

**SEEING THE WORLD THROUGH NATURE**

**SCHOOL WORK SHEETS**

**BLOCK 6:**

# **SPRING MIGRATION**





## Download the app

To complete some of the tasks outlined in the school work sheets you will need our special smartphone app, called [NAME HERE]. To download this app, please go to:

- [www.xxxx](http://www.xxxx) (iOS)
- [www.xxxx](http://www.xxxx) (Android)



OGÓLNOPOLSKIE  
TOWARZYSTWO  
OCHRONY PTAKÓW



BirdWatchIreland



BirdLife  
Cyprus



MALTA



Co-funded by the  
Erasmus+ Programme  
of the European Union



# BLOCK 6

## SPRING MIGRATION

**Background:** This subject is carried out in the form of different outdoor and indoor activities and discussions.

DETAILED PROBLEMS	How can you tell that the spring is coming?	When do birds return to us? What dangers do migrating birds face? How do birds fly?
Activities in the field	<p>The search for the first signs of spring can be turned into an adventure full of emotions. Mark one day of the week as the day of the Spring Detectives (<b>S6/A/1-S6/A/4</b>). Every week on this day go for a walk with the children, using the same route, and carefully watch changes in the environment. Start your observations in the second half of February and carry them out until the end of April. You can show the students the first signs of spring. Be cautious when showing fragile flowers to blind students, in order not to damage them.</p> <p>During the walks, pay attention to flowers – the first ones are the wind-pollinated flowers (on trees and shrubs, such as the Hazel or the birch species), followed by (as the temperature rises) insect-pollinated ones. Along with the flowers, insects appear. This is the time when the first birds return.</p>	
		<p>While walking, pay attention to how birds fly. Maybe you will be able to see the soaring flight of a Buzzard or the active flight of Barn Swallows or pigeons.</p>
Indoor observations and experiments	<p>Together with the children, design and set up a spring class blog, where the children can publish notes on their spring observations.</p>	<p>How do birds fly? (<b>S6/B/1 – S6/B/2</b>)</p> <ul style="list-style-type: none"> <li>● Introduce the project <b>SPRING ALIVE</b> to the children, using the information available on the project's website, <a href="http://www.springalive.net">www.springalive.net</a>. (Spring Alive is an international project that gathers information about the arrival of migrant birds from Europe, Central Asia and Africa. Observers track the timing of the spring migration of the White Stork, the Cuckoo, the Barn Swallow, the Swift, the Sand Martin, the Ringed Plover and the Bee-eater.</li> <li>● Together with your students, decide which species you will be waiting to see return to the area. In a city, it will most likely be the Swift, while different species will typically be found in the suburbs (Barn Swallow) or rural areas (Cuckoo, Willow Warbler).</li> <li>● Draw a 'WANTED' poster (<b>S6/B/3</b>) for the bird that you are waiting for. Put it up around the area.</li> <li>● Decide where in your neighbourhood you can expect to find this bird (for example by asking parents).</li> <li>● A CALENDAR OF RETURNING MIGRATORY BIRDS (<b>S6/B/4</b>). Find a place in the classroom to put up a calendar of returning birds. The teacher's role is crucial if blind students attend the class. If it is possible to detect birds by their sounds, you may ask blind students to discover the recently arrived ones. Remember that partially sighted students may use their eyesight to observe nature.</li> </ul>



# School Work Sheets Block 6

<b>Artistic tasks</b>		<b>Game</b> – FIND DIFFERENCES ( <b>S6/B/5</b> ) between similar bird species. (This task aims to draw the children’s attention to basic differences between the birds that return in spring, including differences in sound.)
<b>Linguistic and written tasks</b>	Folk wisdom in proverbs about birds ( <b>S6/A/7</b> ). Competition on SPRING SONGS – you will find inspiration in the book <i>Ireland’s Birds: Myths, Legends and Folklore</i> by Niall Mac Coitir (Collins Press).	Searching for spring could also take place in the classroom. Collect a set of books, magazines and albums, and get a computer with access to the internet. Together with the children, look for poems, stories and press clippings, as well as paintings by famous and less well-known painters, which show birds returning to their breeding grounds in the spring.  Write notes to be published in the blog.
<b>Mathematical tasks</b>		Ask the children to create maths problems based around counting feathers.
<b>Games and competitions</b>		Play a game on the phone together, ‘MIGRATION OF BIRDS’ ( <b>S6/B/6</b> ). This app focuses on bird migration and the dangers that are waiting for migrating birds.  It shall be for the teacher to decide whether or in what way to use the app to work with blind and partially sighted children.  Alternatively, a teacher can have a discussion with students about potential dangers for returning birds.



### SPRING DETECTIVES

Invite the children to participate in the search for spring. The game is based on a systematic search for signs of spring in a selected area.

Divide students into small groups, in which at least one person has functional vision (partially sighted or sighted students). Then ask each group to find signs of spring.

Remember to be clear and precise in describing what they have to look and listen for: spring species of plants, spring species of birds, species of insects, songs of territorial birds, smell of flowers.

Students walk around and record their findings with the use of the Spring Detectives Checklist (**S6/A/2**) or in another suitable way (writing in a notebook, with the use of Braille, Braille note-taker or a computer).

To aid in the task, the participants can receive a Spring Detectives handout containing a table of the most common species to seek.

There are three different badges to be earned:

#### **GOLD**

- The gold badge goes to the team that collects the highest number of spring signs.

#### **SILVER and BRONZE**

- The silver and bronze badges go to the teams that take the second and third places in terms of the number of spring signs they collect.



### SPRING DETECTIVES CHECKLIST

#### Guidelines for teachers

- This activity may be carried out during one lesson or for a specific time period. Beware that students should note down their observations in whichever way is most suitable: print, writing in a notebook, with the use of Braille, Braille note-taker or a computer.
- The exercise is a good opportunity to talk with pupils about pollinators and food chains. Also, it is recommended to consider helping the students to plant more plants that will attract pollinators.
- For birds, you can also use some of the sounds from the “Meet the Birds” mobile app along with pictures (available on Google Play for Android phones or on the AppStore for IOS phones). Pupils could listen for the songs/calls of those birds.

### SPRING DETECTIVES

.....  
Note down your findings – spring species of plants and animals

DATE OF OBSERVATION	WEATHER	PLANTS	INSECTS	BIRDS



## CAN SPRING BE MEASURED?

**Guidelines for teachers:** Provide special assistance to blind children, especially when finding a plant to touch and during investigations. Give children instructions to be gentle when handling/touching plants.

### What you will need

- A ruler
- Notepaper, something to write with

### Tasks and questions

- 1 Find a plant in the area that is waking up for the spring – e.g., a Snowdrop.
- 2 Note down the date and the weather conditions and measure the height of the plant (measure from the surface of the soil).

.....

In how many days, in your opinion, will the plant start to bloom?

.....

- 3 Continue to measure every 2-3 days or during the search for spring, until the flower blooms.

.....

.....

- 4 Were your predictions correct?

.....

### Think about:

- In your opinion, what had the biggest influence on the plant's speed of growth?
- In the beginning, from where do you think the plant got its strength to grow?

### Alternative activity

Ask questions concerning a particular plant that has been found by students:

- Will the plant grow?
- In how many days' time will the plant bloom?
- What will be its size?

Record the children's answers and, once a plant blooms, show them again to blind students. Compare their initial assumptions with the facts.

Then talk about friendly factors for plants to grow.



### THE SPRING DERBY

**Guidelines for teachers:** Prepare a list of the signs of spring and present them to students. Ask the questions listed below. Ask children to write their assumptions and then collect their answers.

When spring has arrived, bring back their answers and check with pupils whether they were right. Help children to explain why those signs of spring appear in a specific order.

#### Tasks and questions

**1** Imagine that you are a spectator at the Spring Derby, whose competitors include:

- ☐ Flowers without petals (wind-pollinated), such as on Hazel or Silver Birch
- ☐ Colourful flowers with petals
- ☐ Insects
- ☐ Barn Swallows
- ☐ Swifts

**2** In what order, do you think, will they reach the finishing point? Which sign of spring will appear first and which will be last? Number your answers from 1 to 5 in the boxes next to the competitors.

**3** Conduct field research (from mid-February to mid-April). Were your assumptions correct?

#### Think about:

- Why did the competitors finish in the order that they did?





## SPRING DETECTIVES SHEET

**Guidelines for teachers:** It is suggested to limit the number of plants, insects and birds in the printed or tactile picture to three or four. If more images are applied, blind students may be confused.

### PLANTS



(IM)

SNOWDROP



(CK)

DAFFODIL



(IM)

WILLOW



(IM)

CROCUS



## SPRING DETECTIVES SHEET

### BIRDS



(JV)

SWALLOW



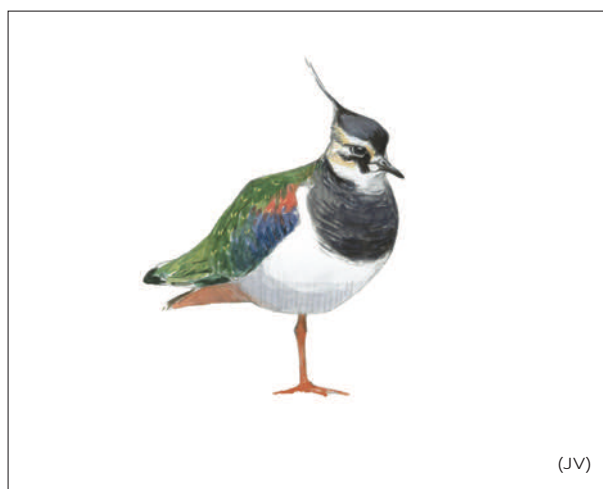
(JV)

WILD GEESE



(JV)

SWIFT



(JV)

LAPWING



## SPRING DETECTIVES SHEET

### OTHER ANIMALS



(MK)

FROG



(MK)

SMALL TORTOISESHELL



(MK)

LADYBIRD



(MK)

HONEY BEE



## SPRING DETECTIVES SHEET

### WEATHER NOTES



SUN



RAIN



COLD



WARM



## PROVERBS

### Questions and tasks

1. Read the following proverbs about birds:

- Cé gur beag díol Dreoilín, caithfidh sé a sholáthar.  
*Little as a wren needs, it must gather it.*
- Má labhrann an Chuach ar chrann gan duilliúr, díol do bhó agus ceannaigh arbhar.  
*If the Cuckoo calls from a tree without leaves, sell your cow and buy corn.*
- One Swallow does not a summer make.
- Swallows and bees on the wing are sure signs of spring.

2. Check whether your observations match the proverbs.

### Think about:

- Where do these proverbs come from?
- Why are they not always true?



## IS SHAPE IMPORTANT?

### What you will need

- Three pieces of identical A4 paper sheets, such as for computer printers

### Questions and tasks

**1** How to prepare the paper for the experiment:

- Tightly screw up one piece of paper into a ball.
- Crumple one piece of paper.
- Leave one piece of paper untouched.

**2** Before children drop the pieces of paper, they guess which will fall to the ground last.

.....

**3** How to conduct the experiment:

- Do the experiment in a **very quiet room**.
- Three children, each holding one piece of paper, stand in different corners. It is important that blind students can locate them by hearing before the exercise.
- The teacher should make sure that each child holds their piece of paper at the same height.
- When the teacher gives the word, the children let their pieces of paper fall.
- The other children note which piece of paper reaches the ground first and which one is last.

### Think about:

- Why did that particular piece of paper take the longest to fall?
- Do birds use a similar phenomenon in order to fly?
- What sort of object (toy) could you make in order to take advantage of this phenomenon?



## WHICH NATURAL PHENOMENA DO STORKS USE TO HELP THEM FLY?

**Guidelines for teachers:** This exercise could be carried out in a form of discussion. The teacher can explain to students that, when gliding, Storks use the natural physical phenomenon that heated air rises upwards. These columns of rising warm air are called 'thermals.'

Gliding flight requires finding columns of heated, rising air. The bird rises into the air, spreads its wings wide and uses the currents of warm air to soar through the air. Within minutes, soaring in these thermals can lift the bird too high for us to see it.

The birds wander from one thermal to another. For longer distances, birds such as Storks glide between thermals, reducing the amount of wing flapping required, thereby saving them a lot of energy.



## ‘WANTED’ POSTER

**Guidelines for teachers:** You can prepare a poster, announcement, newspaper article, radio message, social media post, etc. This task may be assigned as homework. Remember to give clear instructions.

### Questions and tasks

- 1 Prepare a WANTED poster for a bird returning in spring from its wintering grounds. Include the information listed below.
- 2 Pin the poster on the noticeboard.

## WANTED

Name of a bird you are looking for.

.....

(Photo or illustration of  
the wanted bird)

### BRIEF DESCRIPTION OF THE WANTED BIRD:

(A description of its characteristics, its appearance, its size, etc. Remember, it's good to compare this information to that for other well-known birds. For example: the bird is sparrow-sized, the main plumage colour, other characteristics such as colour of head cap, shape of wings in flight, etc.)

.....  
.....  
.....  
.....

WANTED BECAUSE OF:

.....

Who to contact with any sightings of the wanted bird





### CALENDAR OF RETURNING MIGRATORY BIRDS

**Guidelines for teachers:** Together as a class, you can make one calendar of returning migratory birds. The teacher's role is crucial if blind students attend classes. If it is possible to detect birds by their sounds, so you may ask blind students to try to identify the recently arrived ones. Remember that partially sighted students may use their eyesight to observe nature.

Spring is the time when migratory birds return from their winter vacations. Some return squawking loudly and are very obvious, while others slip back quietly, going largely unnoticed.

As a group, listen and watch carefully and record your findings in the calendar.

DATE OF DISCOVERY	BIRD	WHERE SEEN OR HEARD	BEHAVIOUR

An example:

DATE OF DISCOVERY	BIRD	WHERE SEEN OR HEARD	BEHAVIOUR
March 1st	Wild geese	While out walking	Flying in a 'V' and honking



### FIND DIFFERENCES BETWEEN SIMILAR SPECIES

**Guidelines for teachers:** You can focus with your students on differences in sound using the app “Meet the Birds” (available on Google Play for Android phones or on the AppStore for IOS phones). Also ask the pupils to describe the sounds verbally (high-pitched, etc).

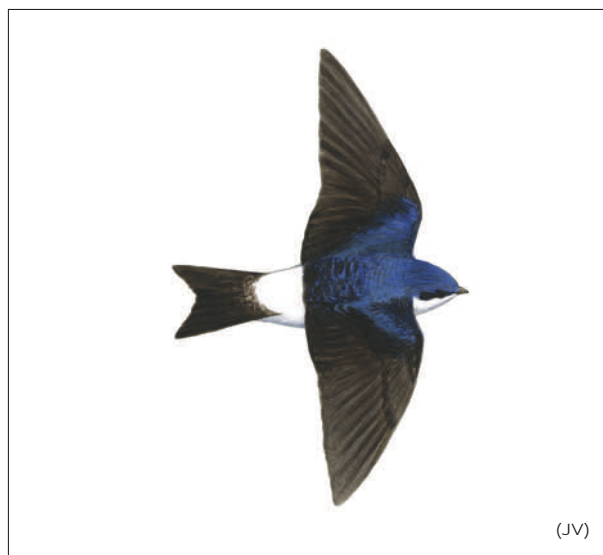
Also, you can use models or prepare embossed pictures instead of printed pictures.

#### Questions and tasks

- 1 Find differences between Common Swift and House Martin:



SWIFT



HOUSE MARTIN

- 2 Find differences between Barn Swallow and House Martin:



BARN SWALLOW



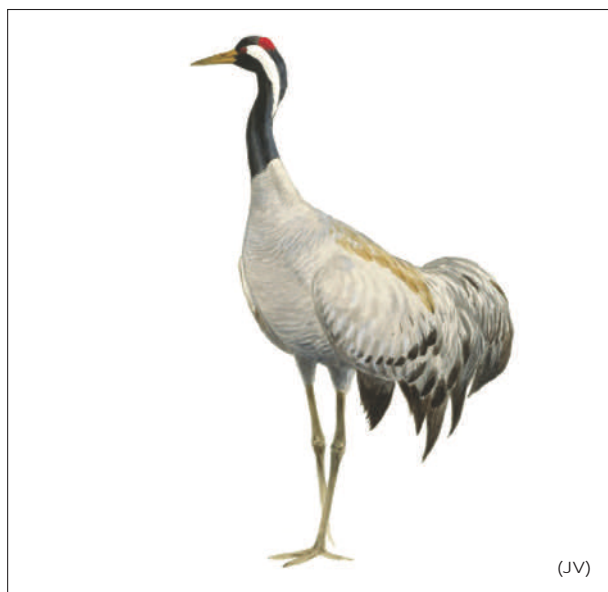
HOUSE MARTIN



## FIND DIFFERENCES BETWEEN SIMILAR SPECIES

### Questions and tasks

- 1 Find differences between Crane and White Stork:



CRANE



WHITE STORK

- 2 Find differences between Crane and White Stork (in flight):



CRANE



WHITE STORK



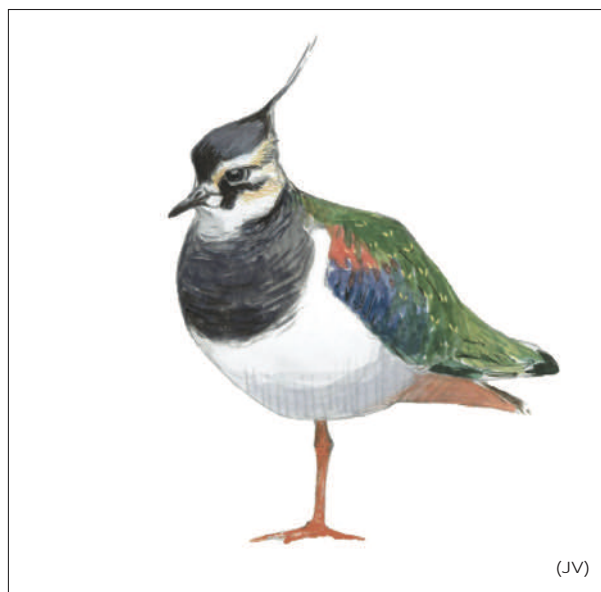
## FIND DIFFERENCES BETWEEN SIMILAR SPECIES

### Questions and tasks

- 1 Find differences between Skylark and Lapwing:



SKYLARK



LAPWING

- 2 Find differences between Skylark and Lapwing (in flight):



SKYLARK



LAPWING



## MIGRATION - DANGERS FOR BIRDS

**Guidelines for teachers:** A teacher can lead a discussion with students about potential dangers for returning birds. As homework, you may also ask students to search for relevant information on the internet or in other sources.

Also, it is suggested that teachers use the “Migration of Birds” smartphone app, which is available on Google Play for Android phones or on the AppStore for IOS phones. The app focuses on bird migration and dangers that are waiting for migrating birds, using the examples of five species: White Stork, Common Swift, European Bee-eater, Common Cuckoo and Barn Swallow. The teacher should decide whether or in what way to use the app to work with blind and partially sighted students.





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).

## **AUTHORS:**

**CONCEPT AND TEXT OF MATERIALS PREPARED WITHIN THE FRAMEWORK OF THE PROJECT, “EMPOWERING TEACHERS AND PUPILS FOR A BETTER LIFE THROUGH NATURE”:**

**Iwona Majcher**

**Katarzyna Rosińska**

**Ryta Suska-Wróbel**

**COVER DESIGN AND GRAPHICS ON THE COVER:**

**Wiktor Tabak**

**ILLUSTRATIONS:**

**Juan Varela (JV)**

**Marek Kołodziejczyk (MK)**

**PHOTOGRAPHS:**

**Bogdan Moczarski (BM)**

**Cezary Korkosz (CK)**

**Iwona Majcher (IM)**

**Jadwiga Moczarska (JM)**

**Karolina Kalinowska (KK)**

**Łukasz Zdyb (ŁZ)**

**Natalia Kann (NK)**

**Pixabay (px)**

**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](http://www.birdwatchireland.ie)

