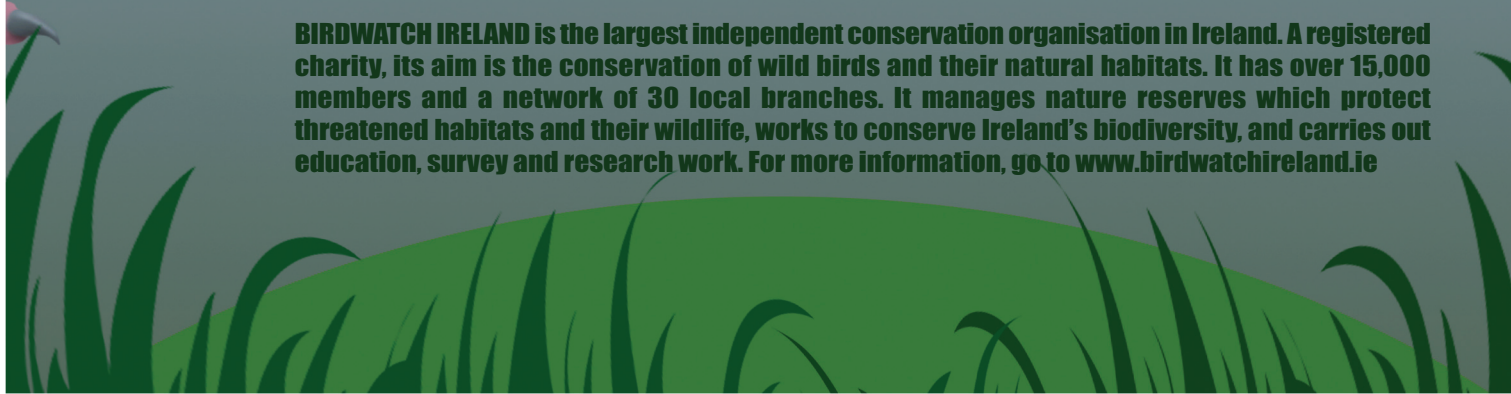
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BIRDWATCH IRELAND is the largest independent conservation organisation in Ireland. A registered charity, its aim is the conservation of wild birds and their natural habitats. It has over 15,000 members and a network of 30 local branches. It manages 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