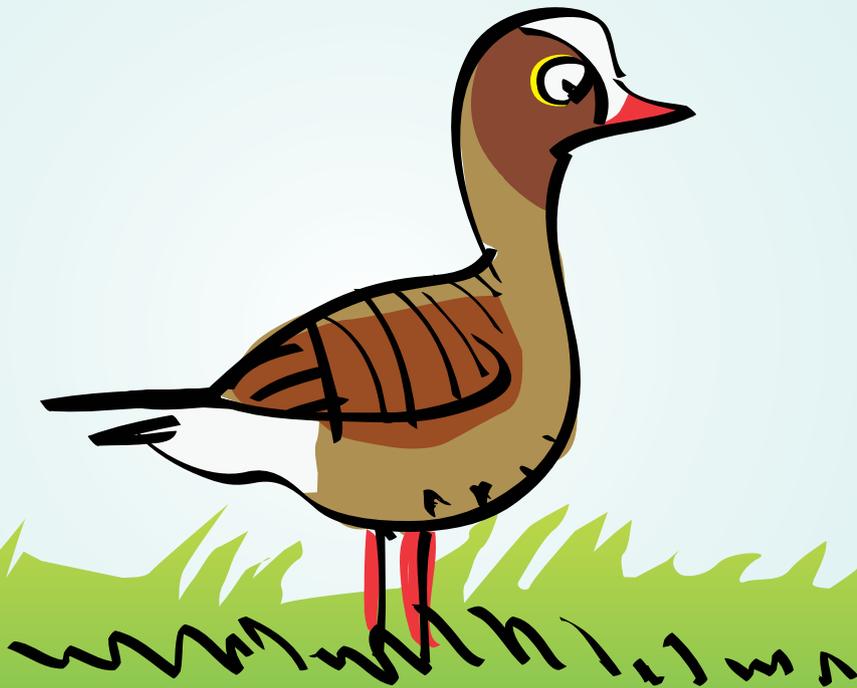


EDUCATIONAL ACTIVITIES



for children
9-12 years old

The Lesser White-fronted Goose: a goose gone wild and global



Contents

Part A: Educational material

1. Introduction	3
2. Aim and objectives	4
3. Educational material structure	6
4. Using the educational material	8
5. The Hellenic Ornithological Society	9
6. The Lesser White-fronted Goose	10
7. Coordinated action for Lesser White-fronted Goose conservation ..	11

Part B: Educational activities

1. How many wild birds do you know?	15
2. Ducks and geese	21
3. Where is my nest and what's for dinner?	29
4. The Lesser White-fronted Goose uncovered	37
5. Masks and geese	43
6. Where we belong	47
7. One for all and all for one	57
8. A story about the Lesser White-fronted Goose	63
9. The Lesser White-fronted Goose game	75
10. Goose trails in local culture	79
11. Illegal hunting? Let's re-think it	85
12. Getting closer to the Lesser White-fronted Goose grasslands	93
13. Finn, Imre and Nieida	99
14. Creative writing	103
Evaluation sheet for the facilitator	108
Evaluation sheet for the children	109
References	110

The Lesser White-fronted Goose: a goose gone wild and global

EDUCATIONAL ACTIVITIES for children 9 – 12 years old

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1. Introduction



Decreasing biodiversity is one of the greatest environmental challenges facing modern humans. One of the main difficulties in raising awareness about this issue amongst people and in particularly children, is that the decline in biodiversity does not initially have a visible impact like other environmental problems, for example pollution. Thus, in order to achieve a substantial change in the attitude of children towards this increasing problem, it is necessary to undertake educational activities regularly. In this way, the results are more likely to affect the children not only on a cognitive level, changing their attitude and behaviour, but also affect the way children relate to and perceive the natural world.

The Environmental Education Department of the Hellenic Ornithological Society has designed the educational material titled **“The Lesser White-fronted Goose: a goose gone wild and global”**. This material was created to raise awareness and promote action towards minimisation of biodiversity loss, by focusing on a globally threatened species, the Lesser White-fronted Goose.

The Lesser White-fronted Goose (*Anser erythropus*) is one of the most endangered waterbird species in the world, whose Fennoscandian population is on the verge of extinction. This small goose has become an important species to educationally approach the value of biodiversity conservation. It is a migratory species that breeds in Scandinavian and Russian arctic and subarctic zones and flies through the Baltic countries, Hungary and Greece as well as Kazakhstan, Ukraine, Azerbaijan, Turkmenistan, Iran, Iraq, Uzbekistan and even China and Japan, transporting with it the message of the necessity of trans-national cooperation in protecting biodiversity.

The educational activities in this edition are adapted from the “Travelling with the Lesser White-fronted Goose in the Greek wetlands” edition (in Greek) that was produced by the Hellenic Ornithological Society within the framework of the European LIFE+ project, **“Safeguarding the Lesser White-fronted Goose Fennoscandian population in key wintering and staging sites within the European flyway”** (LIFE10 NAT/GR/638). Representatives of the Greek educational community participated both in the creation of the original material and its broad application. More than 6,000 students and 250 teachers participated in the overall activities of the programme and a Local Educational Network for the Lesser White-fronted Goose was established with the approval of the Ministry of Education of Greece.

We hope that this educational material finds a positive response from the other countries visited by the Lesser White-fronted Goose, with small local networks, “acting locally, having thought globally”; working together to ensure not only safe places for wintering and breeding but also safe passages for migratory birds. The material refers to the Lesser White-fronted Goose in Greece but most of the activities can also related to other countries and even other waterbird species.

The material has also been translated into Norwegian and Farsi, together with local actors who worked together to adapt it to the local conditions in Norway and Iran that are key countries for the Lesser White-fronted Goose.

We welcome your comments and feedback so we can improve future material and similar endeavours. Finally, we hope you enjoy your creative journey with the Lesser White-fronted Geese of your country!

Please find more information and supplementary material in: www.ornithologiki.gr/lwfg

The Lesser White-fronted Goose Team

2. Aim and objectives

The aim of the educational material is to support teachers create an environment that fosters the development of ecological consciousness. The material can help create the right conditions for students to become engaged in and aware of the conservation of a threatened species, in this case the Lesser White-fronted Goose, alongside the conservation of species in general and broader environmental issues. This is achieved through helping to develop skills in the following areas:

- **Cognitive**
- **Social and emotional**
- **Psychomotor and aesthetic**

The suggested activities relate to special characteristics and behaviour of wild birds, focusing on the example of the Lesser White-fronted Goose as a threatened species, while at the same time giving the opportunity to explore and discuss a variety of environmental issues. Through the implementation of the activities children are encouraged to cooperate, develop and share their ideas, learn about environmental protection issues and propose solutions to the problems encountered by wild birds and other animals. In both a playful and safe context, we encourage children to broaden their knowledge, express themselves, to create, activate and shape their position in relation to the protection of wild birds and the Lesser White-fronted Goose in particular.

Aiming to allow creative space for tailor-made teaching and material adaptation, we have chosen to use the term “facilitator” in the description of the activities. This way we aim to inspire you in the pedagogical process and invite you to become an integral part of the material implementation.

Please feel free to contact the Hellenic Ornithological Society for support during the implementation of the material. We will be very happy to help.

DETAILED OBJECTIVES OF THE MATERIAL

Cognitive objectives

Students will:

- get to know and interact with wild birds, understand their needs, the link between species and habitat and the concept of species adaptation
- become familiarised with the Lesser White-fronted Goose, its current status, understanding the specificity of its habitat, the migration journey and the importance of their own region for the species
- identify the difficulties encountered by migratory birds
- identify the threats that the Lesser White-fronted Goose faces
- identify the stakeholders and groups involved in managing the natural environment
- understand the impact of land use changes on the population of the species, link these changes to human activity

Social and emotional objectives

Students will:

- develop positive feelings towards the protection of a threatened species
- participate in discussions and reflection on the threats to the Lesser White-fronted Goose
- empathise with the impact of poaching and human activity on the Lesser White-fronted Goose
- consider the choices for species conservation and the importance of cooperation between people living in different ecosystems and cultures in species conservation
- empathise with a species that has limited options available to meet its food and other needs
- develop social skills (teamwork, achievement of common goals, etc.) through coming into contact with their peers in a safe play and accepting environment with the common goal of protecting the Lesser White-fronted Goose

Psychomotor and aesthetic objectives

Students will:

- acquire wildlife research skills (observation, recording, data collection and processing, study, etc.)
- foster connection with the environment and the information drawn from it through developing observational skills
- activate critical thinking skills in such a way that they can take part in a brainstorm and evaluate ideas
- distinguish the different Lesser White-fronted Goose threats and issues between regions
- develop reflections and arguments about the intrinsic, utilitarian and other cultural values of species
- apply research methods to analyze the relationship of geese with the local culture
- propose actions and solutions for the protection of wild birds and in particular of the Lesser White-fronted Goose
- develop artistic skills by making use of existing knowledge and developing new knowledge with a variety of creative media (role play, visual arts and literature)

3. Educational material structure

A total of 14 educational activities are included addressed mainly to children aged 9-12. However, most of the activities can be adapted for younger (6-8 years) and older (13-15 years) children. The material is predominantly about the areas where the Lesser White-fronted Goose is present, enabling the children to play a decisive role and work positively to solve the problem locally.

ACTIVITY SHEETS

In most cases, each activity is presented in two parts. The first part is for the facilitator, while the second part contains pages that can be used by the children.

Masks and geese



In short:

Children make masks of the Lesser White-fronted Goose and the Greater White-fronted Goose and try to distinguish one from another through a movement game.

Learning objectives:

To distinguish the Lesser White-fronted Goose from the Greater White-fronted Goose, to understand the difficulty of this distinction and to define the colours of the Lesser White-fronted Goose.

 Copies of activity sheets, points, scissors, glue, rubber, stapler (optional), A4 cardboard (optional)

 45 minutes

Background information

The head of the Lesser White-fronted Goose is small, with a short, conical, pink bill. It has a distinctive white blaze at the base of the bill that extends on the forehead. Its distinctive feature is a yellow ring around the eyes. It looks very much like a Greater White-fronted Goose and it's very difficult to tell them apart. Often one or a few Lesser White-fronted Geese are mixed in flocks of other geese (in Greece, mainly Greater White-fronted Geese) that are looking for food and it takes a lot of experience and practice for someone to be able to distinguish the two species. An adult Lesser White-fronted Goose in relation to an adult Greater White-fronted Goose: a) is smaller in size, b) has a yellow ring around the eye, c) the white area at the base of the bill and the front extends more backwards and upwards, d) its bill is smaller and triangular, e) is generally darker.

The Greater White-fronted Goose was named after the white mark above its bill, on its forehead, which separates it from the other geese. The Lesser White-fronted Goose is smaller and slightly different from the Greater White-fronted Goose.

The activity

Preparation

- Reprint "Masks" activity sheets in equal number with the number of children (total)
- Optionally, glue to A4 thin cardboard for greater durability

Introduce the task

The facilitator describes the external characteristics of each species and points out that although they are very similar to each other, they are two different species. At this point, children can formulate their own assumptions about the origin of the names Greater White-fronted Goose and Lesser White-fronted Goose. The aim is for the children to get active and remember the names of the geese.



43

Activity sheets for the facilitator

Each activity includes a brief introduction with which the facilitator can become familiar with the activity theme and flow. Accompanying texts also help the facilitator to get a quick overview and choose the activities that fit the goals he/she has set.

Specifically, the following are described:

In short: A brief description of the activity is provided in order for the facilitator to become quickly acquainted with the content of the activity.

Learning objectives: The main objectives of the activity, mainly at the cognitive level, are identified. The facilitator can set his/her own goals by tailoring the activity accordingly. The facilitator will identify when implementing the activity other complementary goals on a psychomotor, aesthetic, social and emotional level.

Materials: Indicates the materials necessary for the implementation of the activity; commonly used materials in a classroom, required activity sheets and support material.

Duration: An estimate of the time required for the activity is provided. However, the duration depends each time on the number of children, their age and the emphasis that the facilitator wants to give to each activity section. The facilitator should also take into account the required preparation time before each activity.

At the end of each activity there should be a discussion about the activity theme to allow reflection and expression of the subjective experience of the children. It often prepares the children for their introduction to the next activity.

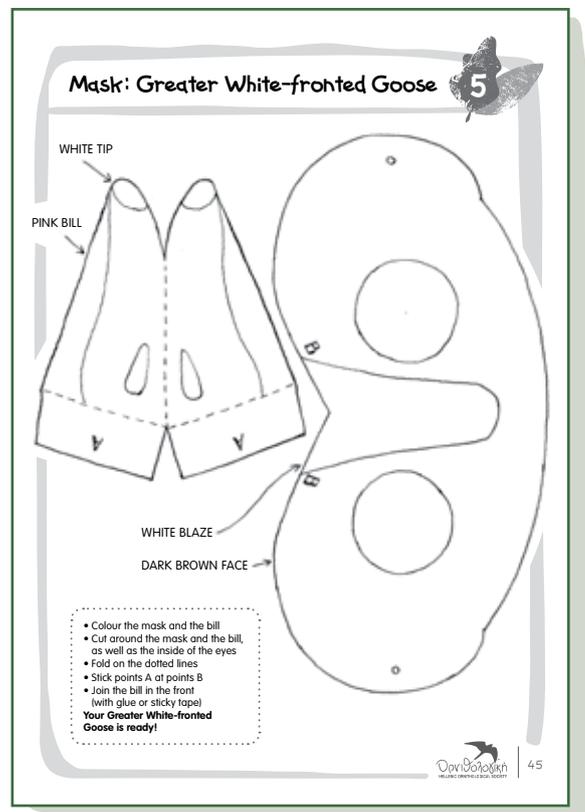
Finally, in the **“One step further”** section, there is a brief description of suggested complementary activities and ideas that the facilitator can apply if there is the time and willingness from the team.

Activity sheets for the children

Activity sheets for the children follow the activity sheet for the facilitator. On these sheets, children will find additional information about the activity and wild bird constructions. Some sheets have information about the habitats of the Lesser White-fronted Goose and other species while in others the environmental illustration itself can prepare the team for the activity that can provoke questions for the children. The facilitator can make black and white copies of the activity sheets whereas colour copies are rarely required.

SUPPORTING MATERIAL

The **“Lesser White-fronted Goose game”** as well as supplementary material to be used as required by the facilitator (**“The Lesser White-fronted Goose Colour Book”** and the children’s story **“A goose no less... a Lesser White-fronted Goose”**). All supplementary material is available in the webpage: www.ornithologiki.gr/lwfg



4. Using the educational material

IMPLEMENTATION IN THE ANNUAL SCHOOL PROGRAM

The material is designed to operate in the context of an annual environmental education program in order to influence beyond the cognitive level. At the same time, it is designed to move from concepts of general content (e.g. biodiversity) to concepts of specific content (e.g. Lesser White-fronted Goose). This way foundations are laid for children to have increased awareness about species in general and environmental issues, in addition to learning about the specific target species of the educational material.

The activities in the current edition have been selected to give an overall picture for the Lesser White-fronted Goose. The criteria for the selection of these activities are: the familiarization of children with the particular characteristics of the Lesser White-fronted Goose (morphology, lifestyle and threats), the understanding of how humans affect its survival, how we try to protect it and how the children themselves can act for the benefit of the Lesser White-fronted Goose. These activities can be supported and enriched with complementary material that the facilitator considers suitable for her/his team.

EDUCATIONAL MATERIAL IMPLEMENTATION

It is possible to choose freely from all the activities based on the needs and goals of each team and the pedagogical framework in which the material is applied.

TRANSNATIONAL COOPERATION

To protect this particular species, transnational co-operation between the countries visited by the Lesser White-fronted Goose is required. An international working group for conservation of the Lesser White-fronted Goose exists and operates under the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA). The working team is comprised of representatives from 19 countries across the Lesser White-fronted Goose distribution range and can be extended by involving the school and student community. The subject matter of the material as well as the material itself can form the basis for creating school partnerships between educational institutions in different countries.



5. The Hellenic Ornithological Society



The Hellenic Ornithological Society (HOS) is an environmental, non-profit organization with the aim of studying and protecting wild birds and their habitats in Greece. Since 1982 the HOS has been working to ensure a sustainable environment for both birds and humans. Its work includes a wide range of actions: from conservation and research, to information, education and interventions on critical issues of the natural environment.

The HOS is a partner of BirdLife International, the world's largest federation for the protection of birds and their habitats. Birds, as well as their problems, know no borders...

Supporters of the HOS can develop their interest in birds and their habitats and also contribute towards their conservation without the need for specific knowledge on these issues.

ENVIRONMENTAL EDUCATION IN THE HELLENIC ORNITHOLOGICAL SOCIETY

The Hellenic Ornithological Society made its first steps in the field of environmental awareness and education just four years after its foundation in 1982, with the support of the former Environmental Directorate of the European Economic Community. After many actions to protect the natural environment and reaching tens of thousands of children, we continue our efforts with unrelenting commitment, setting higher goals and hoping that we are contributing to a world where wildlife and humans can coexist in harmony.

The aim of HOS' environmental education activities is to inspire children to be involved in and gain awareness about the protection of wild birds and, more generally, in the protection of the natural environment. Environmental education activities have been created to promote awareness, knowledge, proactive attitudes, skills, competencies and participation.





6. The Lesser White-fronted Goose

GETTING TO KNOW THE LESSER WHITE-FRONTED GOOSE

The Lesser White-fronted Goose is Europe's second smallest goose (following the Red-breasted Goose by only a few centimetres!) with a body length of just over half a meter and a wing span of 115-135 cm. It is brown-grey in colour with light stripes on the sides, dark patches on the belly, a white abdomen and a white strip at the end of its tail. Its legs are orange-red (erythro – red & pus – feet) and its toes are joined with membranes suitable for swimming as well as walking. Its head is small, with a short, conical, bright pink beak. It has a distinctive white blaze at the base of the bill that extends until the top of the head. Its distinctive feature is a yellow ring around each eye. It mainly feeds on fresh grass found in natural meadows with low vegetation. It can also eat shoots, leaves and roots from aquatic and other plants; and more rarely seeds and shoots in crop fields (e.g. wheat). Lesser White-fronted Geese are found in large open areas with low vegetation, close to wetlands, such as lakes and swamps and less often amongst crops. They prefer the wet meadows and salt marshes and avoid areas with high vegetation (e.g. reed beds) that can limit their visibility.

THE LESSER WHITE-FRONTED GOOSE JOURNEY

Lesser White-fronted Geese breed during the summer in the tundra of arctic and subarctic Scandinavia and Russia, while in the autumn they migrate to more southern latitudes from the Balkans, the Black and the Caspian Sea and all the way to eastern China. The Fennoscandian population is the smallest and thus most endangered Lesser White-fronted Goose population and breeds in northern Scandinavia (Fennoscandia) and spend the winter in Greece.

During mid-August, and following their breeding in the Nordic Scandinavia in the summer, the Fennoscandian Lesser White-fronted Geese begin their autumn migration journey. From the breeding areas, the population is divided and follows two different migratory routes to the wintering areas. The first major stop is the Kanin peninsula (Northwest Arctic Russia). More than half of the birds follow the so-called European route that runs through the Baltic countries, Poland and eastern Hungary to end up in late September – October in northern Greece. The rest follow the so-called centro-Asian route and end in Greece via Russia, Kazakhstan and Ukraine. The European path is usually followed by pairs with their young, while the centro-Asian route is followed by birds that did not reproduce successfully.

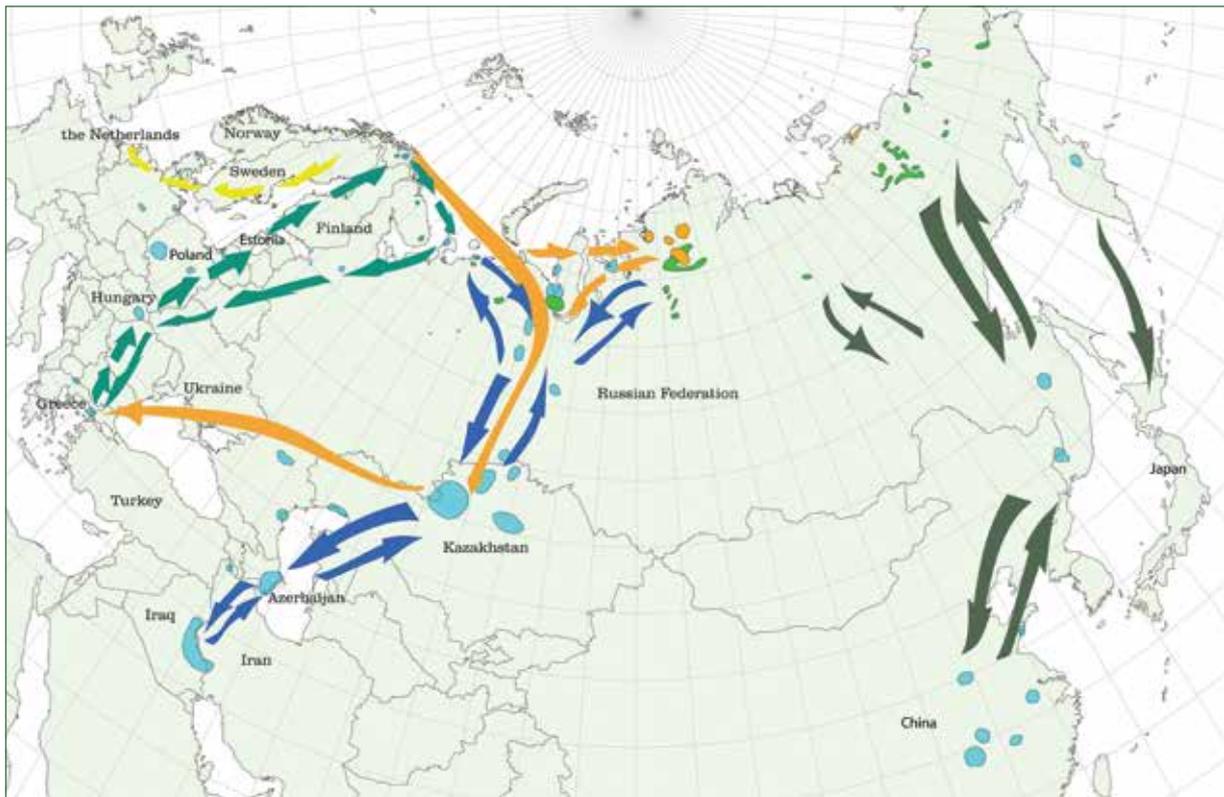


Figure: Migration system for the Lesser White-fronted Goose

Light blue shading = important staging sites and wintering sites, green = breeding areas, orange = moult sites

Fennoscandian population: Green arrows = migration route for successful breeders, orange arrows = migration route for unsuccessful breeders

Swedish reintroduced population: yellow arrows show the main route southwards

Russian Western main population: blue arrows show main routes southwards

Eastern main population: black arrows show main routes

You can also find out about the almost daily Lesser White-fronted Goose observations at www.piskulka.net.

LESSER WHITE-FRONTED GOOSE THREATS AND CONSERVATION

The Lesser White-fronted Goose is a species that is in danger of disappearing globally. Its world population is estimated at approximately 50,000 individuals. It is classified as Vulnerable internationally, in the Red List of Threatened Species of the International Union for Conservation of Nature (IUCN), as Endangered in Europe and Critically Endangered in the European Union as well as in Greece. The Fennoscandian population has been reduced to just about 30 pairs. In Greece, Lesser White-fronted Goose hunting has been banned since 1985. Wildlife Refuges have been established in overwintering wetlands that have been designated as Special Protection Areas (SPAs) and included in the Natura 2000 network.

The main threats to the Lesser White-fronted Goose internationally are its immediate killing as a result of poaching, the loss and degradation of habitats where it stages and winters, the human activities that disturb and scare the geese and displace them in areas that are not suitable or are unsafe and gaps in our knowledge of the species.

Apart from the loss and degradation of the Lesser White-fronted Goose habitats, as well as wetland drainage and crop intensification, another threatening factor for arctic breeding birds like the Lesser White-fronted Goose is climate change and the resulting habitat changes. Negative impacts are also caused by hydroelectric power production projects in Scandinavia and wintering areas in China, as they change the availability of water in wetlands.

In Scandinavia and Russia, the Lesser White-fronted Geese are threatened by illegal and accidental killing, human activity (hunting, fishing and tourism), but also by natural predators such as foxes that can attack nests.

In areas along the European migratory route the threats are mainly the loss or degradation of habitats and the disturbance caused by human activities. In wintering areas, the most significant threats are the lack of suitable, undisturbed and safe habitats for feeding and roosting, as well as illegal hunting and human disturbance.

Conservation measures

In order to protect the Lesser White-fronted Goose at an international level, the following actions need to be undertaken:

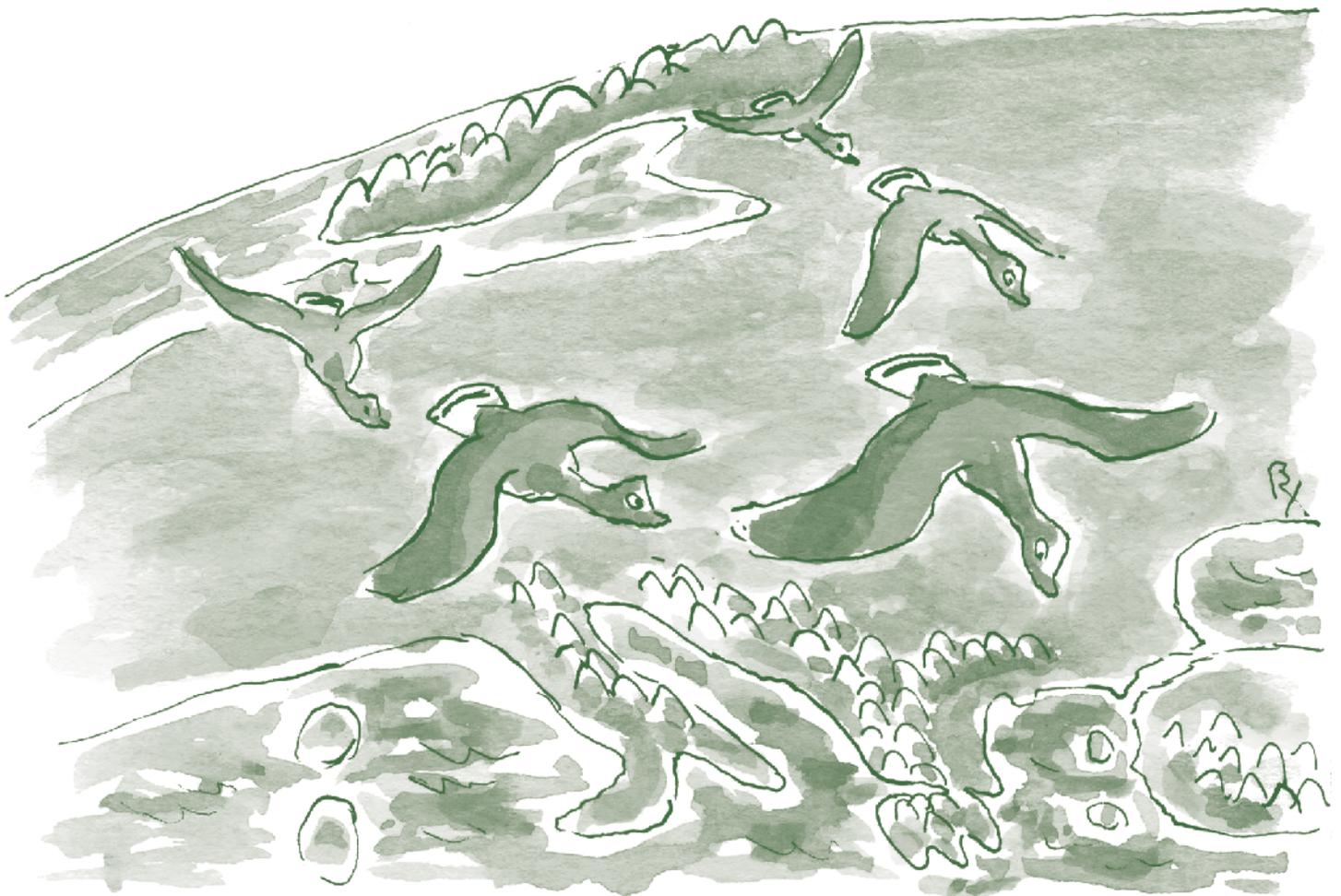
- Regulation of hunting pressure in important staging and wintering areas
- Satellite tracking and research of Lesser White-fronted Geese in order to identify, monitor and eventually protect the important areas for the species
- Prevention of the habitat loss, management and restoration of habitats in staging and wintering areas
- Legal protection of the important areas for the species at international and national level
- Promotion of public awareness in order for the public to take an active role in Lesser White-fronted Goose conservation

In Greece:

- Hunting of the Greater White-fronted Goose has been banned within the Special Protected Areas (SPAs) of the Natura 2000 network where the Lesser White-fronted Goose is present, in order to minimise the possibility of a Lesser White-fronted Goose being shot.
- In the framework of the Lesser White-fronted Goose LIFE+ project an outdoor surveillance Smart Patrol System was set up in Kerkini Lake and the Evros Delta in Greece in order to control hunting

and poaching activity.

- Coordinated and detailed monitoring of the species and continuous recording of the population are carried out in close cooperation with the Management Authorities of important areas for the Lesser White-fronted Goose, other BirdLife partners and stakeholders across the flyway.
- Interventions are being carried out to restore Lesser White-fronted Goose habitat following diet analysis.
- Numerous dissemination actions are taking place for combating illegal hunting and special training seminars are carried out for new hunters, wardens and public officers.
- An environmental education programme has been designed for all school ages and is running in schools across northern Greece.
- The Hellenic Ornithological Society coordinates the Lesser White-fronted Goose conservation work in Greece and also participates in the Lesser White-fronted Goose International Working Group.
- A National Action Plan for the conservation of the Lesser White-fronted Goose was adopted in 2017 by the Ministry of Environment and Energy as well as the Ministry of Finance.



7 Coordinated action for Lesser White-fronted Goose conservation



An international flyway approach is applied in the conservation efforts for the Lesser White-fronted Goose, in order to reflect the wide range of its population. Norway and Finland began in mid-1980s to systematically monitor the species and uncovered the migration route of its Fennoscandian population. Since then a number of transnational projects have been implemented for its conservation and study, while the knowledge base for the species has improved greatly.

The most recent and ambitious project was the LIFE + 2011-2017 project that included urgent conservation measures taken in important areas for the Lesser White-fronted Goose in Greece, Bulgaria and Hungary. Through the project field ornithologists were also trained in Lesser White-fronted Goose identification and monitoring and new sites for the species were uncovered. The project was co-financed by the European Commission, the Norwegian Environment Agency as well as the participating partners and was coordinated by the HOS. Following 6 years of project implementation the Fennoscandian population finally showed a positive trend.

The Lesser White-fronted Goose conservation work is coordinated on an international level by the AEWA Lesser White-fronted Goose Working Group in which most species range states are group members. The AEWA is an independent legally-binding multilateral regional Agreement that follows the flyway approach: the need to implement conservation measures for migratory waterbirds along the entire length of their flyways. The Lesser White-fronted Goose is one of the waterbird species prioritized for international conservation action under the Agreement and as such, it serves as the main international legal framework for the coordinated conservation efforts for the Lesser White-fronted Goose within the Western Palearctic, covering all range states of the species within its geographic remit. The International Lesser White-fronted Goose working group meets every 2-3 years and sets the work plan for the species.

Please find more information on AEWA's work on the Lesser White-fronted Goose on:

www.unep-awa.org/en/species/anser-erythropus

Please find more information on the LIFE+ Project on:

www.wwf.fi/lwfg

How many wild birds do you know?



in short:

Children recall information about the wild birds they know, participate in a bird memory game and record their observations on the similarities and differences of the birds that they encounter.

Learning objectives:

To recall existing knowledge and experience on wild birds, to recognize and name 8 species of birds, to analyze the main differences between them and to categorize them based on specific criteria.



Coloured cards of the "Wild birds" activity sheets, scissors, glue, white paper sheets, pencils, A4 cardboard (optional)



60 minutes

Background information

Wild birds are found across the entire globe in all ecosystems, they represent the beauty and freedom of nature and are one of the most important indicators of environment quality and health. Around 10,000 bird species live around the world. In Greece 455 bird species have been recorded (2018). They are distinguished from the remaining animals by the presence of feathers and most of them have the ability to fly although there are exceptions (e.g. Ostrich). Like all organisms, they are ranked hierarchically in teams that highlight the differences between them. The classification of birds in different categories (taxa, families, genus and species) is based primarily on anatomical features such as shape, bone size and morphology such as the colour of feathers, beak or feet. Ecological features (e.g. habitat), behavioural characteristics (e.g. song, call) and genetic characteristics (DNA) are also used.

The activity

Preparation

- Create teams of 2-3 children
- Reprint a colour copy of the "Wild birds" activity sheets
- Optionally, glue them to A4 cardboard for greater durability
- Cut out the 16 "Wild birds" cards

Introduce the task

The facilitator asks the children if they know how many different bird species there are in Greece and encourages them to report freely what kind of wild birds they know, to share their personal experiences with a bird that they saw, heard, read about, etc., while also recording the children's

replies on the board. Taking advantage of the children's replies, the facilitator asks questions like:



- *What size was the bird (smaller or larger than for example a pigeon)?*
- *What colours were its feathers?*
- *How was the beak (short, long, strong, etc.)?*
- *Where did you encounter this bird (in the garden, in the town square, etc.)?*

After the children have reported all the species they know, the facilitator focuses on the large variety we see among birds.

1. Memory game

The facilitator urges the children to sit in a circle and places all 16 cards in the centre so that they are visible to all. The cards depict 8 pairs of different species of wild birds with 2 of each belonging to the same category (e.g. Chiffchaff and Goldfinch belonging to the passerines).

- Discuss with the children if they know the 8 species on the cards and reveal their names.
- Number the cards on their back side from 1 to 16.
- Mix the cards and place them randomly (for example, in 3s next to each other) on a large surface (e.g. a table, a desk) with the side showing the images facing upwards.
- Urge the children to look at them once and then turn the cards upside down.
- Announce that they will participate in a memory game.
- Each child first chooses a numbered card, turns it upside down and selects another numbered card that he/she thinks has the same species of bird on the other side.
- If the child finds a pair of the same species of bird and remembers at the same time its name, the cards remain turned up so that the pictures can be seen. If a pair does not match, the cards are turned back over and the next player continues.
- Make sure that the cards remain visible for enough time so that all children can see them, the cards' position must not be changed.
- Every child has an opportunity in each round. The goal is to find all the pairs!

2. Differences between species

The children remain in the circle and the facilitator places 8 of the 16 cards (one of each species) in the centre of the circle. The facilitator focuses their attention on the bird species of the cards and especially on their morphological characteristics. Note that if the teams are more than 8, a second copy of the **"Wild birds"** activity sheets must be printed.

- Urge children to carefully observe the bird images and make comparisons about: shape and size of beaks, legs, body shape and tail.
- Encourage children to observe which species most fit with each other and if they have some common features and what these are.

- Each team chooses two cards of different bird species.
- Explain to the teams that their aim is to classify the species on the cards into related categories.
- First, they divide a white sheet of paper into two columns and note respectively the similarities and differences between the two birds.
- After about 10 minutes, call each team to report one difference and one similarity.
- Join two teams together and ask them to think and discuss, on the basis of bird characteristics, how they would group the (now) four species of birds in front of them.
- The teams report their categorizations and the criteria that they used.
- Write on the table in a horizontal column the four categories of birds (wildfowl, waders, birds of prey and passerines) and together with the children write the names of the birds belonging to each category.

Reflect and evaluate



- *Why are not all birds the same?*
- *What needs do these differences serve?*
- *Why do you think birds have been grouped by the people who study them?*
- *Do you agree with this grouping and why?*

One step further

- If they wish, the children play the memory game again, only now the player is asked to find a pair of birds in the same team and to report the team name (e.g. waders) at the same time.
- In teams, the children choose from a group of birds and record their name on an A3 cardboard. Stick the corresponding cards below and frame them by painting the habitat of each bird category.

ANSWERS: Wild birds

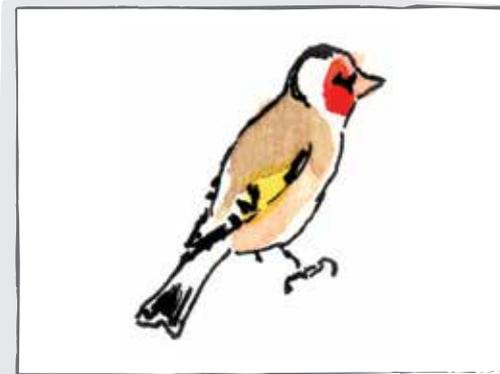
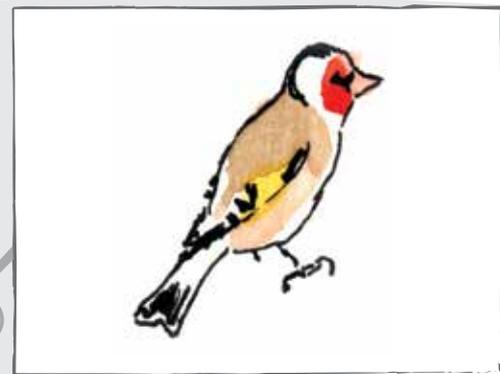
1: Goldfinch:	passerine	5: Little Owl:	bird of prey
2: Chiffchaff:	passerine	6: Scops Owl:	bird of prey
3: Black-winged Stilt:	wader	7: Common Teal:	wildfowl
4: Common Redshank:	wader	8: Common Shelduck:	wildfowl

Wild birds (a)



1) Goldfinch 2) Chiffchaff 3) Black-winged Stilt 4) Redshank

1)



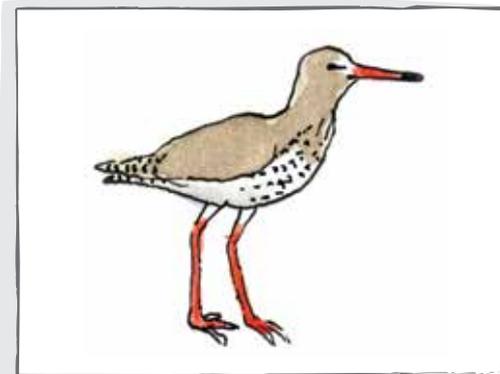
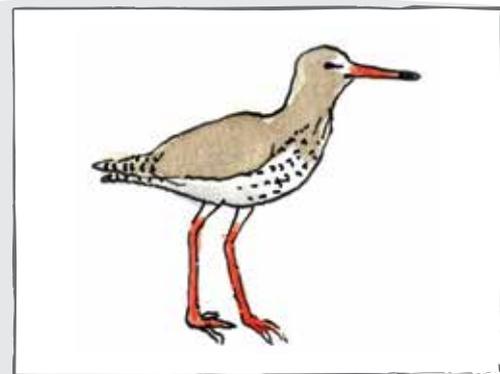
2)



3)



4)

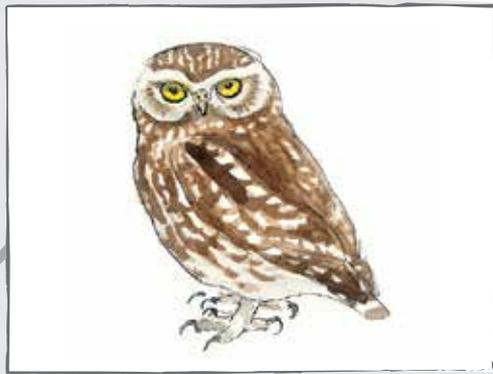


Wild birds (b)



5) Little Owl 6) Scops Owl 7) Teal 8) Shelduck

5)



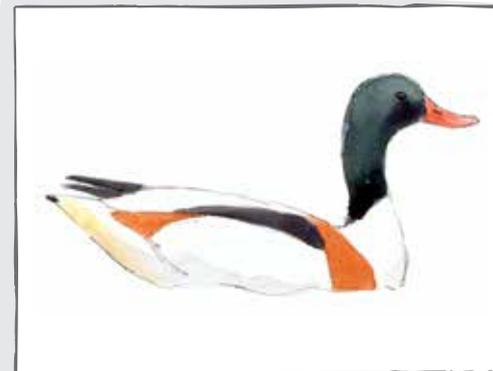
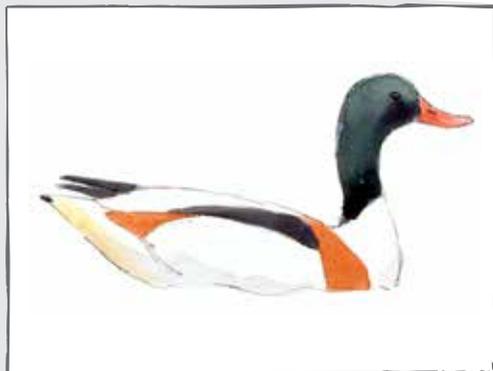
6)

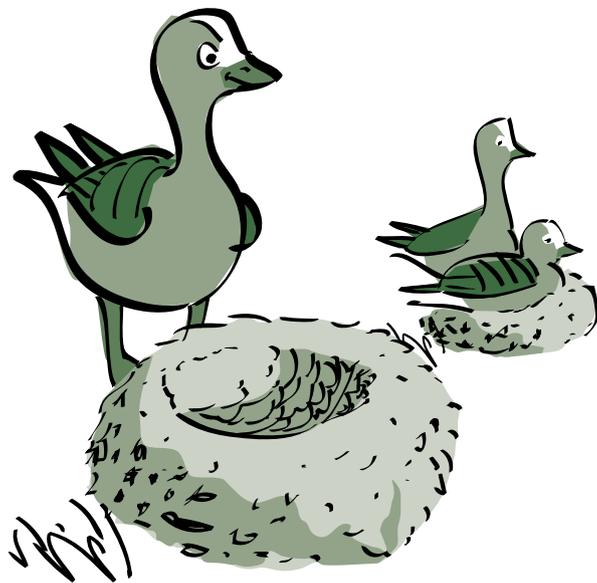


7)



8)





Ducks and geese



in short:

The children cooperate in order to create their own dichotomous identification key for the duck and goose species that exist in their area and make paper cubes/boxes with the different geese of Greece.

Learning objectives:

To familiarize with the dichotomous recognition keys, to become able to identify and name 8 wildfowl species, to learn to distinguish geese from ducks and to identify differences in the morphological characteristics of 4 species of geese.



Coloured cards of the "Ducks & geese" activity sheets, copies of activity sheets, white paper sheets, pencils, paints, scissors, glue, A4 cardboard (optional)



90 minutes

Background information

In Greece, we usually encounter the following four species of geese during the winter: the Greylag (*Anser anser*), the Greater White-fronted Goose (*Anser albifrons*), the Lesser White-fronted Goose (*Anser erythropus*) and the Red-breasted Goose (*Branta ruficollis*).

Geese and ducks are wildfowl (class Anseriformes). They are mainly aquatic birds that have been adapted to live on or close to the water surface.

Ducks and geese differ in the following 1) geese are larger in size and some are twice as large than some ducks, 2) geese have a longer and thicker neck than ducks, 3) geese have a conical and proportionately smaller bill than the ducks whose bill is usually broad and large in comparison to their body, 4) male and female geese look the same whereas the male ducks have bold colours and differ from females, 5) geese will usually be found feeding in fields and wet meadows, whereas ducks swim in water or roost near the shores, 6) ducks fly using very fast wing beats, while geese have a heavier wing beat, 7) geese pair for life while the ducks often change each year, 8) ducks usually lay more eggs than geese.

To identify a species taxonomically, we use identification keys. Keys lead us at each step to select a feature that the taxon has or does not have in order to proceed to the next step and ultimately to arrive at a unique solution. If the options given in each step are two, then the key is called a dichotomous. Using a key to distinguish bird species, in addition to contributing to the study of birds is crucial in the conservation of endangered species that resemble huntable species. Such a case in Greece is the similarity of the Lesser White-fronted Goose with the Greater White-fronted Goose.



The activity

Preparation

- Create teams of 4-5 children
- Reprint colour copies of **“Ducks & geese”** and copies of **“Our geese”** activity sheets in the same number as the number of teams
- Optionally, glue to A4 cardboard for greater durability
- Cut out the 8 cards on the **“Ducks & geese”** activity sheets

Introduce the task

The facilitator reminds children of the distinction of species based on their anatomical and morphological characteristics, the ways in which scientists classify the different species, but also the reasons for this classification. For example, the facilitator may ask questions like:



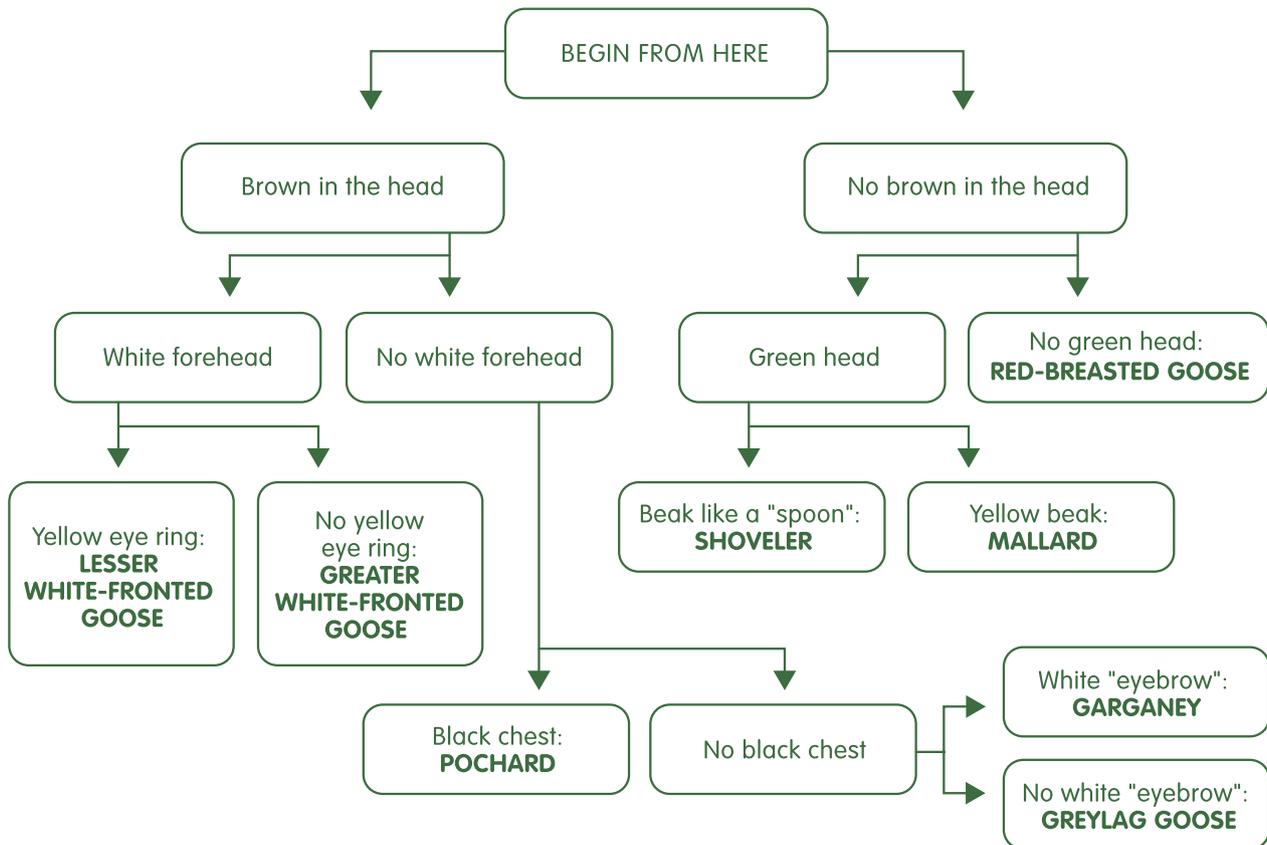
- *What are the criteria used by scientists to classify species?*
- *Why do scientists classify different species?*
- *In which category can you classify the Lesser White-fronted Goose?*
- *What other types of bird species do you remember belonging to the same category?*

1. Identifying birds in class!

The facilitator focuses the discussion on geese and ducks and explains that although they belong to the same category (wildfowl) they still have several differences between them. The facilitator informs the children that they will group in teams in order to recognize 8 species of birds using an identification key and the 8 coloured **“Ducks & geese”** cards.

- Share amongst the teams a set of the **“Ducks & geese”** cards and ask them to observe for a few minutes the external features of the birds on the cards.
- You can use, for example, a duck and a goose card and urge children to report the differences they observe.
- Encourage children to discuss these differences. A good example is the differences in bills that accommodate the different eating habits of the species: the Mallard is fed with aquatic plants and insects found in water while the Lesser White-fronted Goose feeds with plants found on land. Can the children guess from the bill shape what species of bird is feeding on what?
- Explain to the children that scientists use “keys” to distinguish between species as it is very difficult to recognize and remember details in your head on all the species.
- Invite the teams to collaborate and make their own key on a white sheet as shown below.
- Explain that each key is based on the description of the particular characteristics of the species.

An identification key starts from a description of a feature of one species (e.g. brown head) or a group of species and on this basis the items are divided into two categories (e.g. those with a brown head and those without a brown head). A next feature from each category is then selected (e.g. white in the head, long tail, yellow eye ring) and so on.



- Note that we choose the description that fits the attributes of the species best and if it doesn't the other option is selected.
- Announce to the teams that the aim is to make it possible to identify each species using particular traits.
- Distribute paper sheets between the teams and ask them to prepare their keys and set the time they have available (for example, 15 minutes).
- Each team marks their name (or the names of their members) on their key and gives it to another team so that each team has the key of another team.
- Each team chooses one bird species to identify, i.e. to find out its name using the key and makes comments on the key (if it was easy or difficult to use and why).
- When done, the team gives the key to the next team and this goes on until each team gets its own key back.
- Everyone comments together on the keys they made and conclude on those elements that make a key functional or dysfunctional.

2. Cubes and geese

The facilitator focuses the discussion on the four species of geese in the activity and the similarities and differences between them. The facilitator explains to the children that they will compose the four cubes of the sheet **"Our geese"**. Each side of the cube matches with sides of the other cubes so that the four different types of geese can be formed.

- Distribute one copy of the activity sheets **"Our geese"** to each team.
- Children draw the activity sheets **"Our geese"** according to the instructions.
- Cut the contour of the cube and stick its sides according to the instructions. The cube is now ready.
- The teams try to complete the puzzle: The 6 different sides of the cubes form four kinds of geese and key phrases for each goose species.

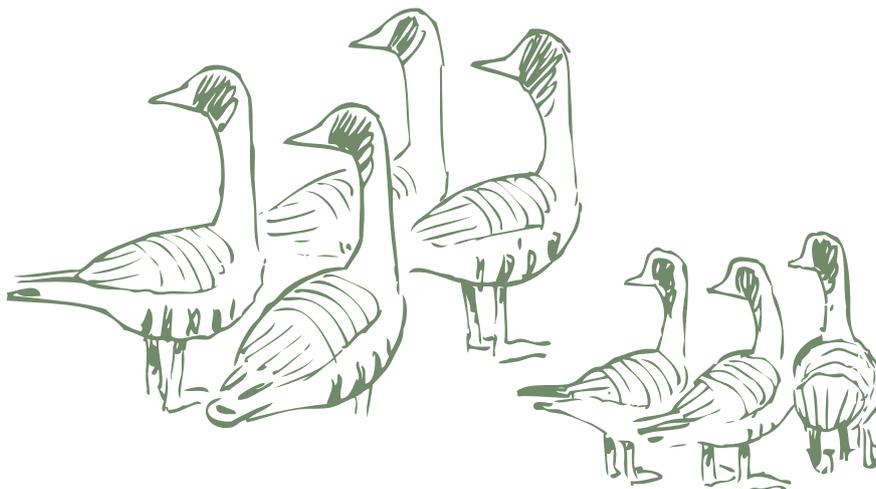
Reflect and evaluate



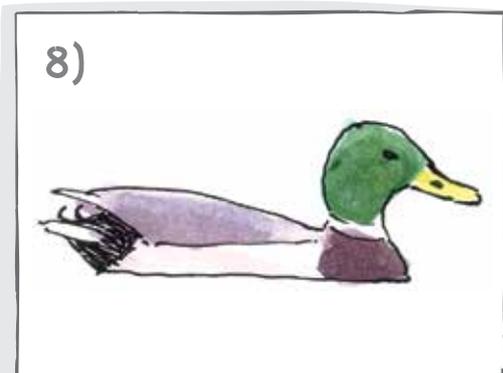
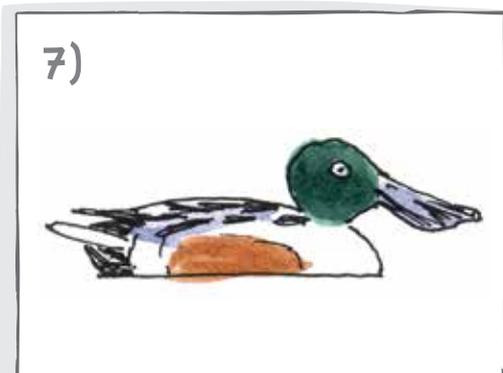
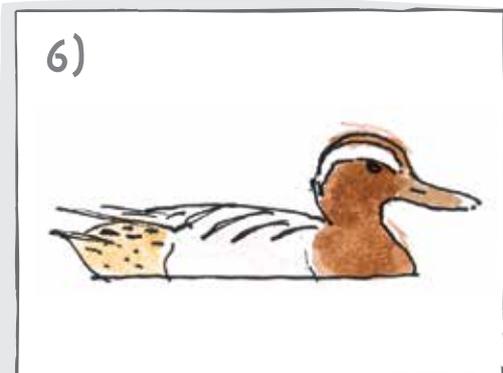
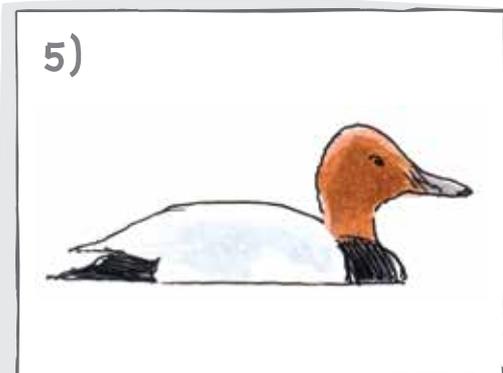
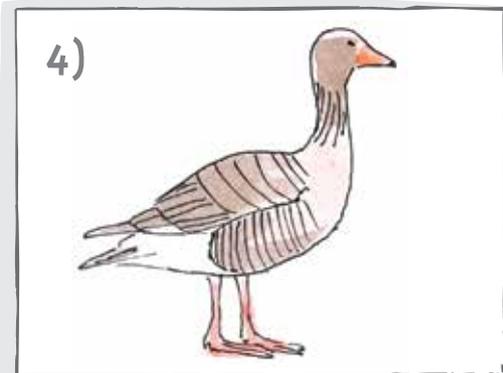
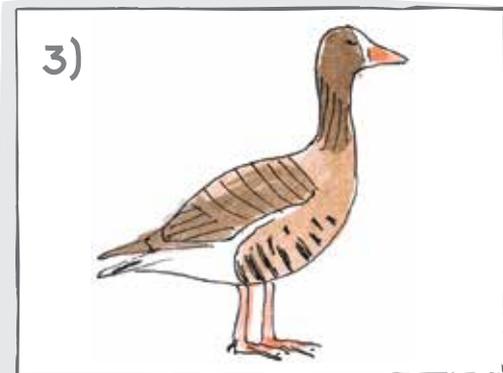
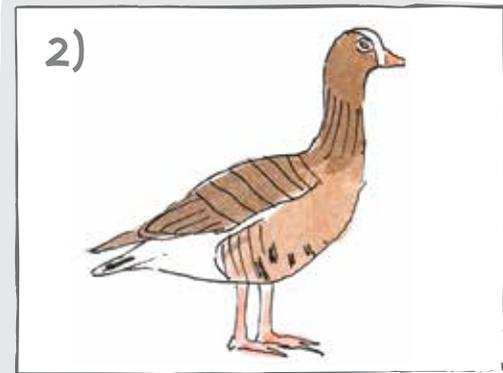
- *What are the main differences between the species they recognized?*
- *Which species resemble each other?*
- *What is the characteristic feature of each goose?*

ANSWERS: Ducks and geese

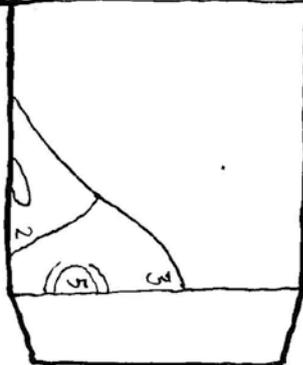
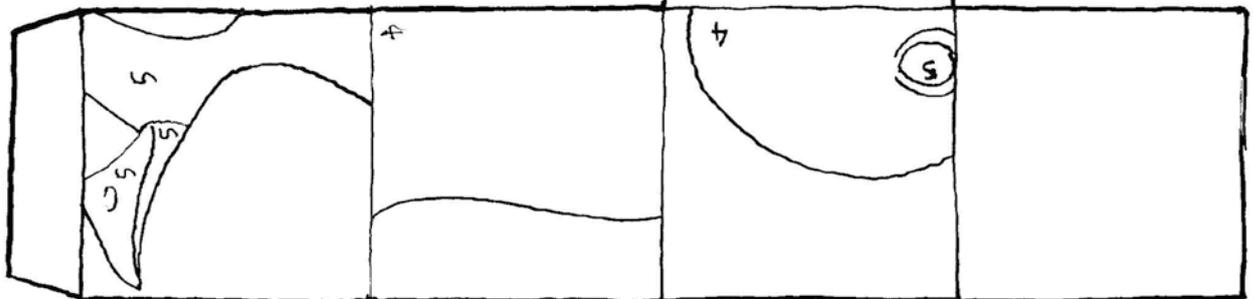
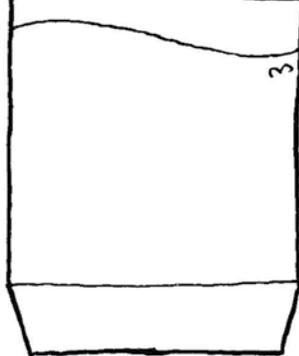
- | | |
|--------------------------------|-------------|
| 1: Red-breasted Goose | 5: Pochard |
| 2: Lesser White-fronted Goose | 6: Garganey |
| 3: Greater White-fronted Goose | 7: Shoveler |
| 4: Greylag Goose | 8: Mallard |



Ducks and geese

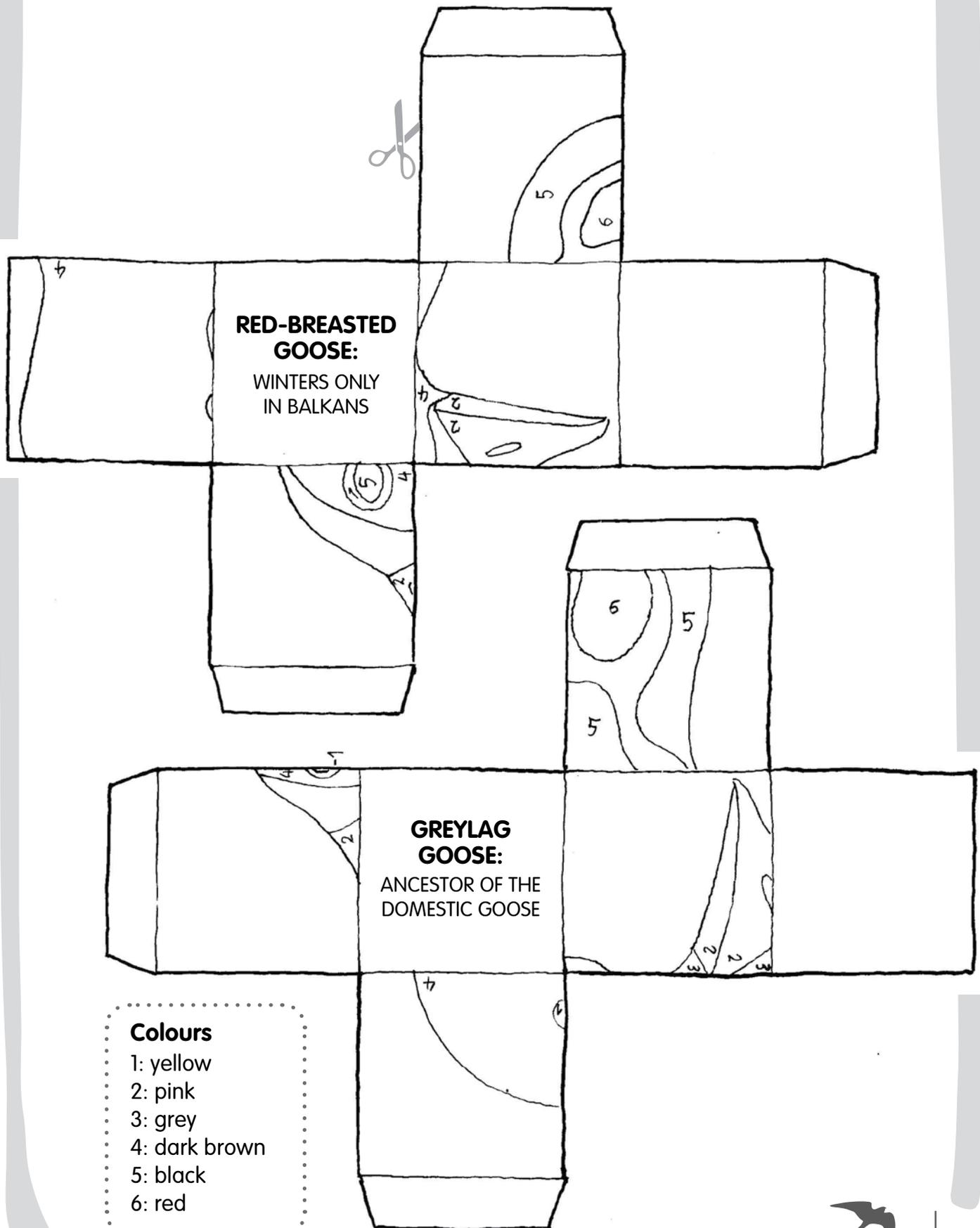


Our geese (a)

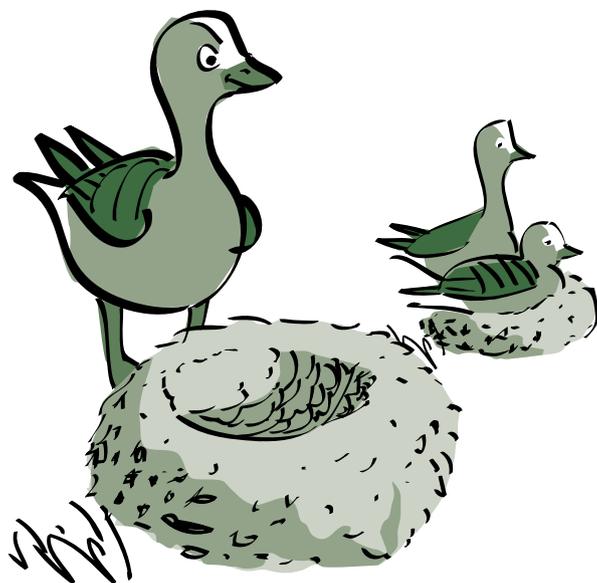


- Colours**
- 1: yellow
 - 2: pink
 - 3: grey
 - 4: dark brown
 - 5: black
 - 6: red

Our geese (b)



- Colours**
- 1: yellow
 - 2: pink
 - 3: grey
 - 4: dark brown
 - 5: black
 - 6: red



Where is my nest and what's for dinner?



in short:

Children create puzzles on the life cycle of the Lesser White-fronted Goose. They also match cards of four species of birds together with the food and nest type for each species.

Learning objectives:

To describe the life cycle of the birds, to distinguish the food selected by Lesser White-fronted Geese and other birds and to describe the different habitat conditions that the species are looking for.



Puzzles and cards from the activity sheets, pencils, scissors, A4 cardboard (optional), paints (optional)



45 minutes

Background information

All birds have a keratin bill that is light and strong. The bill is one of the bird's main "tools", as it is used to catch food but also to clean the wings, to defend against predators or enemies, to create the nest and also to attract a mate. A nest of a bird can be very elaborate (for example, the nests of weavers), can be made from mud and water (e.g. Barn Swallow), can be made from small and fine sticks and other materials (e.g. Lesser White-fronted Goose) or can simply just be the actual ground. Also, some will make their nest in the branches of a tree (e.g. Greater-spotted Eagle), others will hide it among reeds (e.g. Ferruginous Duck) or some may choose an isolated islet (e.g. Dalmatian Pelican). The Lesser White-fronted Goose feeds mainly on grass and on wet meadows and makes its nest during spring in the tundra of arctic Scandinavia and Russia, as well as on the steep slopes of mountains and hills at an altitude of over 700 meters. The Lesser White-fronted Goose lays 3-6 eggs that are incubated by both parents for about a month. After about 40 days the goslings are able to fly and seek food for themselves.

The activity

Preparation

- Create 4 teams
- Reprint "A goose puzzle" and "Matches" activity sheets in equal number of copies with the number of teams
- Alternatively, stick the sheets to A4 cardboard for greater durability
- Trim the individual parts of the disc from the "A goose puzzle" activity sheet
- Cut out the cards on the "Matches" activity sheets

Introduce the task

The facilitator asks the children if they know the stages of the life cycle of the birds and asks questions such as:



- *How does the life of a bird begin?*
- *What does the bird need when it is still inside the egg?*
- *What happens in order for the bird to get out of the egg?*
- *How does the bird change as it grows?*

1. The circle of life

The facilitator invites the teams to compose the circle of life for the Lesser White-fronted Goose based on the **“A goose puzzle”** activity sheet matching the individual parts of the disc shown on the sheet.

- Distribute a copy of the **“A goose puzzle”** activity sheet in each team and let each team cut the individual parts of the disc.
- Invite the teams to place the 5 parts of the disc in the correct order and verify that they have compiled it correctly.
- Smaller children can draw the disc they have created and add a wish for each stage of the life of the Lesser White-fronted Goose.

2. Matching

The facilitator focuses the children’s attention on the bird species of the **“Matches”** sheet making sure to mention that all bird species depicted are threatened. She/he points out that while the life cycle remains common to all bird species, each species has different needs in terms of food and appropriate nesting conditions. She/he focuses on the four species of birds from the **“Matches”** sheet (Dalmatian Pelican, Lesser White-fronted Goose, Greater-spotted Eagle and Ferruginous Duck), their food types and their nests.

- Ask the children if they know the bird species shown on the **“Matches”** sheet and urge them to answer questions such as: What can each of them eat? Where can the bird make its nest?
- Distribute one set of cards from the **“Matches”** sheet in each team.
- Ask the teams to match bird species with the food and nest that each one chooses, set time for task (e.g. in five minutes).
- Ask each team to choose one species and to present their answers.
- Confirm that teams have correctly matched each species with their food and nest.
- Explain to children the reasons why each species makes different choices: Could a Dalmatian Pelican feed on grass? Could the Lesser White-fronted Goose feed on a small mammal, such as the ground squirrel?

Reflect and evaluate



- How does a bird benefit from its beak type?
- Where can each of the four species find its food?
- What will happen if the availability of food for a species is reduced?
- What would that mean for the species from the “**Matches**” activity sheet, which are threatened?

One step further

Children participate in a short game on food of the different species. Food cards are placed inside a box. Children are divided into 4 teams representing the four species. They form 4 rows with their team members standing one behind the other. Opposite the teams and within a few meters the nests of each species are defined. The first person in a row randomly picks a card from the box. If he/she chooses the right food type for the species, they take a step forward; otherwise they stay in their place. The second person in the row continues, the third and so on. The aim is that all the “birds” of each team reach their nest.

ANSWERS: Matches

Dalmatian Pelican: Feeds on fish and makes its nest on small islets.

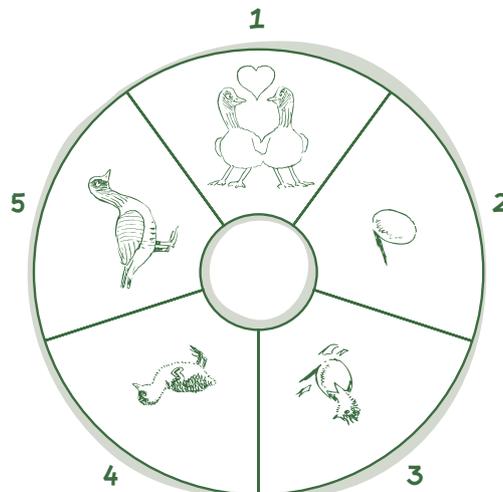
Greater-spotted Eagle: Feeds on small mammals, rodents (like ground squirrels) and roosts on trees.

Ferruginous Duck: Feeds on aquatic plants and builds its nest on the ground in dense vegetation (e.g. between reeds).

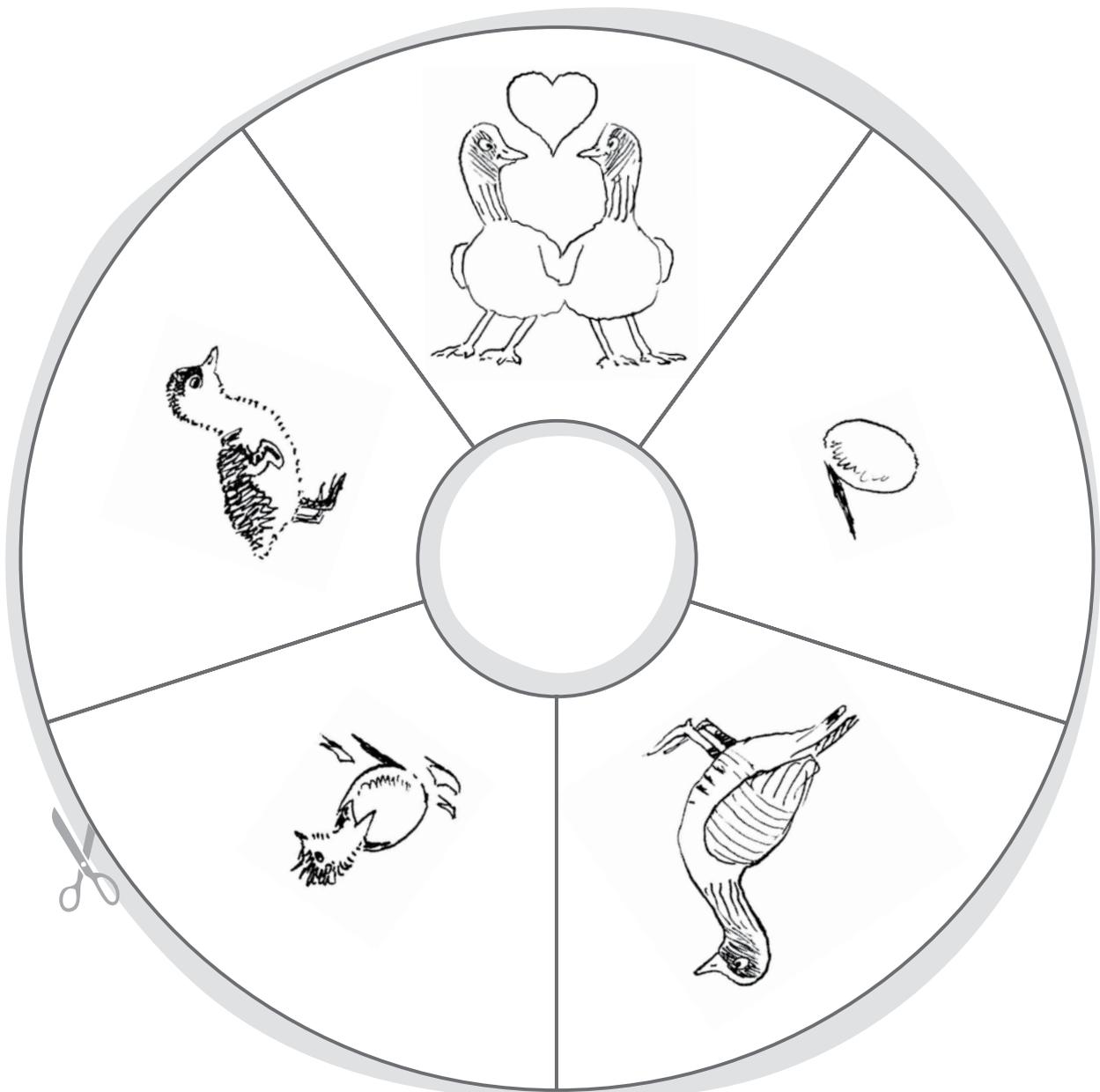
Lesser White-fronted Goose: Feeds on grasses and makes its nest on the ground under no cover.



A goose puzzle



A goose puzzle



Matches (a) Threatened bird species

3

- a) Dalmatian Pelican b) Greater-spotted Eagle
c) Ferruginous Duck d) Lesser White-fronted Goose

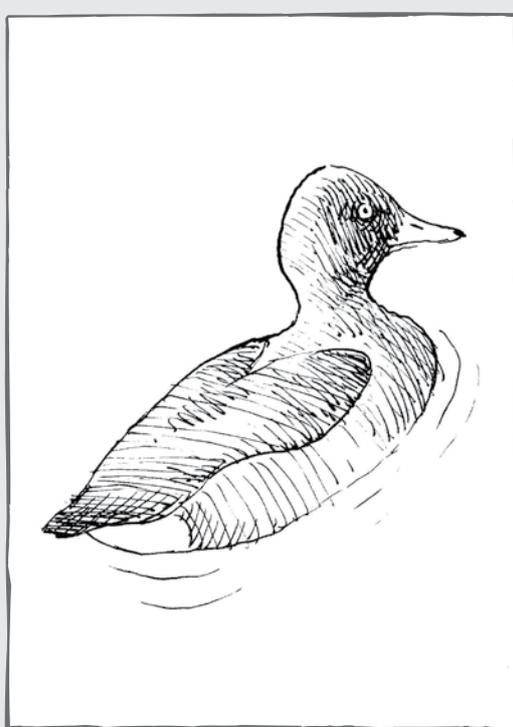
a)



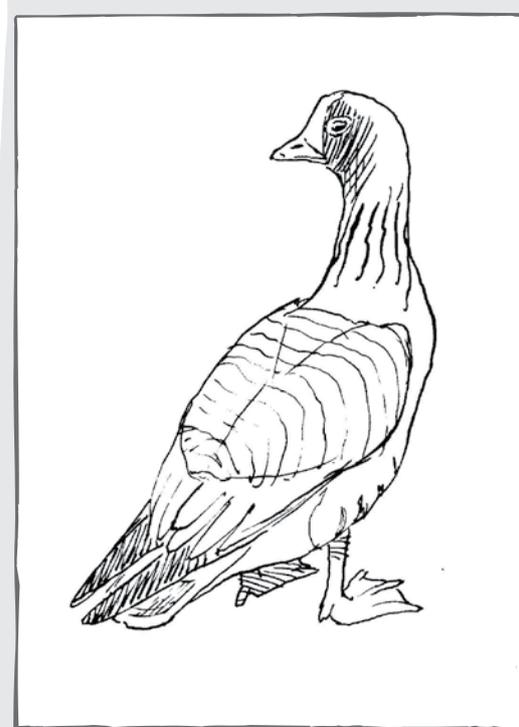
b)



c)



d)

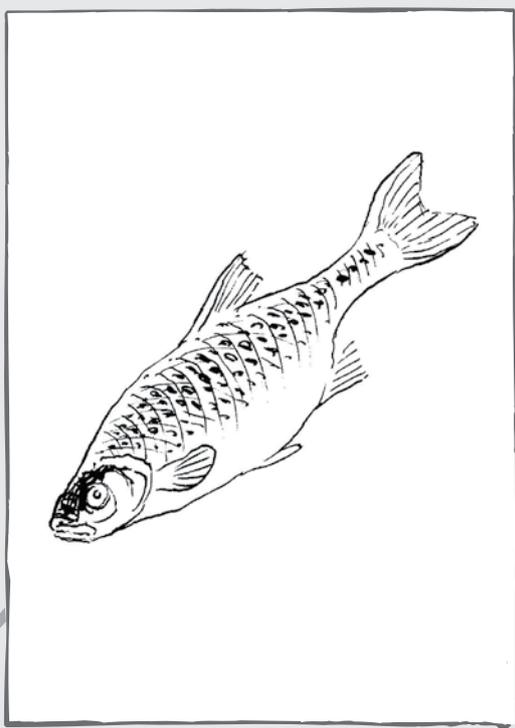


Matches (b) Birds' food

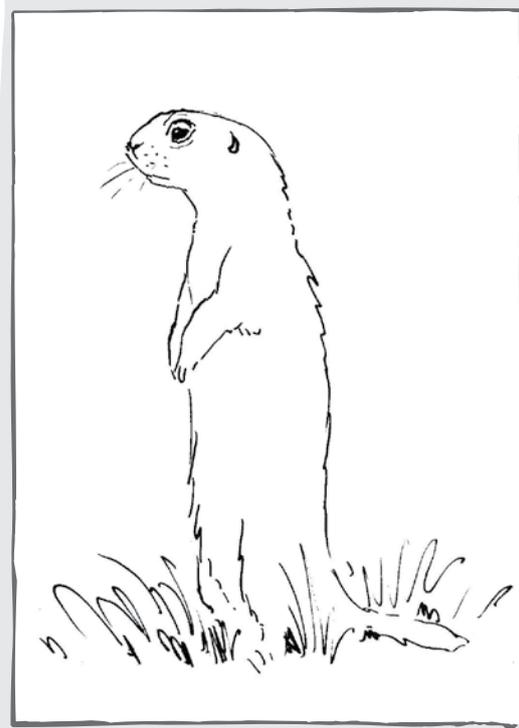


a) Fish b) Ground squirrel c) Aquatic plant d) Grass

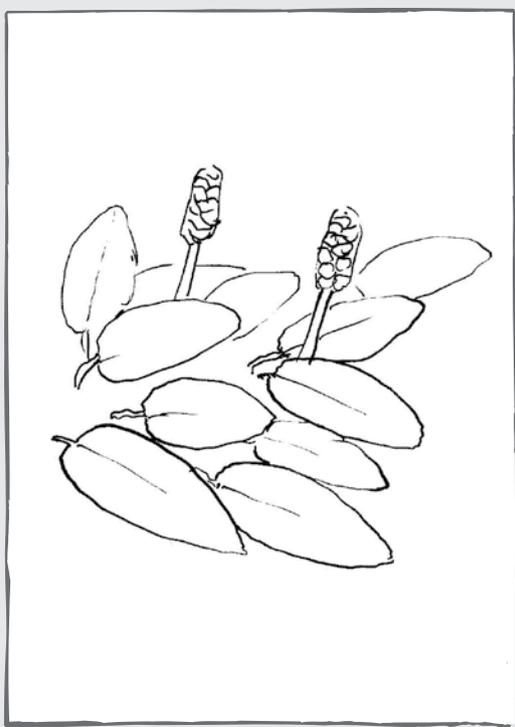
a)



b)



c)



d)



Matches (c) Birds' nests



- a) Nest on islet
- b) Nest on tree
- c) Hidden nest
- d) Nest under no cover

a)



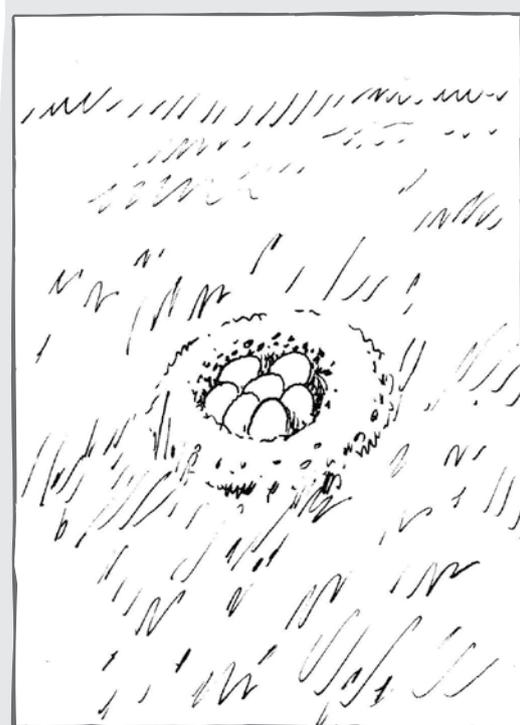
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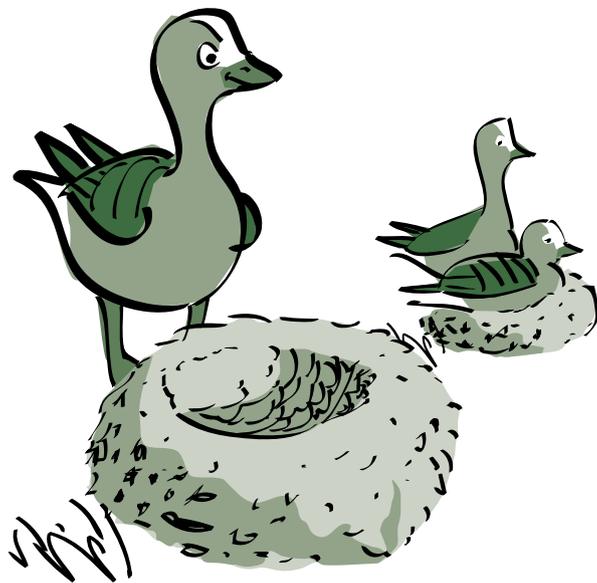


c)



d)





The Lesser White-fronted Goose uncovered



in short:

The children participate in an informative presentation on the evolution of birds, starting their first ancestor, the Archaeopteryx. They make comparisons between humans and the Lesser White-fronted Goose and link their anatomical characteristics to specific functions they perform.

Learning objectives:

To tell the story of bird evolution, to compare common features between the Lesser White-fronted Goose and the human skeleton and to relate the characteristics of the Lesser White-fronted Goose to the functions they serve.



Copies of activity sheets, Power Point presentation "Visit from the past", white paper sheets, pencils



90-120 minutes

Background information

The Lesser White-fronted Goose is a small goose with a body length of just over half a meter and a wing span of 120-135 cm. It is adapted to graze on grass in meadows and swamps with low vegetation. It has relatively strong legs for easy walking, a moderate-length neck that allows easy bending towards the ground. Its toes are joined with membranes suitable for swimming but also walking. Like all geese, it has strong, pointed wings and strong muscles, so it can travel long distances flying day and night while its plumage is waterproof. Its head is small, with a short and conical beak, toothed at the top, suitable for cutting grass. Its eyes are on the side of its head so that it can perceive any danger while grazing.

In Greece, the Lesser White-fronted Goose is found in open, low vegetation areas close to wetlands, such as lakes and swamps and rarely in crop fields. It prefers the wet grasslands and also coastal wetlands and avoids areas with high vegetation (e.g. reeds) that limit its visibility. It mainly feeds with grass of low vegetation found on natural grasslands. It can also eat shoots, leaves and roots from aquatic and other plants and more rarely, seeds and shoots in crops.

The activity

Preparation

- Create teams of 3-4 children
- Reprint "Human and the Lesser White-fronted Goose" and "The anatomy of a Lesser White-fronted Goose" activity sheets in the same number of copies as the teams
- Optionally, reprint the "Resemblance with the Lesser White-fronted Goose" activity sheet in equal copies as the number of children

Introduce the task

Children attend and participate in the informative presentation entitled **“Visit from the past”**. The Archaeopteryx presents the evolution of birds and their different adaptations. The children observe the changes in the anatomy of the birds from the Palaeolithic to the modern times, they are informed about the Archaeopteryx, the anatomy of the birds and especially of the goose.

1. The human and the Lesser White-fronted Goose

The facilitator focuses the attention of the children on the last slide of the **“Visit from the past”** presentation and discusses the similarities between the Lesser White-fronted Goose and the human using points from the drawing of the **“Human and the Lesser White-fronted Goose”** activity sheet, as well as the phrases of the **“Resemblance with the Lesser White-fronted Goose”** activity sheet.

- Share a copy of the **“Human and the Lesser White-fronted Goose”** activity sheet to the teams.
- Encourage the children to compare the figures of the Lesser White-fronted Goose and the human.
- Share white sheets amongst the teams and ask them to note their observations in a certain time (e.g. 10 minutes).
- Teams present their findings in class.
- Read the sentences of **“Resemblance with the Lesser White-fronted Goose”** activity sheet to the children and give them time to choose, without announcing it, the suggestion that suits them.
- Announce to the children that the aim is to identify at least one classmate who shares each of the characteristics that have been read out.
- Children write the number of each sentence (from 1 to 13) on a piece of paper.
- Encourage children to move freely in the class asking as many children as possible if they share the characteristic for each of the sentences on the activity sheet. Next to the sentence number, they write the name of the child who shares this feature with the Lesser White-fronted Goose (e.g. 1: Martin).
- Sit in a circle together with the children and discuss the common characteristics of the children with the Lesser White-fronted Goose.

2. The anatomy of a Lesser White-fronted Goose

The facilitator reminds the children of the previous presentation and invites them to work again in teams. She/he focuses the attention of the children on the fact that there is a very specific reason for the shape, size and way of operation of the species characteristics.

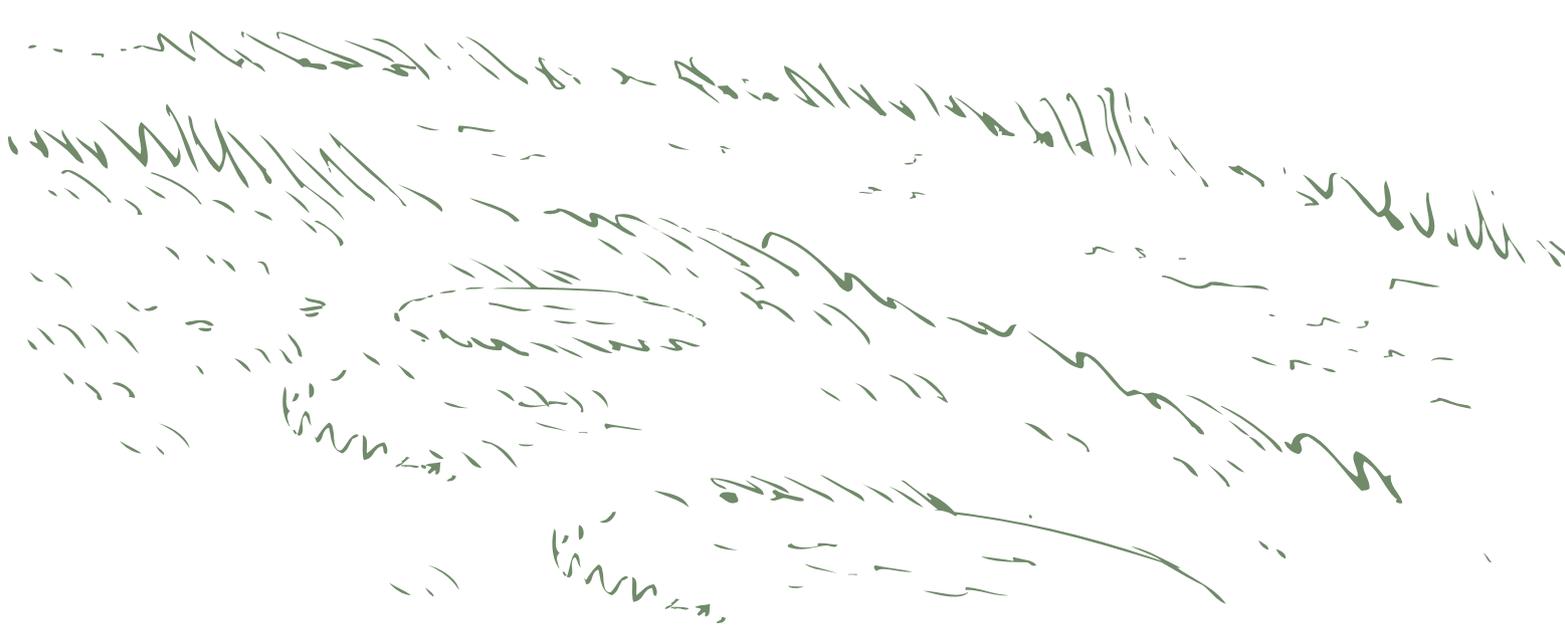
- Share in each team a copy of the activity sheet **“The anatomy of a Lesser White fronted Goose”**.
- Ask the children to create and fill in a table describing the characteristics of the Lesser White-fronted Goose and explain the functions they serve.
- Give an example to children: e.g. the bill of the Lesser White-fronted Goose is strong and can cut grass.
- Each team, after completing their own table, presents it and then discusses their results.

Reflect and evaluate



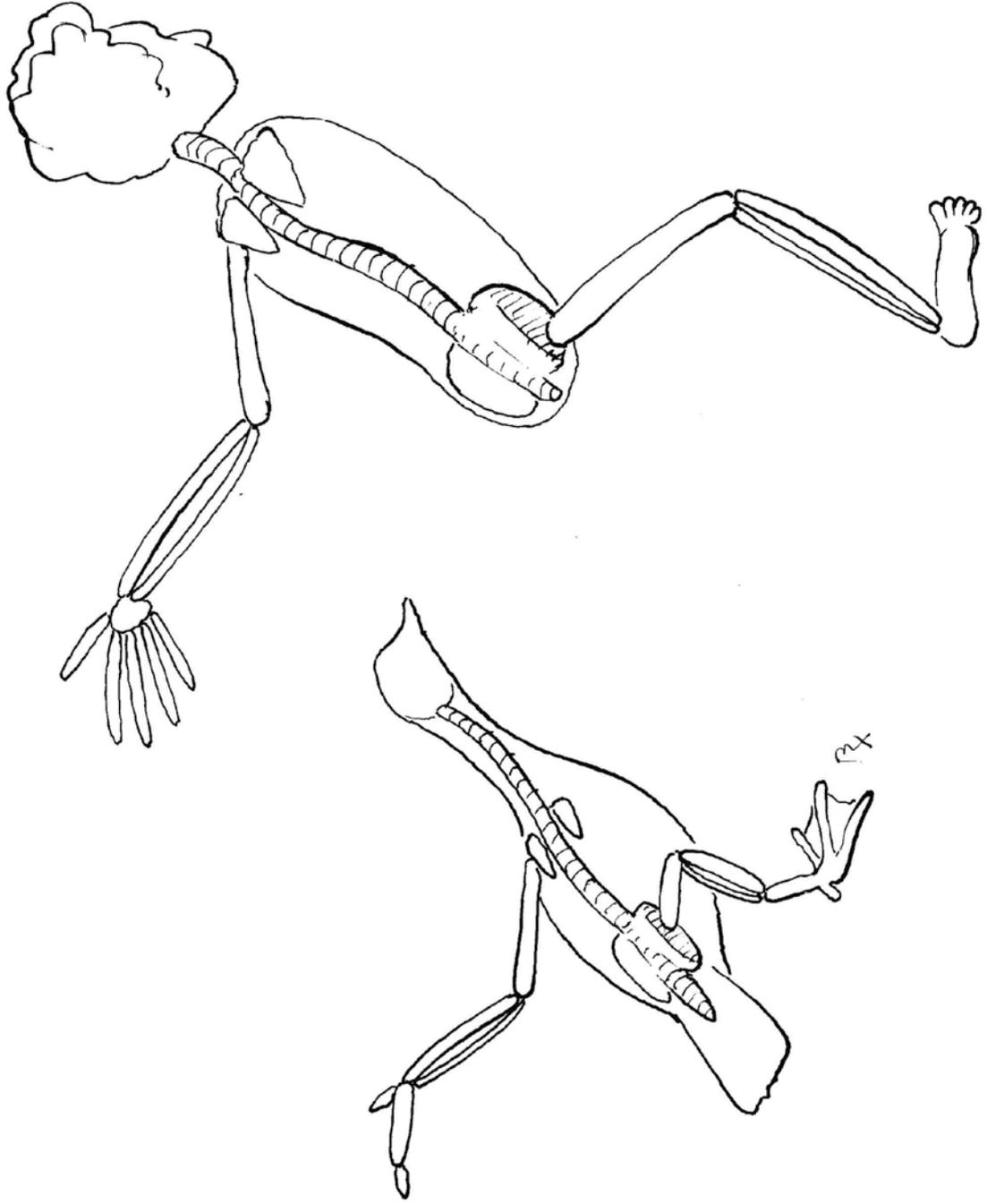
- How are features such as the bill and the wings associated with bird behaviour (search for food, flying, etc.)?
- Which are the characteristics of the Lesser White-fronted Goose that allow it to graze, to travel long distances, to swim, etc.?
- What are our anatomical similarities and differences with the Lesser White-fronted Goose?
- How many common attributes do we have with the Lesser White-fronted Goose?

CHARACTERISTICS	DESCRIPTION	FUNCTION
bill	<i>sturdy with small teeth</i>	<i>to cut grass</i>
neck	<i>medium size</i>	<i>to allow grazing</i>
wings	<i>narrow and long</i>	<i>for long wing beats</i>
toes	<i>webbed</i>	<i>for swimming</i>
eyes	<i>at the sides of the head</i>	<i>to watch for potential predators while grazing</i>





Humah and the Lesser White-fronted Goose



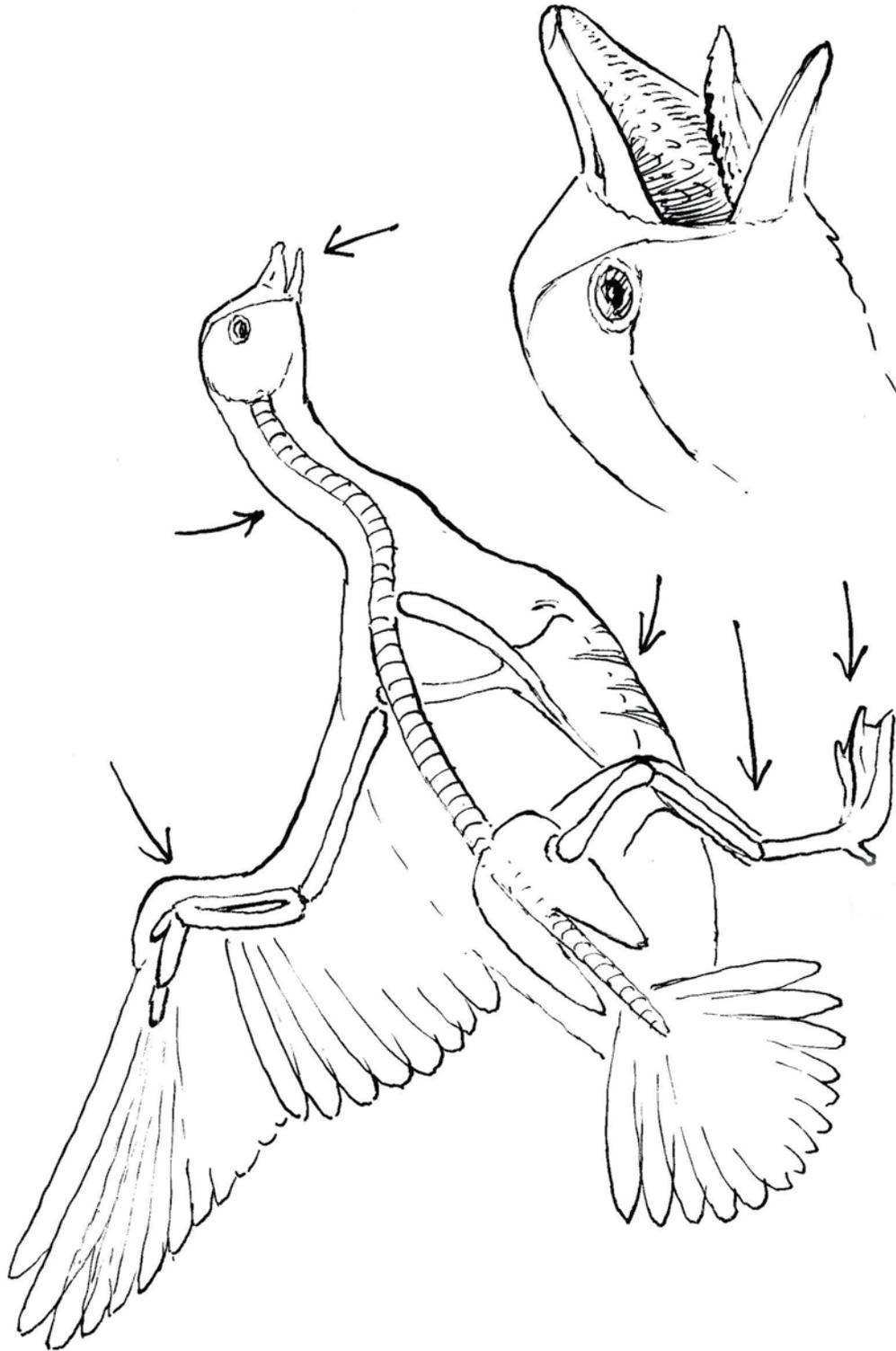
Resemblance with the Lesser White-fronted Goose



- 1. He is among the smallest out of all his cousins!**
(The Lesser White-fronted Goose is among Europe's smallest geese)
- 2. She is always surrounded by friends.**
(The Lesser White-fronted Goose is found in flocks)
- 3. He cannot live far away from the water.**
(The Lesser White-fronted Goose is found in and near wetlands)
- 4. She likes to go to bed early in the evening but if she is hungry she wakes up to eat something.**
(The Lesser White-fronted Goose in the evenings roosts in flocks early but feeds at night especially before embarking on migration)
- 5. Does not like shooting.**
(The Lesser White-fronted Goose, like all birds, perceives hunting as a dangerous activity)
- 6. Loves peace.**
(The Lesser White-fronted Goose is sensitive to disturbance from human activities)
- 7. Has a birthmark on the belly.**
(All Lesser White-fronted Geese have a unique patch on the belly)
- 8. She is afraid of cages.**
(The Lesser White-fronted Goose, like all wild birds, lives freely in nature)
- 9. Can withstand the cold.**
(The Lesser White-fronted Goose is one of the species of birds that withstand low temperatures - the feathers help a lot)
- 10. Likes long trips.**
(The Lesser White-fronted Goose, as a migratory species, is capable of long distance travel)
- 11. He likes to eat greens.**
(The Lesser White-fronted Goose feeds mainly on grass)
- 12. Is very selective with his food.**
(The Lesser White-fronted Goose does not feed with the same variety of food with other geese as it prefers specific grasses)
- 13. Does not like surprises.**
(Although geese are capable of becoming accustomed to something that does not threaten them, they generally do not like the unexpected - e.g. they can get used to cars passing next to them, but once one of them stops and someone gets out, they may be disturbed and fly away)



The anatomy of a Lesser White-fronted Goose



Masks and geese



in short:

Children make masks of the Lesser White-fronted Goose and the Greater White-fronted Goose and try to distinguish one from another through a movement game.

Learning objectives:

To distinguish the Lesser White-fronted Goose from the Greater White-fronted Goose, to understand the difficulty of this distinction and to define the colours of the Lesser White-fronted Goose.



Copies of activity sheets, paints, scissors, glue, rubber, stapler (optional), A4 cardboard (optional)



45 minutes

Background information

The head of the Lesser White-fronted Goose is small, with a short, conical, pink bill. It has a distinctive white blaze at the base of the bill that extends on the forehead. Its distinctive feature is a yellow ring around the eyes. It looks very much like a Greater White-fronted Goose and it's very difficult to tell them apart. Often one or a few Lesser White-fronted Geese are mixed in flocks of other geese (in Greece, mainly Greater White-fronted Geese) that are looking for food and it takes a lot of experience and practice for someone to be able to distinguish the two species. An adult Lesser White-fronted Goose in relation to an adult Greater White-fronted Goose: a) is smaller in size, b) has a yellow ring around the eye, c) the white area at the base of the bill and the front extends more backwards and upwards, d) its bill is smaller and triangular, e) is generally darker.

The Greater White-fronted Goose was named after the white mark above its bill, on its forehead, which separates it from the other geese. The Lesser White-fronted Goose is smaller and slightly different from the Greater White-fronted Goose.

The activity

Preparation

- Reprint "Masks" activity sheets in equal number with the number of children (total)
- Optionally, glue to A4 cardboard for greater durability

Introduce the task

The facilitator describes the external characteristics of each species and points out that although they are very similar to each other, they are two different species. At this point, children can formulate their own assumptions about the origin of the names Greater White-fronted Goose and Lesser White-fronted Goose. The aim is for the children to get active and remember the names of the geese.

1. Mask creation

The facilitator explains to the children that they will make goose masks and in particular, Greater White-fronted Goose and Lesser White-fronted Goose masks. Children can freely choose one of the two types.

- Share copies of the “Masks” sheet amongst the children.
- Children paint the parts of the mask according to the instructions.
- Cut the outline of the mask and bill and the inside of the mask’s “eyes”.
- Stick the end of the bill with the adhesive (glue/tape) and stick it on the mask according to the instructions.
- In the small holes on the sides of the mask, pass an elastic band through and tie it with a knot. Alternatively, attach it to the mask with a stapler. The mask is ready!
- Each child marks their name on the back of the mask.

2. Find the Lesser White-fronted Goose

The facilitator focuses on the difficulty of distinguishing between the two species and the dangers that this similarity can have to the Lesser White-fronted Goose. The Greater White-fronted Goose is huntable while the Lesser White-fronted Goose is a threatened species whose hunting is forbidden. The difficulty in distinguishing between them is also the cause of the hunting ban for the Greater White-fronted Goose in areas where the Lesser White-fronted Goose is present in Greece. The facilitator informs the class that they will take part in a movement game and prepares the classroom accordingly.

- A small team of children are invited to be birdwatchers. Cyclically, all children become birdwatchers. Their aim is to distinguish the Lesser White-fronted Geese from the Greater White-fronted Geese.
- The rest of the children wear their masks and move around like geese (fly, look for food, etc.).
- The flock of geese may initially be stationary on one side of the room and then identification can become more challenging. Birdwatchers are asked to distinguish the species as:



- Flying (children are moving around)
- Grazing (the children sit on their knees)
- Roosting (the children sit on their knees and hide their heads)

- As soon as the children locate all of the Lesser White-fronted Geese by calling out, for example, children’s names, other children are invited to become birdwatchers and so on.

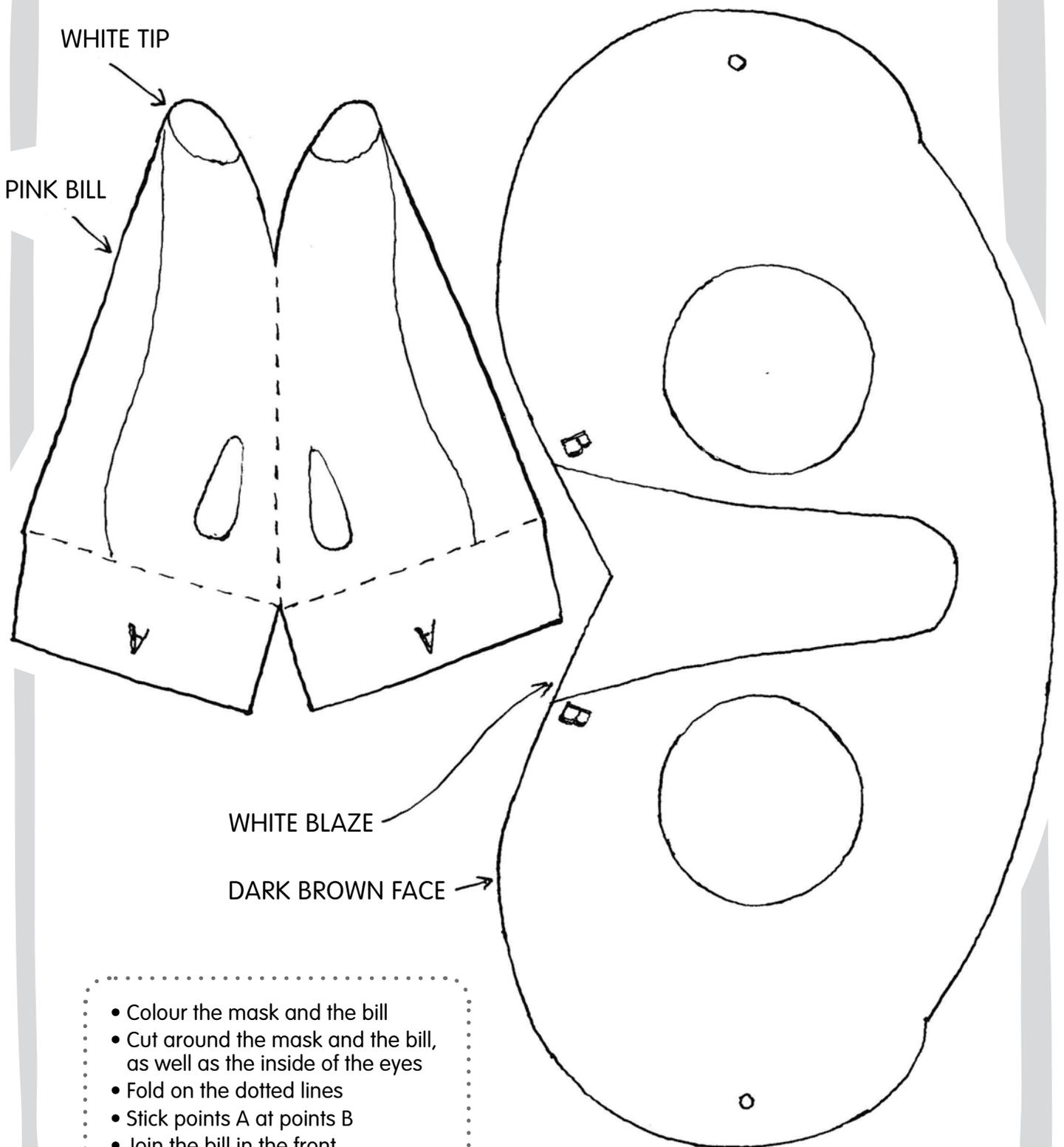
Reflect and evaluate



- *What are the differences between the two species?*
- *How easy or difficult is the distinction between them?*
- *What are the difficulties in distinguishing between them in nature?*
- *How can we protect the Lesser White-fronted Goose from accidental shooting?*

Mask: Greater White-fronted Goose

5

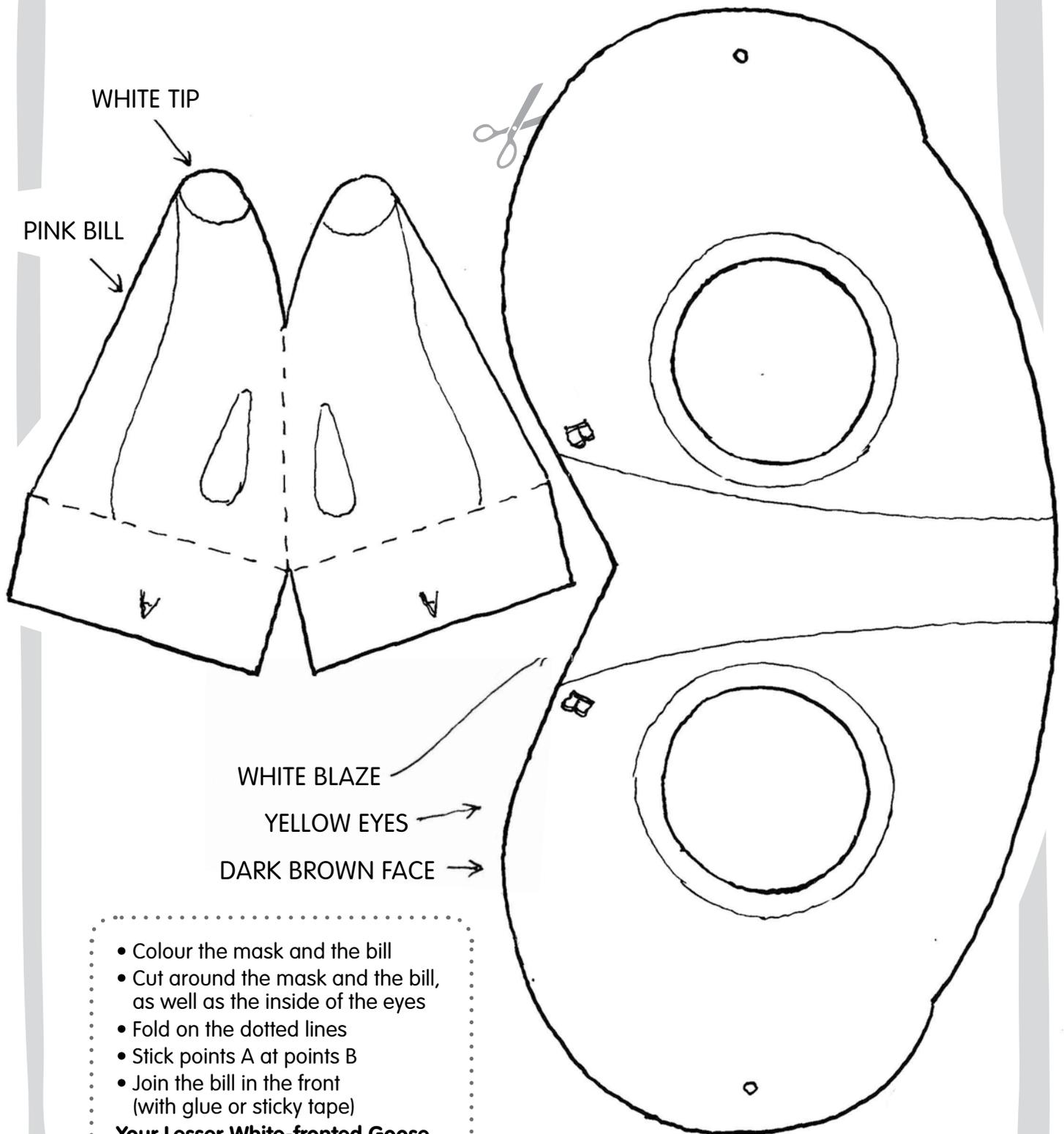


- Colour the mask and the bill
- Cut around the mask and the bill, as well as the inside of the eyes
- Fold on the dotted lines
- Stick points A at points B
- Join the bill in the front (with glue or sticky tape)

Your Greater White-fronted Goose is ready!

Mask: Lesser White-fronted Goose

5



- Colour the mask and the bill
- Cut around the mask and the bill, as well as the inside of the eyes
- Fold on the dotted lines
- Stick points A at points B
- Join the bill in the front (with glue or sticky tape)

Your Lesser White-fronted Goose is ready!

Where we belong



in short:

The children clarify the concepts of “I want” and “I need” and assign animals and insects to the habitat appropriate to them, according to their needs.

Learning objectives:

To separate biological from indirect needs, to match specific species with habitats, to track changes in land use, to distinguish wet grasslands from other ecosystems and to identify the habitat of the Lesser White-fronted Goose.



Copies of activity sheets, pencils, scissors, white paper sheets, sticky tape



90 minutes

Background information

Anybody who takes walks in nature and observes the animals and plants will have noticed that reeds do not grow on the tops of the mountains and that seabirds don't live in the steppes. Each type of animal is adapted and performs best in a particular ecosystem/environment (climate, habitat, food, predators). This means that an animal is adapted to the habitat where the animal lives more than others that may have a similar lifestyle. A species that would try to “move in” to a foreign habitat would not be able to compete effectively with the native species when it comes to searching for food, avoiding predators or use nesting places.

The Lesser White-fronted Goose prefers low-vegetation wet grasslands. It is located in fields and meadows near wetlands such as lakes and marshes. It avoids lakes with dense vegetation (rich in e.g. reeds) as they don't allow good visibility. It needs open spaces to be able to control whether a potential threat is approaching the flock (animals or humans).

The activity

Preparation

- Create teams of 4-5 children
- Reprint “Everyone...” and “...at their home!” activity sheets in an equal number with the teams

Introduce the task

The facilitator and the children discuss the needs of people. She/he encourages children to think of their home (in the broadest sense of the term - as the place where we live, eat, play, sleep, discuss, etc.) and freely report what are the things they need. The debate extends to the difference between “I want” and “I need”.

1. Wants and needs

The facilitator urges children to report the things they need in their daily lives and records their responses on the board. The aim is to conclude what the vital importance of each habitat is for the species that uses it, as it serves specific biological needs.

- Distinguish the responses of the children into the two categories by marking a “W” (I want) and an “N” (I need), respectively.
- Conclude to the basic needs: food, water, shelter, rest, companionship, cleanliness.
- Encourage children to report some of the animals living near us (e.g. in the neighbourhood) and mark them on the board (e.g. dog, cat, sparrow, pigeon, lizard, mouse, worm).
- Urge children to recognize what these animals need to in order to live by taking into account the basic needs they have previously identified (e.g. food - mice, big insects, seeds, grass, fruit, water).
- Ask the children to identify where they can find what they need (e.g. tree, house, soil, garden).
- Focus on the concept of habitat and the close relationship each species has with its own habitat.

2. Matching species and habitats

The facilitator reminds the teams that some species can only live in one habitat while there are species that can be found in more than one.

- Distribute one copy of the **“Everyone...”** and **“...at their home!”** activity sheets to each team. Different teams can work with different habitats.
- Encourage children to make assumptions about the habitat of each species based on their anatomical and morphological characteristics.
- The children match the species of animals and insects on the activity sheet **“Everyone...”** with the ecosystems from the activity sheet **“...at their home!”**.
- Ask children to cut out the illustrations of the species and stick them to their respective habitat designs.
- Each team presents their results i.e. why they chose the particular habitat for the species and why the other habitats were rejected.
- The other teams comment depending on their own matches.
- Uncover the right answers and correct them where necessary.

Reflect and evaluate



- *Where does the Lesser White-fronted Goose meet its needs?*
- *What is the difference between our own habitat and that of the Lesser White-fronted Goose?*
- *What changes could this habitat undergo that would make it no longer suitable for the Lesser White-fronted Goose?*
- *What can the Lesser White-fronted Goose do if its habitat changes?*

One step further

The habitats depicted in the illustrations are sequenced; they are adjacent ecosystems. The facilitator can choose one of the habitats and discuss it with the children:



- *What happens if one of them is destroyed?*
- *How will the species that exist in it be affected and how will other habitats be affected?*
- *Will other ecosystems be affected in the same way? Will all species be affected in the same way?*

ANSWERS: Matching habitat types

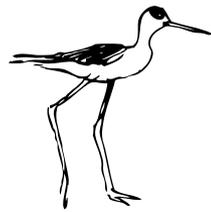
- 1: Open water with a reedbed:** Common Pochard, Marsh Harrier, Water Rail, Great Reed Warbler, water frog, Otter, dragonfly, grass snake
- 2: Shallow water with salt marsh:** Little Egret, Greater Flamingo, Black-winged Stilt, Eurasian Curlew, Yellow Wagtail
- 3: Wet grassland:** Little Egret, White Stork, Lesser White-fronted Goose, Marsh Harrier, Common Snipe, dragonfly, water frog
- 4: Riparian forest:** Night Heron, Penduline Tit, Hooded Crow, water frog, caspian turtle, grass snake, Otter, stonefly
- 5: Intensive crops and settlements:** White Stork, Hooded Crow, House Sparrow, Common Vole, Barn Swallow



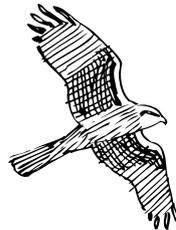
Everyone...



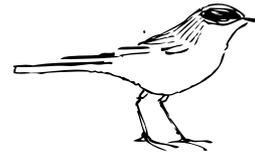
Pochard



Black-winged Stilt



Marsh Harrier



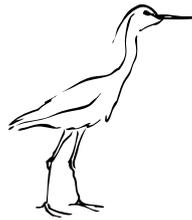
Yellow Wagtail



Hooded Crow



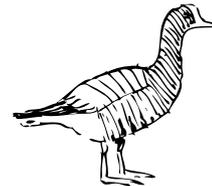
White Stork



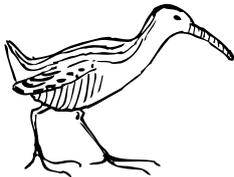
Little Egret



Snipe



Lesser White-fronted
Goose



Water Rail



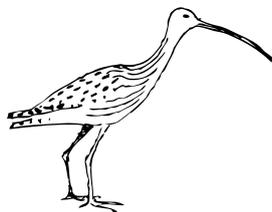
Night Heron



House Sparrow



Barn Swallow



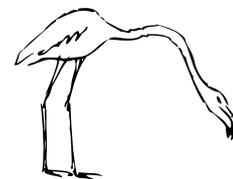
Curlew



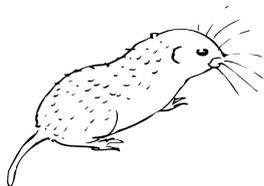
Great Reed Warbler



Penduline Tit



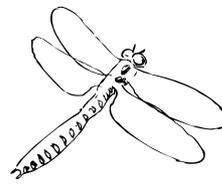
Flamingo



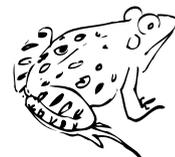
Common Vole



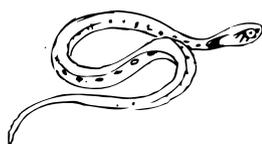
Otter



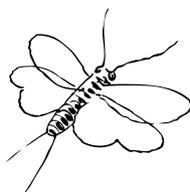
Dragonfly



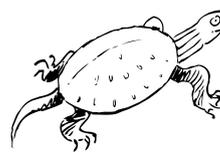
Water frog



Grass snake



Stonefly



Caspian Turtle

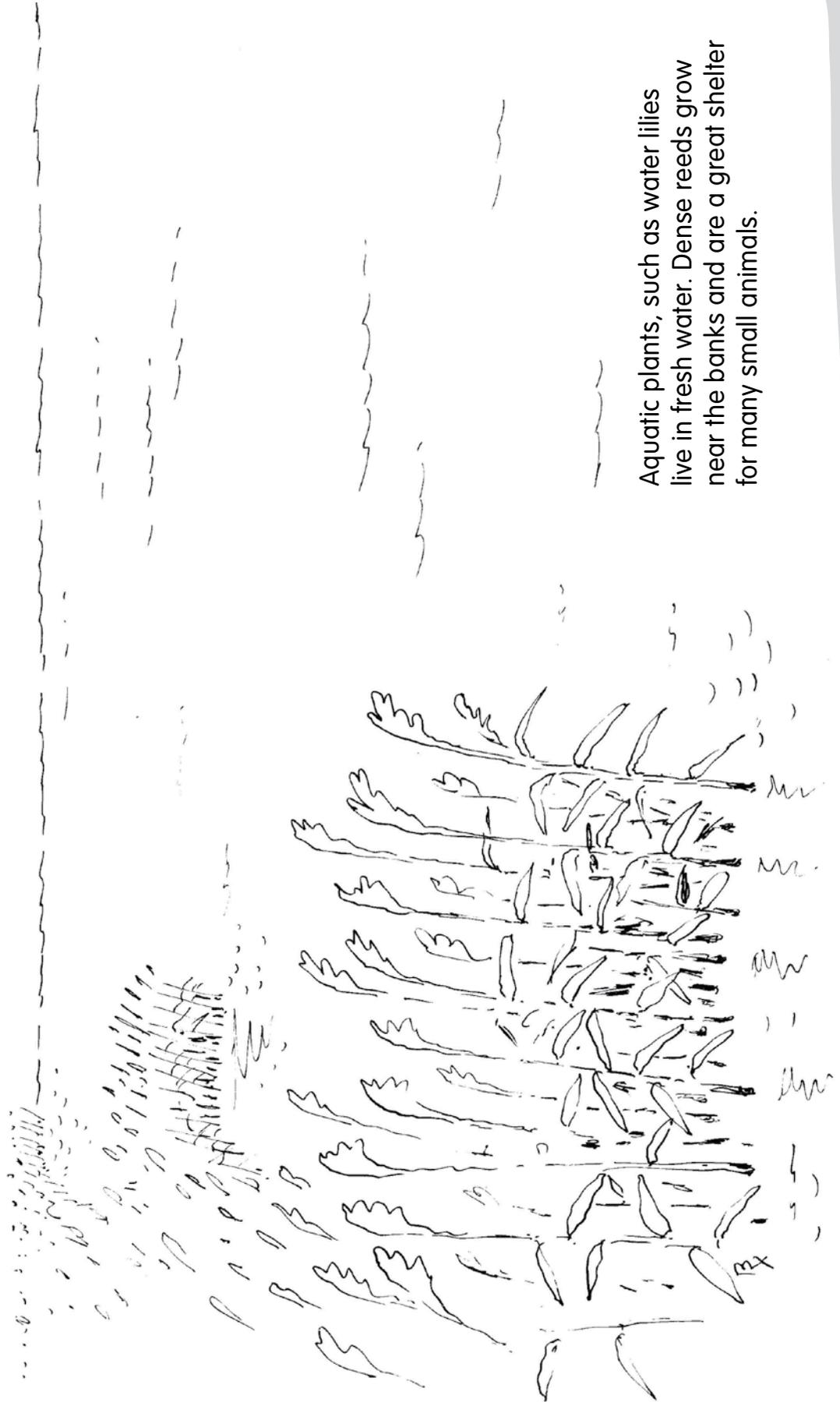


Human

...at their home (a)



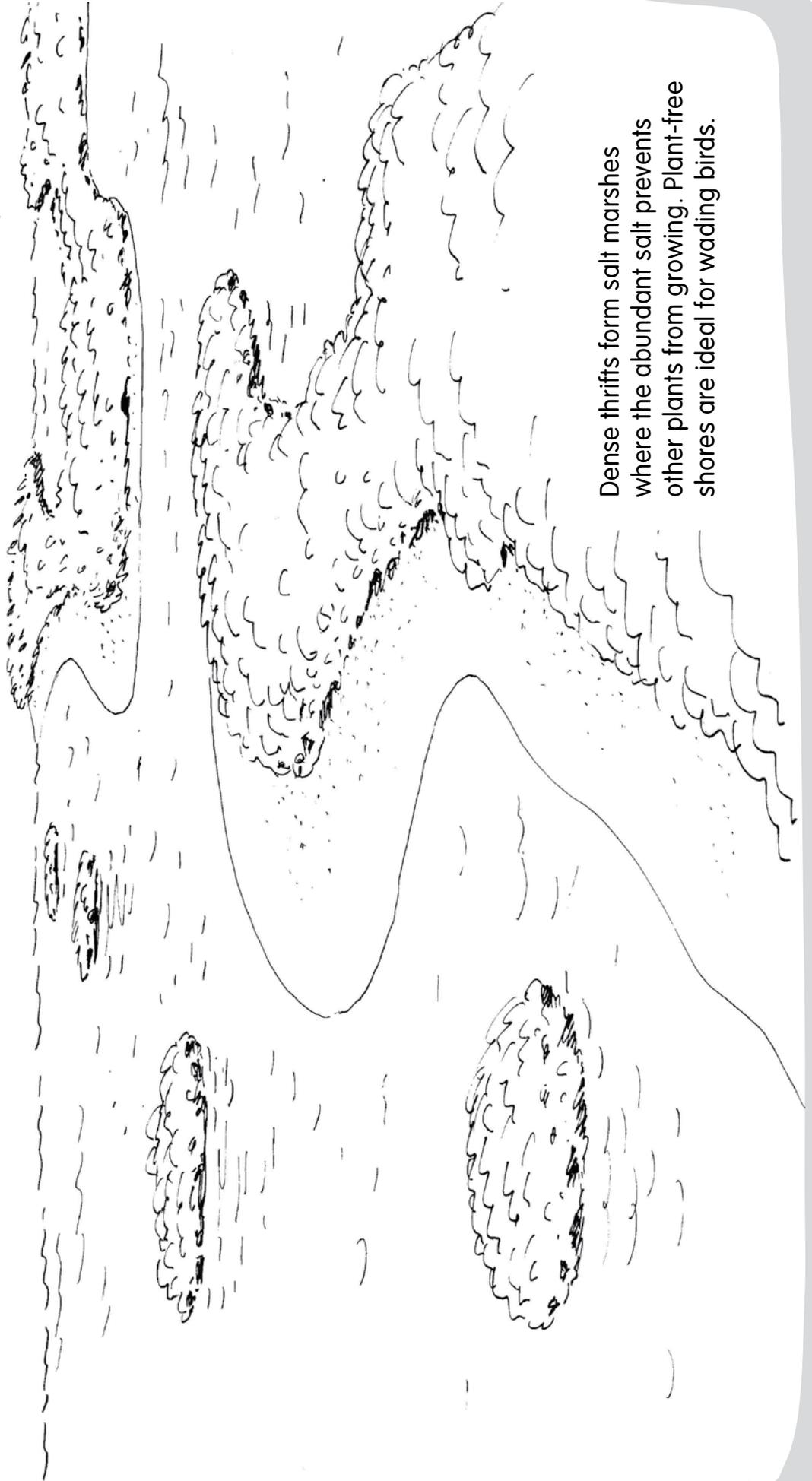
1. Reedbed and open water



Aquatic plants, such as water lilies live in fresh water. Dense reeds grow near the banks and are a great shelter for many small animals.

...at their home (b)

2. Shallow water and salt marsh



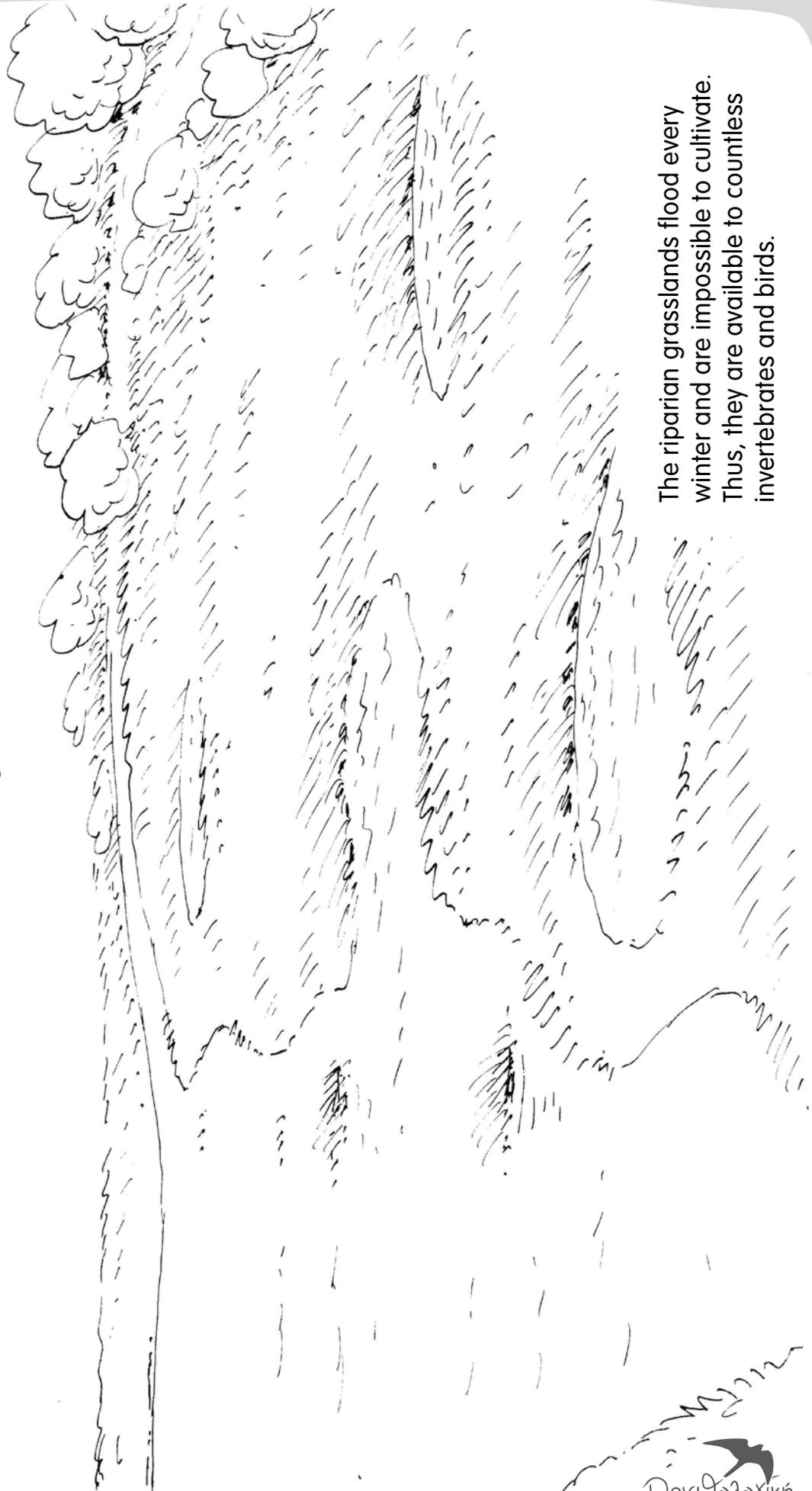
Dense thriffs form salt marshes where the abundant salt prevents other plants from growing. Plant-free shores are ideal for wading birds.



...at their home (c)



3. Wet grassland

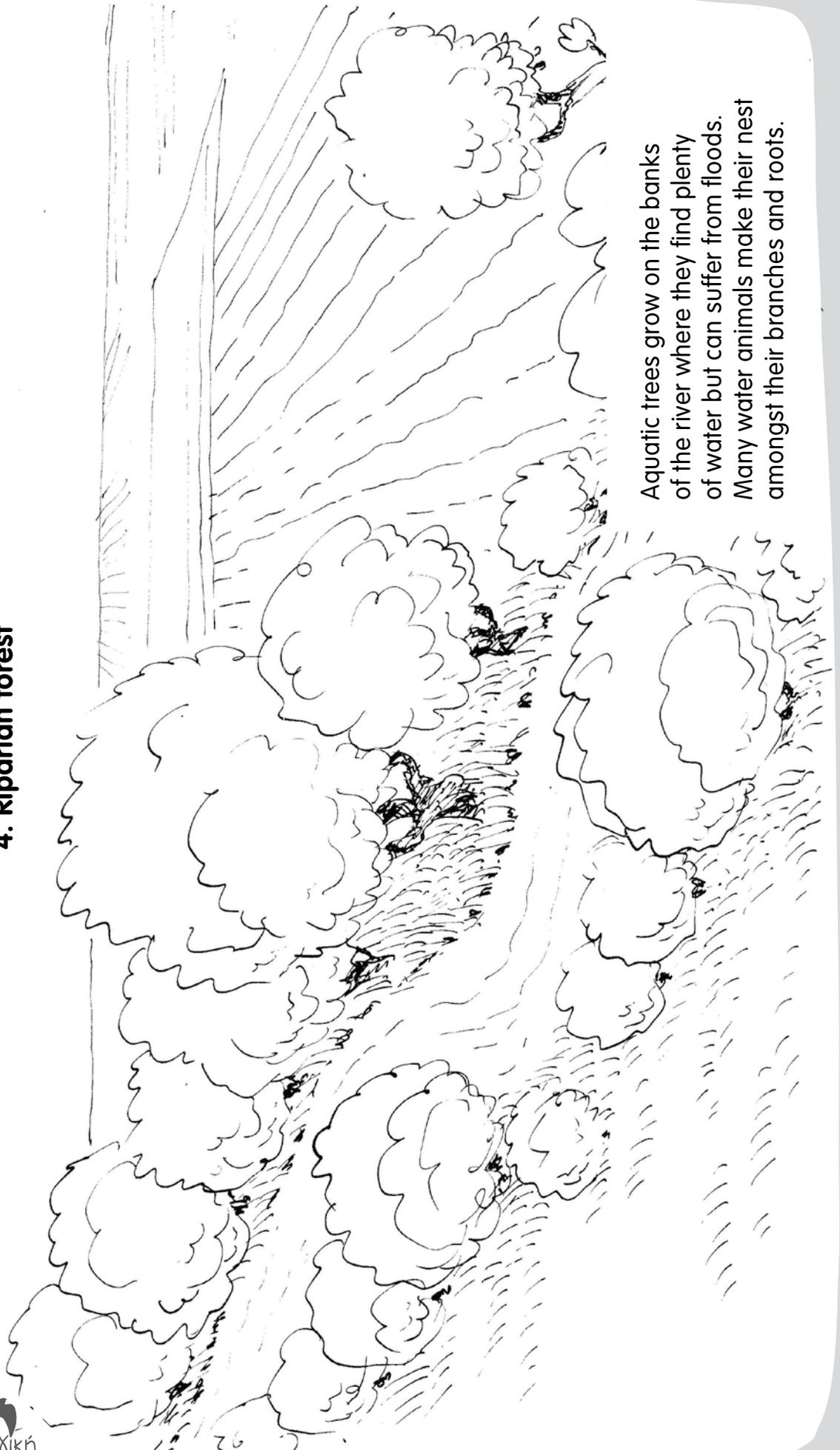


The riparian grasslands flood every winter and are impossible to cultivate. Thus, they are available to countless invertebrates and birds.



...at their home (d)

4. Riparian forest

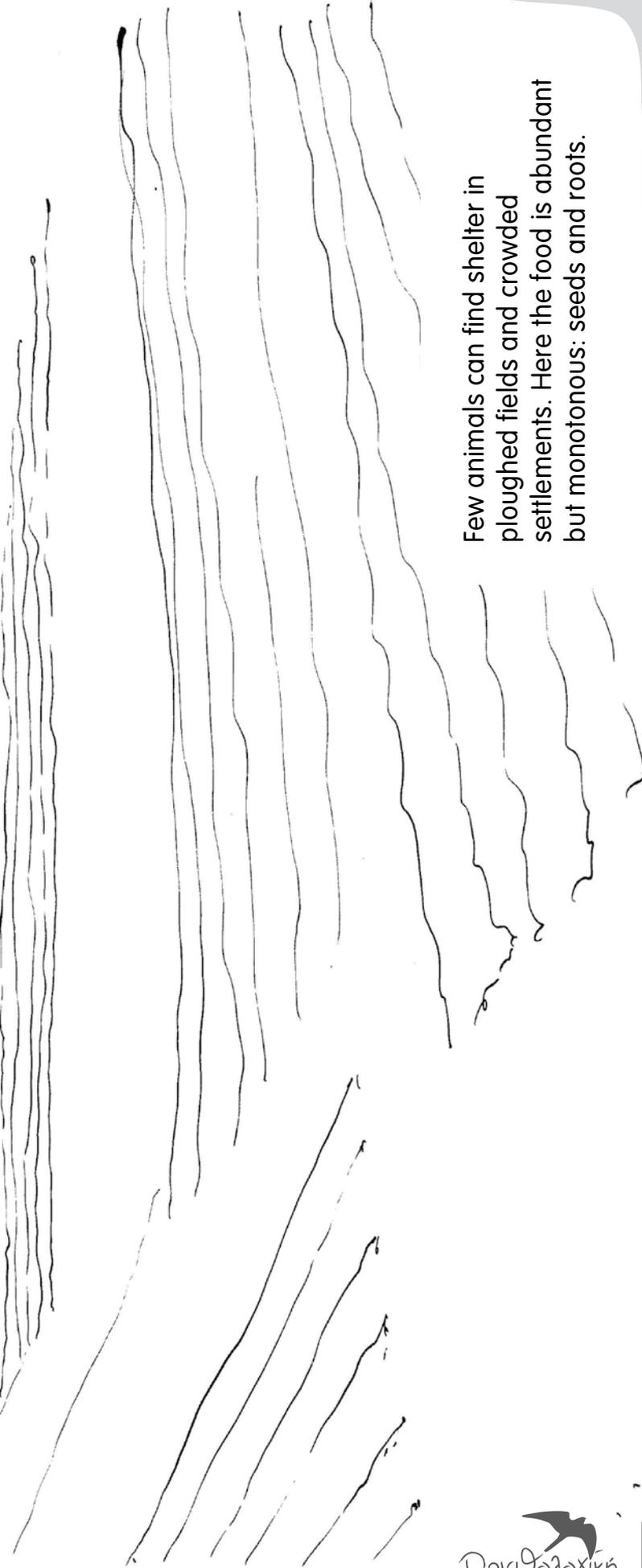


Aquatic trees grow on the banks of the river where they find plenty of water but can suffer from floods. Many water animals make their nest amongst their branches and roots.

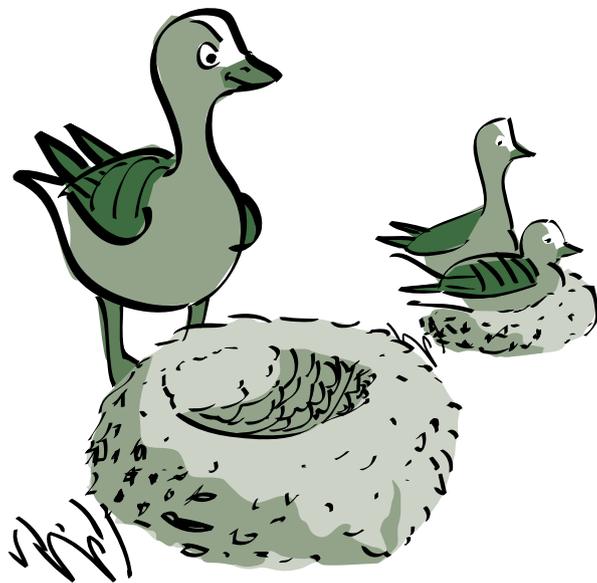
...at their home (e)



5. Intensive crops and settlements



Few animals can find shelter in ploughed fields and crowded settlements. Here the food is abundant but monotonous: seeds and roots.



One for all and all for one



in short:

Children assisted by a series of guiding questions and improvisational actions, experiment with the different flying patterns of birds. They also make three-dimensional paper Lesser White-fronted Goose constructions (mobile).

Learning objectives:

To understand the advantages of different flying patterns, to familiarize themselves with how birds fly and to interpret the way geese fly.



Copies of activity sheets, pencils, staples, paints, scissors, glue, fishing line, A4 cardboard (optional)



90 minutes

Background information

Migration is the *en masse* movement of birds from the breeding areas towards the areas where they will overwinter (autumnal migration) and vice versa from the wintering areas towards the breeding areas (spring migration). The driving force behind migration is the need to ensure favourable climatic and ecological conditions for food and reproduction.

Many bird species nesting in northern regions near and in the Arctic Circle move south during autumn to avoid low temperatures and have more food available (e.g. ducks, geese, swans, waders). Other birds migrate in the spring to temperate areas where they have reduced competition for food and nesting places (e.g. swallows, bee eaters, Golden Orioles and Hoopoes). Some birds perform seasonal movements but on a much smaller scale. The Black Redstart, for example, is very common in Greece in winter at low altitudes even in the cities, but in the spring it moves mainly uphill to the mountains where it nests.

Different bird species follow different strategies during their migratory journey. The geese, for example, form teams and fly in a V formation. This formation helps to make the journey less tiring. The first bird in the formation creates a favourable buoyancy condition for the subsequent birds that follow. In this way, birds save up to 15% of the energy they would spend if they made the trip alone or randomly scattered and could eventually travel for longer. Of course, the goose at the front of the formation gets tired faster and that is why, from time to time, another bird from the flock takes its place. Flying in formation still allows birds to see each other, communicate, maintain coordination, avoid conflicts and teach younger individuals the migration route.

The activity

Preparation

- Create teams of 8-9 children
- Reprint “**Lesser White-fronted Goose in flight**” activity sheets on equal copies as the children
- Optionally, glue to A4 cardboard for greater durability

Introduce the task

The facilitator encourages children to recall their existing knowledge on bird migration. She/he uses the introductory information and questions such as:



- *Can you mention some migratory birds? What are they called and where do they come from? When?*
- *Are all birds migrating at the same time from the same countries?*
- *Are birds migrating within the same country from one region to another?*
- *Do you think all birds follow the same path? Why?*
- *Do only birds migrate? Do you know other animals that do the same?*

1. A flock of birds

The facilitator informs the children how different species of birds travel in a different way and how children as a team will simulate the journey of a flock!

- Encourage children to think that each team is a big flock.
- Each team is asked to think about the best way to travel as a flock to reach its destination safely and with the least amount of losses.
- Ask the teams to answer the following helpful questions:



- The trip is long and we cannot take food with us. What should we do before the start of our long and very tiring journey?
- In what form will we fly so that we do not touch each other but have an aerodynamic shape to fly faster?
- Who will get ahead, who in the middle, who in the end? By which criteria?
- Will there be one or more of us in the front? Will the front position change? If so, who will take the lead next?
- Can the ones in the end of the flock do something to help the ones in the front?

- Remind the teams that a) our goal is to get everyone to our destination, b) cooperation is essential for the success of the entire team, c) we pay attention to the coordination of movements within the flock.
- Teams act out their voyage silently.
- Discuss how each team is flying: What helped each team in flying? What has made the journey harder?

2. Geese: a close knit family!

The facilitator explains and presents to the teams the unique way the geese fly using the information provided in the activity introduction. She/he then calls the children to fly into goose flocks.

- Point out to the children that flocks do not have one leader, but depending on which goose is the strongest and less tired one, it “drives” each time.
- Mention as an example for the V movement, the runners and the cyclists, who move behind each other. Thus, those who are behind utilize the air flow created by the runner or the cyclist in front of them.
- Each team forms a “V”: one in front, two behind the first, two behind the other but more spaced and so on, leaving as much spacing as to create a “V” shape.
- The position of the “guide” of the flock alternates cyclically among the children.
- The “guide” explains through a particular move what is their own strength (they open the wings wide, they are tough and do not get tired, they can see very well far away, they are not afraid of the dark and fly easily at night, etc.) giving children the ability to express different types of strength and power.
- Ask the children to present a brief act. Each team represents a journey involving a) the beginning of the journey (what they do before leaving), b) at least one resting position, c) an injury or tiredness of a bird from the flock, d) a change of the guide of the flock, e) the end of the journey.

3. A flock of Lesser White-fronted Geese in our class

The facilitator informs children that they will build three-dimensional paper Lesser White-fronted Goose constructions using the instructions of the sheets **“The Lesser White-fronted Goose in flight”**.

- Share a copy of the **“The Lesser White-fronted Goose in flight”** activity sheets with each child.
- Children paint the body and the wings of the Lesser White-fronted Goose according to the instructions and cut out on the corresponding outlines.
- Put glue on the back of Lesser White-fronted Goose’s body and stick the two sides together, thus making the body of the Lesser White-fronted Goose.
- Stick the wings on the body of the Lesser White-fronted Goose with the wings pointing backwards to the point indicated by the instructions. The three-dimensional Lesser White-fronted Goose is ready!

Reflect and evaluate



- *Why does each species choose a different way of flying?*
- *What are the advantages of flying in a “V” formation?*
- *What can make the migratory journey of a bird difficult?*

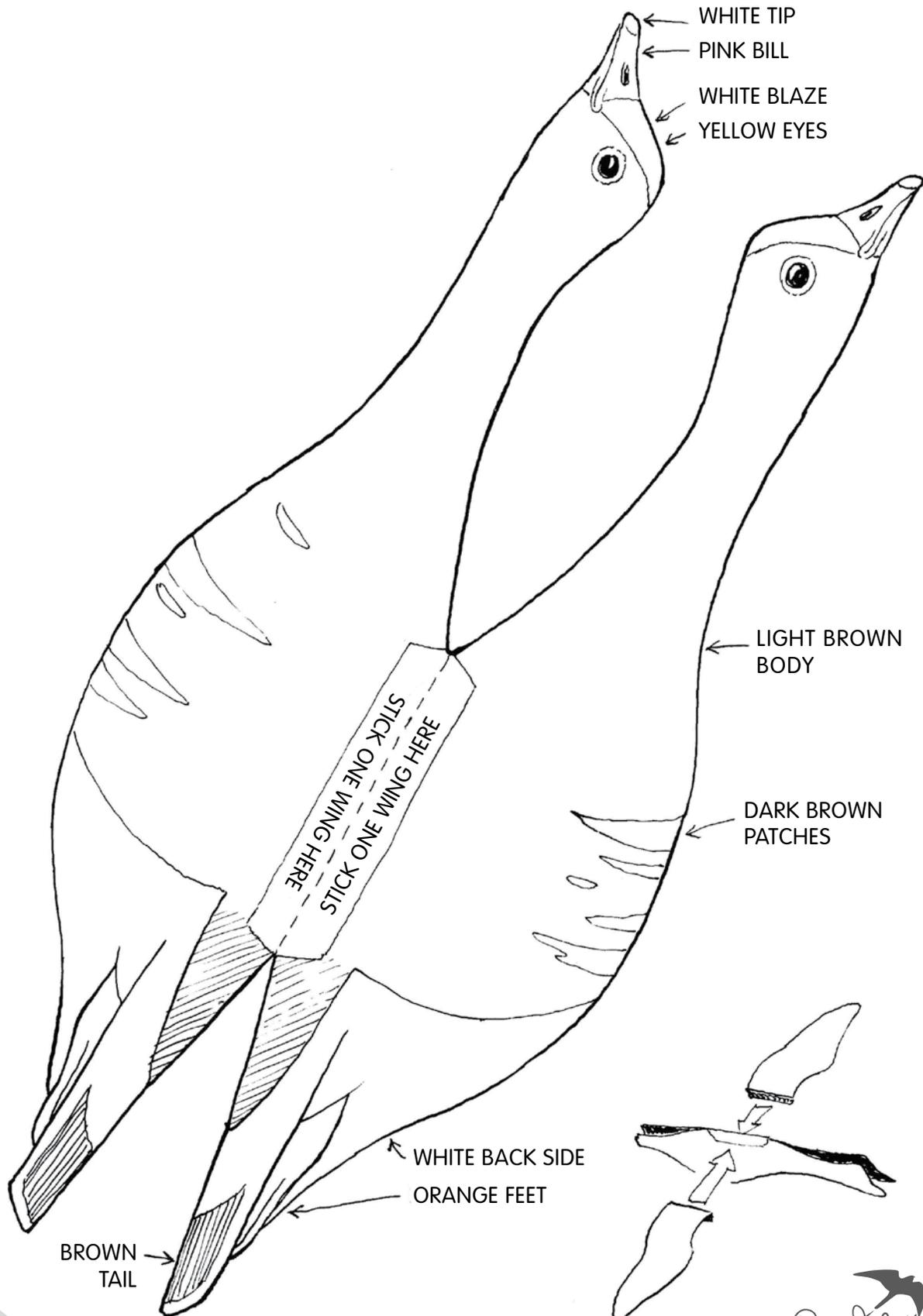
One step further

- If they want, children can thread a fishing line from the wings and the body of the Lesser White-fronted Goose and tie the lines between them. In teams, they join together the lines and put on pieces of wood to make 3-4 flocks of Lesser White-fronted Geese. Finally, they hang their constructions from a high point in the classroom.

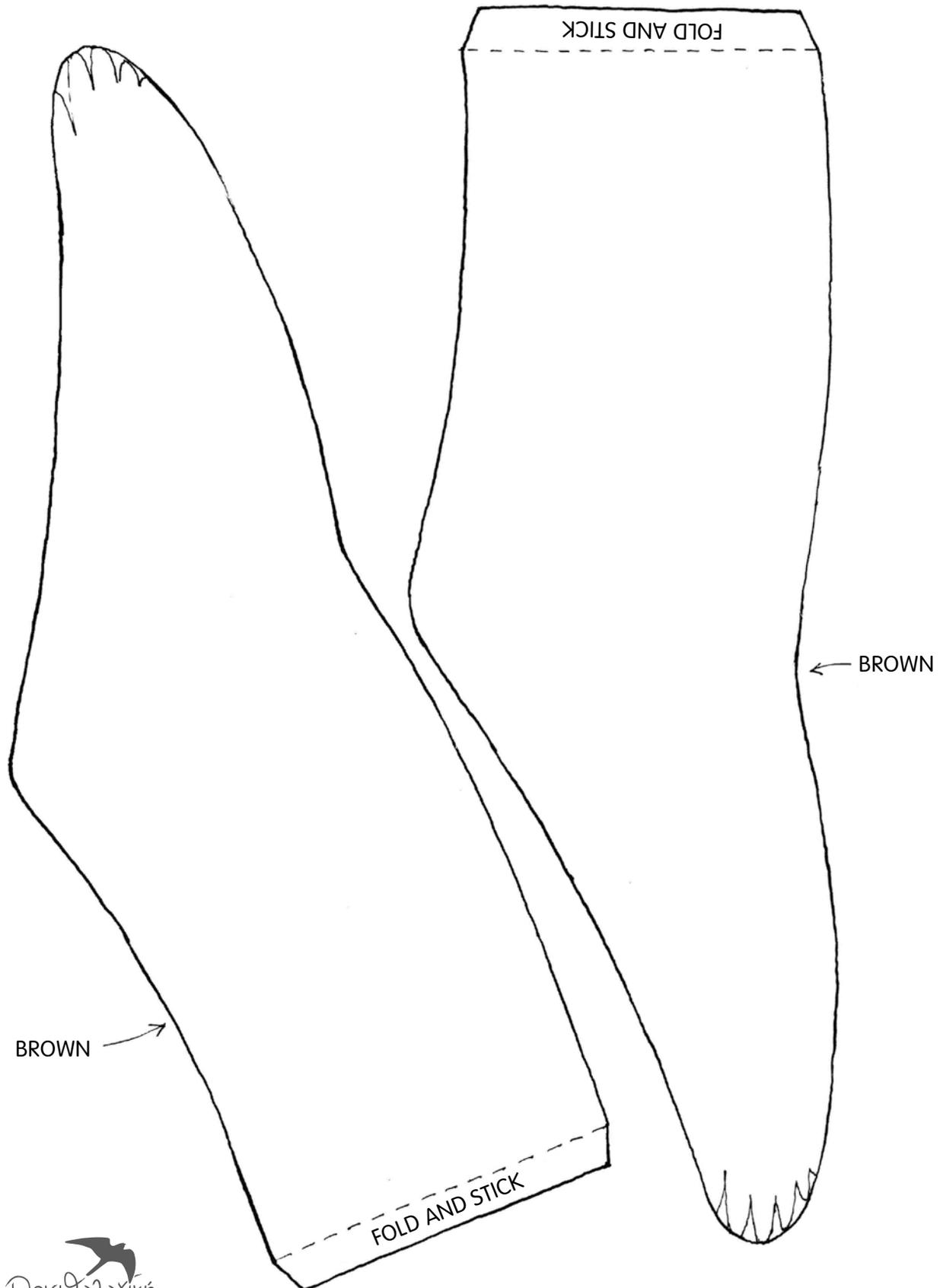
- Children can read the illustrated story **“A goose no less... a Lesser White-fronted Goose”** that narrates the migration journey of Tomas, a young Lesser White-fronted Goose. The facilitator can use the story as preparation for the following activity.



The Lesser White-fronted Goose in flight (a)



The Lesser White-fronted Goose in flight (b)



A story about the Lesser White-fronted Goose



in short:

The children follow the journey of the Lesser White-fronted Goose by placing in the right order illustrated cards with key snapshots of the goose's great annual migration journey and present their own version of the life of the Lesser White-fronted Goose through a theatrical performance.

Learning objectives:

To narrate the journey of the Lesser White-fronted Geese, to describe the threats they face, to report the countries the Fennoscandian population of the species migrates through, to get acquainted with the concept of migration.



Cards of the "The journey of the Lesser White-fronted Goose" activity sheets, copies of the activity sheets, scissors, pencils, map of Eurasia



75 minutes

Background information

The Lesser White-fronted Goose nests in late spring in the tundra of Arctic and Subarctic Scandinavia and Russia and in winter migrates to southern regions, from the Balkans, the Black and the Caspian Sea and even China. The Fennoscandian population that breeds in northern Scandinavia spends the winter in Greece.

After breeding during summer in Finnmark, northern Norway, the Lesser White-fronted Geese begin their journey around late August. The population will split and follow two different migratory routes towards the wintering areas. Some of the birds follow the so-called European route that runs through the Baltic, Poland and eastern Hungary to end up in northern Greece around October. The rest follow the so-called centro-Asian route and also end up in Greece via Russia, Kazakhstan and Ukraine. The European path is usually followed by pairs that are flying with their young, while the centro-Asian path is taken by birds that did not manage to reproduce successfully.

The Lesser White-fronted Geese stay in Greece until about mid-March. Spring migration takes a shorter route through eastern Hungary, Lithuania, Estonia and Finland and ends in the end of May - early June in the Valdak Marshes in northern Norway, before the flock disappears even more north to their breeding grounds.

The activity

Preparation

- Create teams of 4-5 children
- Reprint "The journey of the Lesser White-fronted Goose" activity sheets in the same number of copies as the teams

- Cut out the 18 cards from the sheets
- Optionally, reprint **“The story of the Lesser White-fronted Goose”** activity sheets for each team

Introduce the task

The facilitator reminds the children about the bird migration journey. She/he tells children that such a journey hides many difficulties and presents a lot of dangers for birds. The facilitator encourages the children to experience the journey of a little goose, the Lesser White-fronted Goose.

1. The journey of the Lesser White-fronted Goose

- Give each team a set of cards from the **“The journey of the Lesser White-fronted Goose”** activity sheet.
- Teams look at the 18 cards for 5 minutes.
- Read out the story on the **“The story of the Lesser White-fronted Goose”** activity sheet or your story based on it.
- Ask the teams to put the cards in the correct order according to what they hear from the narrator. To make it easier, they can number the cards using a pencil and when the story ends they put them in the correct order.
- Each team presents the journey of the Lesser White-fronted Goose based on the order of the cards they have chosen.
- Discuss the differences between the teams and reveal the course of the Lesser White-fronted Goose migratory journey.
- For older children, we can give copies of the story and allow them to identify the right sequence of cards by themselves. To increase the difficulty level, we can divide the story by cropping the individual paragraphs of the sheet. We give the teams the individual paragraphs and the set of cards and they choose the order of the story themselves, while placing their cards in the correct order.

2. The route of the Lesser White-fronted Goose on the map

The facilitator encourages children to locate the countries from which the Lesser White-fronted Goose travels through in Eurasia.

- Share copies of a map of Eurasia with the children.
- The children identify the countries through which the Lesser White-fronted Goose passes through and plan its route.
- Ask the children to add information on the map, such as what the Lesser White-fronted Goose does in each country, which months in each country, etc.

3. Our own journey

The children present their own story themed from the journey of the Lesser White-fronted Goose, using the cards of the **“The journey of the Lesser White-fronted Goose”**.

- Randomly share 2-3 cards to each team.
- Children, based on the pictures on the cards, decide which card will be the beginning of their story.
- They draw inspiration from the cards and create their own Lesser White-fronted Goose story, which they present as an act to their classmates.
- Give the following helpful guiding questions for the structure of their story:



- Who is the protagonist of the story?
- Where did they go?
- What risks did they encounter?
- Who helped them?
- What happened in the end?

Reflect and evaluate



- *How many and which countries does the Lesser White-fronted Goose travel through?*
- *What do they do in each country?*
- *Are they facing the same problems in each country? Why?*
- *What happens to the flock if there is no suitable habitat in a country to stop at?*
- *How can we protect a species that knows no borders?*

One step further

The teams colour in the cards and stick them to large white sheets or on a paper roll. They can add to their creations with personal comments, wishes for a good trip or make it part of a collage. For the collage, they can use clippings from newspapers, magazines and even pieces of fabric that they can bring from home. Each team gives a title to their work. The work created can be presented at the end of the school year or another suitable occasion.

The story of the Lesser White-fronted Goose (a)



1. *One would argue that this year, the Lesser White-fronted Geese are rather satisfied. Most pairs from the flock have been successful in bringing new small Lesser White-fronted Geese into the world. Each pair had about 5 goslings!*
2. *The little ones slowly grow and are ready for their first journey. Which journey is that? Winter you see, is fast approaching and in the northern countries it is very heavy, even for the Lesser White-fronted Geese who can withstand the cold much better compared to other birds. Besides, they do not like it at all when the snow covers the grass that they graze on. The flock leaves behind the Scandinavian countries that from high up above look so small!*
3. *Among the flock there are also some pairs that have had a hard time and have not managed to bring new Lesser White-fronted Geese to the world. These pairs then choose another route, far from where their companions will travel through together with their young. And then something magical happens! Without saying a word to each other, the flock is divided into two. One sets towards the east and the other towards the south.*
4. *The journey is long and the Lesser White-fronted Geese are tired. Even though they have made many changes at the "driver's" seat they will soon need a place to rest...*
5. *But they knew they would not easily find such a place, as the lakes that their ancestors used to rest had now been replaced almost entirely by endless crop fields. So, only a little bit of food and a little bit of rest for the Lesser White-fronted Geese...*
6. *Soon though, they found themselves again on the road or rather in the air!*
7. *They were so lucky that they landed in a place that was truly fantastic! In the Hortobagy National Park in Hungary! There they would find the*

The story of the Lesser White-fronted Goose (b)



opportunity to regain strength as they find plenty of grass just as they want it: freshly grown! This is made possible by the Hungarian cows with the tall horns. Grazing on the vegetation maintains the grasslands that would otherwise become shrubland.

- 8.** *In this beautiful landscape, the Lesser White-fronted Geese had no reason to complain. Only occasionally, some tall creatures with arms instead of wings and longer legs than their own – they were called humans – would come with some black boxes that made “flash” and “flash” noises again and again. No, they did not scare them so much, but they often forced the Lesser White-fronted Geese to look for other quieter fields.*
- 9.** *After having enough food and rest in the National Park, it was time to leave. Their journey did not stop there. They went in formation and took off one by one.*
- 10.** *The time for another stop soon arrived. They may have very strong wings that help them fly for many hours but frequent stops are necessary to avoid exhaustion. After flying for several kilometres they reached their next destination, Bulgaria.*
- 11.** *But there they did not find peace! Despite the fact that several areas there were important for the birds, it seemed like no one was aware of it! Cars and 4-wheel drives almost everywhere! The car wheels trampled the grass and the noise from the car engines was terrifying!*
- 12.** *They were so scared, they left... flying!*
- 13.** *The flock leader soon found a really unique place! Everyone agreed that it was what they needed after such an adventure. A place with a large lake and endless banks, where they could keep on grazing. There was something strange about this place: there were buffaloes that liked the water so much that they decided to call them, what else but water buffaloes.*

The story of the Lesser White-fronted Goose (c)



- 14.** *As it was expected, they did not all stay near the Lake. Some of the Lesser White-fronted Geese wandered around and went closer to the places where people lived. There they met some of their larger cousins, the Greater White-fronted Geese. Before they even had time to say hello they realised that hunters were hiding around them aiming for their larger cousins!*
- 15.** *The Lesser White-fronted Geese would not be in danger as people had decided not to hunt them because they were too few - and indeed they were! None of them, however, could vow that the hunters could really distinguish them from the Greater White-fronted Geese that they hunted, as they looked so much alike that they couldn't even distinguish themselves! In no time at all, they hid in a place that no one knew! There, they believed they would find the peace and quiet they wanted.*
- 16.** *Their final destination was a safe haven they had discovered and used to spend the winter. There they would meet their companions who had chosen the other, longer route! It was one of those places where people had taken care not to allow hunters or cars to enter, so they could graze in peace.*
- 17.** *Months passed, winter started changing in to spring and the Lesser White-fronted Geese knew like every year that it was time to leave Greece. Did the inhabitants in this place realise that the Lesser White-fronted Geese had spent so many winters there? They couldn't answer this question; they could only hope to find this place every year with even more grass and even more peace!*
- 18.** *These were their thoughts while they were flying and after countless wing beats the Scandinavian countries of the North appeared before them. Now it was the time for resting, romancing and egg laying...*

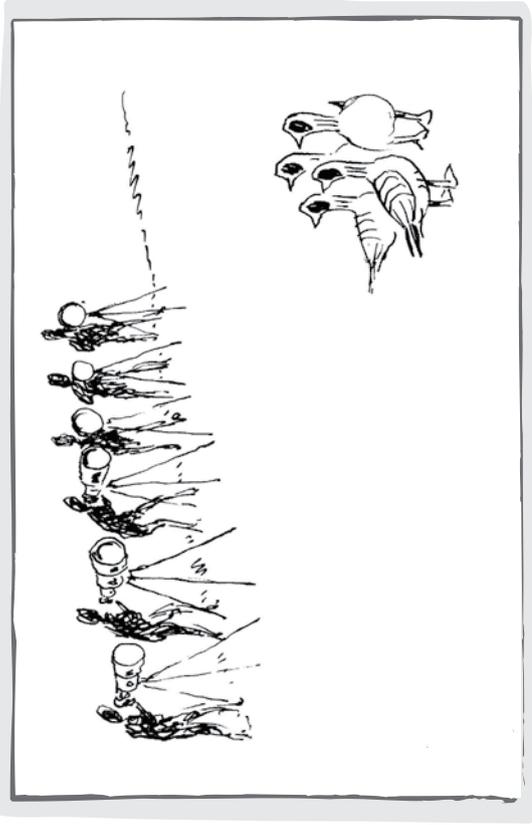
The journey of the Lesser White-fronted Goose (a)



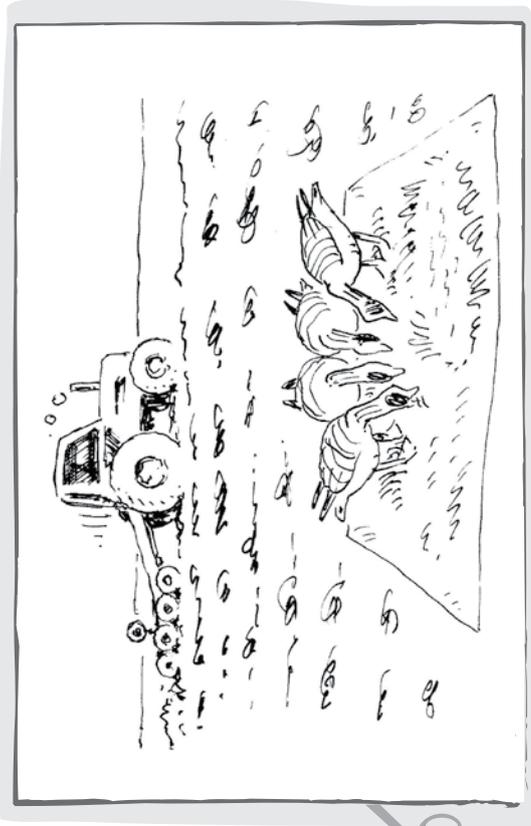
The journey of the Lesser White-fronted Goose (b)



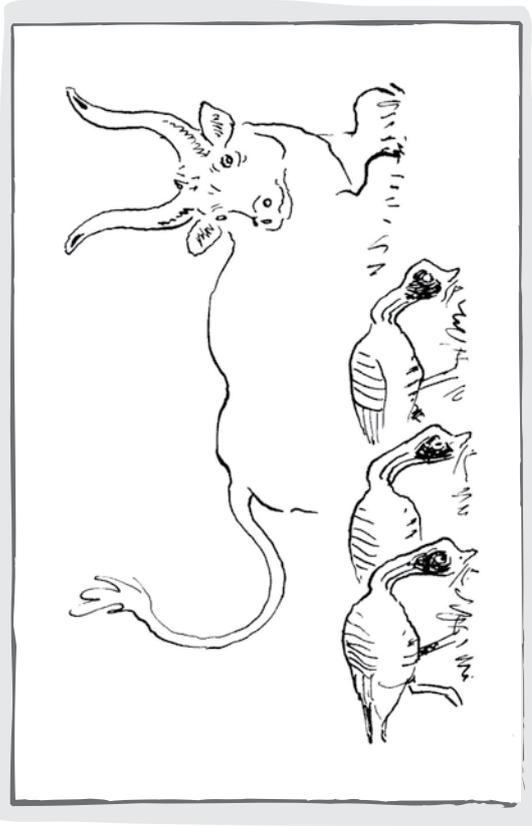
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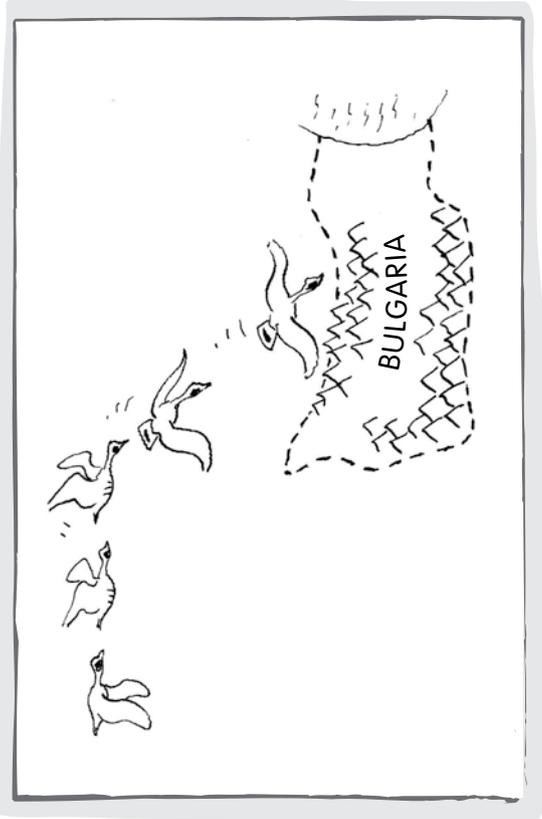
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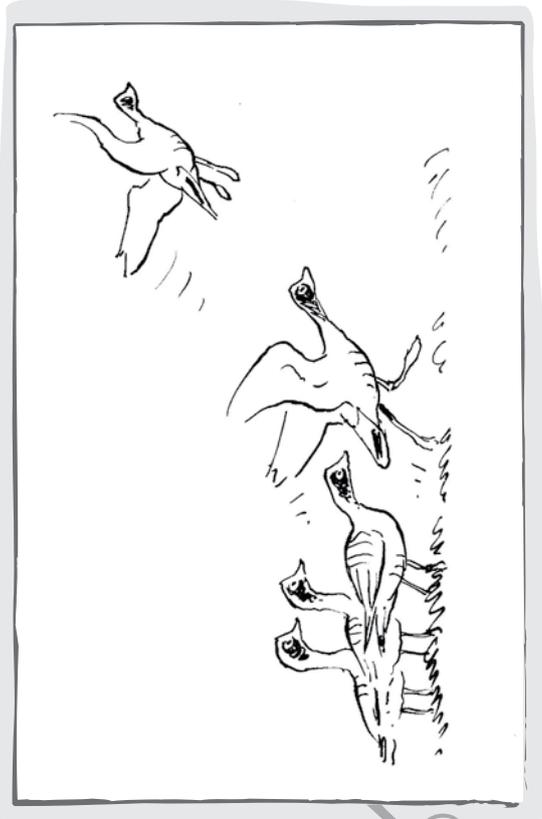
The journey of the Lesser White-fronted Goose (c)



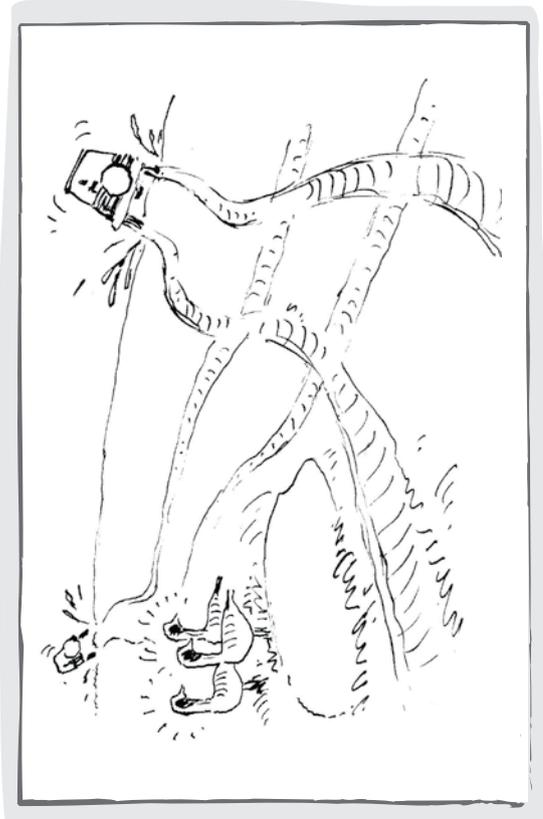
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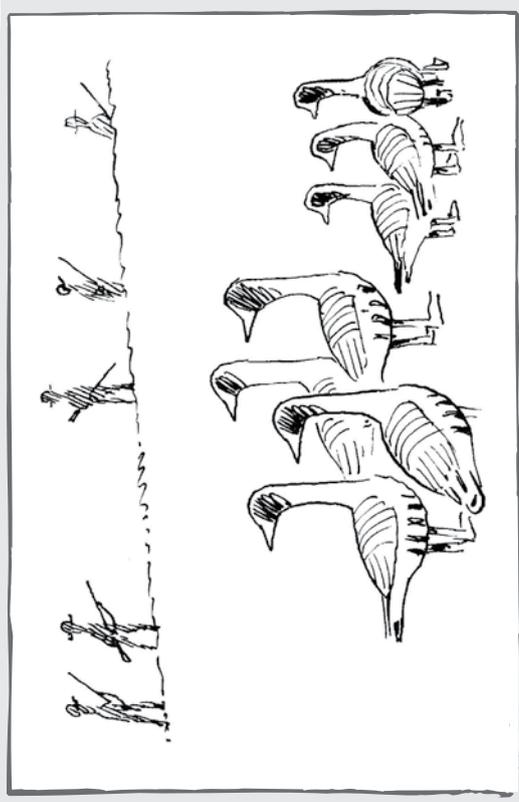


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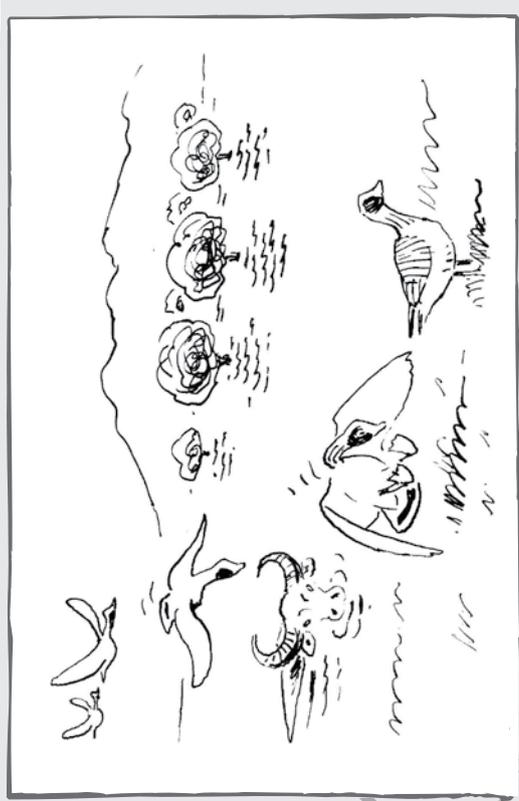
The journey of the Lesser White-fronted Goose (d)



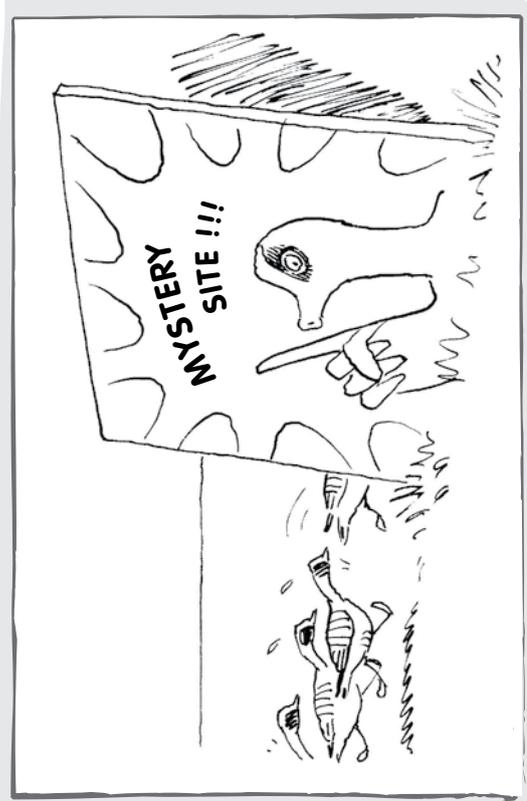
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16



13



15

The journey of the Lesser White-fronted Goose (e)



18



extra
cut

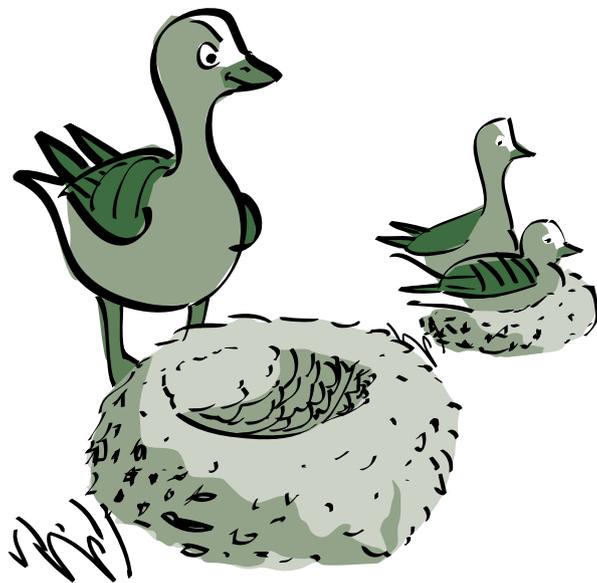


17



extra
cut





The Lesser White-fronted Goose game



in short:

Children learn to separate the dangers that the Lesser White-fronted Geese face, natural and man-made and recall the information they learned through a floor game describing the annual journey of the Lesser White-fronted Goose from the Arctic to the Mediterranean and back again.

Learning objectives:

To distinguish the dangers facing the Lesser White-fronted Geese between natural and man-made, to describe their existing protection measures and to reflect on the impact of human activities on the survival of a species.



Colour copies of the “The Lesser White-fronted Goose game” in size A3, copies of the activity sheet, large dice, roll of paper and marker



45 minutes

Background information

During a migratory journey, birds face a series of obstacles. Bird migration includes difficulties such as the opposing winds, storms and predators, as smaller and larger bird species face the risk of being hunted by predators on the migratory journey.

As most birds have been migrating for thousands of years, they have learnt to adapt to the natural hazards. But this is not the case with problems created by human activity. Habitat degradation is perhaps the most important problem for migratory birds. Intensification of crops, increased infrastructure and wetland drainage are some of the factors of loss or degradation of habitats that birds use as refuelling stops. Poaching during migration is also a significant risk as many migratory birds are killed before they manage to complete their journey. The city lights may also disorient the birds. Lastly, most migratory birds are also at risk from hunting.

The activity

Preparation

- Create teams of 4-5 children
- Optionally, reprint the “**Danger or protection**” activity sheet
- Print the 32 A4 pages (each image is 1 A4) to form the floor game - each square of the game occupies a page that can be printed in A4 or A3 size
- Construct a large cardboard dice
- If possible, laminate the images to keep them in better condition

Introduce the task

The facilitator asks the children to recall the dangers of the migratory journey of the Lesser White-fronted Goose from the previous activity. She/he makes use of the introductory information and explains the distinction between natural hazards and man-made threats.

1. Squares of danger or protection

The facilitator reads to the children the suggestions from the **“Danger or protection”** sheet. This will also save time from the following activity as these suggestions describe the adventures encountered by the Lesser White-fronted Goose in the game.

- Read out the suggestions from the activity sheet **“Danger or protection”**.
- Ask the teams to rank the suggestions in the following categories:



- Natural hazards (unpredictable weather conditions, natural predators, exhaustion, etc.)
- Human threats (loss and / or degradation of habitats, poaching, etc.)
- Protection measures for the species (legislation, work of environmental organizations, awareness raising, etc.).

- Children write the three categories on a piece of paper and note each sentence they hear under the appropriate category.
- Teams communicate their choices to the classroom, discuss and argue for the answers they have given.
- Announce the right answers.

2. Floor game

The facilitator informs the children that they will participate in a game on the migratory journey of the Lesser White-fronted Goose.

- Transfer the action to the school yard or clear space in the classroom if possible.
- Explain to the children that each team represents a Lesser White-fronted Goose flock.
- Announce that each team starts with 10 energy points. Each team throws the dice in turn and moves to the appropriate square. Each square describes what the flock is facing and how many points it wins or loses.
- Point out to children that the points symbolize the energy that keeps Lesser White-fronted Geese alive and can be attributed as the necessary food for them.
- Score on a large card the points won or lost by each team and inform the teams accordingly.
- If the team lands on a “lethal” square, it is called to return to the start and begin again with 10 points. The same is called if the team loses all its points along the way. The goal is for all flocks to reach their destination!

Reflect and evaluate



- *What put the Lesser White-fronted Goose at risk?*
- *What were the natural hazards and what human threats it faced?*
- *What posed the most risk? When was the Lesser White-fronted Goose more vulnerable?*
- *How can humans make the journey of the Lesser White-fronted Goose more difficult?*
- *What can we do to protect the Lesser White-fronted Goose?*



Danger or protection



Natural hazards

- A fox ate one of your four eggs.
- You migrate for the winter but the opposite wind makes it difficult for you to fly.
- A White-tailed Eagle chased you and forced you to fly away.
- Harsh winter. Deep snow covers the grass and you cannot find anything to eat.

Human threats

- You were shot by hunters who thought you were a Greater White-fronted Goose.
- You are flying for many hours but you cannot find any wetlands to rest.
- Visitors bother you by taking pictures and you need to leave before having eaten enough.
- Poachers killed your mate.
- Many cars go through the new road. You leave in search for quieter places.
- The pasture that you have been grazing on has been converted to crops and you can no longer find your favourite grasses.
- 4x4 cars are driving around the grasslands. You fly elsewhere.
- The lights of the neighbouring city confuse you and you lose your way.

Protection measures

- Goose hunting is banned in the wetland where you winter.
- A road barrier stops cars approaching your grazing grasslands.
- People cut the reeds and keep the wet grasslands for the geese.
- The countries you cross through your journey work together in a LIFE Project specifically for your protection.
- The authorities prevented the poachers from hunting you.
- European countries passed new laws on wetland protection.

Goose trails in local culture



in short:

The children are encouraged to interview and discuss with older people, to collect and record in a systematic way cultural data on geese in their area.

Learning objectives:

Children learn to systematically record the local knowledge of geese living in their area, appreciate and interpret information, discover the presence of nature in the people's traditions and deepen the interrelated relationship of humans to nature.



Activity sheet copies, white paper sheets, pencils, sound recorder, camera (optional)



90 minutes (preparation)

Background information

Birds star in many myths around the world. They have been messengers of gods and people and appear in numerous prayers. They have accompanied heroes in their quests, have revealed secrets and have shared tips. Migratory bird patterns have provoked people's curiosity and signalled the change of the seasons. In Greece and Europe, geese have starred in fairy tales and stories, the most famous of which is perhaps the journey of Nels Holgersson.

The activity

Preparation

- Create teams of 5-6 children
- Reprint "Data entry forms" activity sheets in an equal number with the teams
- Find and print coloured copies of photos from the goose species in the area (in size A4 each)
- If possible, laminate the photos to keep them in better condition

Introduce the task

The facilitator encourages children to recall myths or tales of their area that star birds. The facilitator can then focus the discussion on geese and their reference to fairy tales, folk traditions, personal experiences of children, place names, children's or traditional songs, enigmas, proverbs, etc. If there is time available, they can search for the above references in ethnographic books, magazines, school books, local press and children's books.

1. Ethnographers in action!

The facilitator invites children to collect information on the geese of their area through on-site research and, optionally, the use of audio visual media (camera, sound recorder). The subject of

their research may concern a) local names, b) folk songs and c) traditional expressions (myths, fairy tales, legends, narratives, proverbs, riddles, etc.). They make sure to prepare properly before the on-site survey is carried out.

- Support children in locating people in the area who can help them or refer them to someone who knows about the subject. They can reach residents of the area, especially the elderly and / or their children.
- Direct the teams to choose the questions they will ask. Some key questions are:



- Do you know the Lesser White-fronted Goose? Other geese?
- Which season do you see the geese? The Lesser White-fronted Geese?
- Do you know any expressions (proverb, local name, etc.) or song or name of a place referring to the geese?
- How or from whom did you learn about it?
- When did you first hear this song or this expression?

- For additional support, inform the children that they can use the colour photos of the geese during interviews to help facilitate their identification process.

2. Interviews on geese

The facilitator coordinates the interviews of children. Before the interviews they must have come up with the protocols they will use. They can use the **“Data entry forms”** activity sheets or design their own protocols. They should also decide on the place and time of the meetings.

- Children communicate with the people who will help them, choose the days for the interviews and choose a quiet place for the meetings.
- Remind the children to test first their sound recorder or other recording media before their interviews.
- Explain to the children that they should be objective and note the interviewer’s comments by recording the local dialect.
- Inform children that they can take pictures if the interviewee agrees.
- Children introduce themselves to the interviewees, describe the subject of their research and how they will use the information.
- Take care to allow enough time for the interviewee to speak and manage the time so that each interview lasts 20-40 minutes.
- Children keep notes, in particular the elements that interest them and ask for clarification where required.

3. Data collection

The results of the research can be presented either within the classroom and / or in the other classes of the school. If available, research data can be collected in an Excel file or equivalent soft-

ware. Alternatively, the process can be handwritten by first making an evaluation of the material they have.

- Ask the children to group their results. If they have used protocols during the activity, they record the following data:



- Folk songs and traditional expressions on geese indicating their region of origin and the initials of the interviewee.
- Local names of geese indicating their region of origin and the initials of the interviewee.
- The number of people who a) know about the Lesser White-fronted Geese, b) have seen Lesser White-fronted Geese, c) know other species of geese in relation to the total number of people who participated in their research.
- The locations where their interviewees a) have seen Lesser White-fronted Geese, b) have seen other goose species.
- Their conclusions based of their research if a) Lesser White-fronted Geese are fewer or more than in the past, b) if geese are generally fewer or more than in the past.

One step further

Children's work can be assembled and printed in a book, published in a local newspaper, etc. The teams can send the data they collect to the Hellenic Ornithological Society (BirdLife Greece).

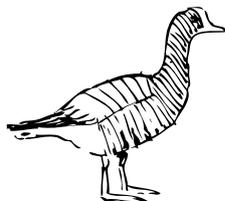
Reflect and evaluate



- *Are the inhabitants of the area aware of the Lesser White-fronted Goose? Other geese?*
- *What are the main means of expression where the "geese" are mentioned?*
- *After carrying out the research, what comes to mind when you hear the term "geese"?*



Data entry forms (a)



Researchers:
 Interview date:
 Interview place:

INTERVIEWEE

Name:

Date of birth:

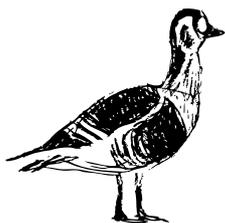
Occupation:

Local names	Area
1) Greater White-fronted Goose:	
2) Lesser White-fronted Goose:	
3) Greylag Goose:	
4) Red-breasted Goose:	
5) Other:	
Folk songs	Area
1)	
2)	
3)	
Traditional expressions (myths, tales, enigmas, legends, superstitions)	Area
1)	
2)	
3)	

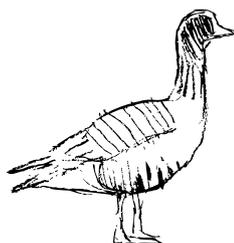
Where has the interviewee heard this expression?

When did the interviewee hear this expression for the first time?

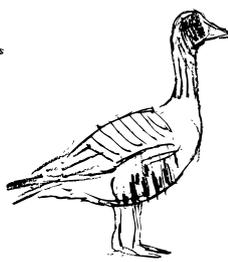
Data entry forms (b)



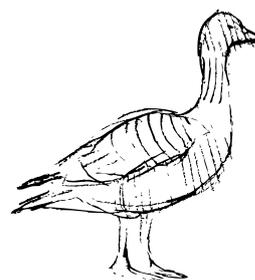
Red-breasted Goose



Lesser
White-fronted Goose



Greater
White-fronted Goose



Greylag Goose

INTERVIEWEE

Name:

Date of birth:

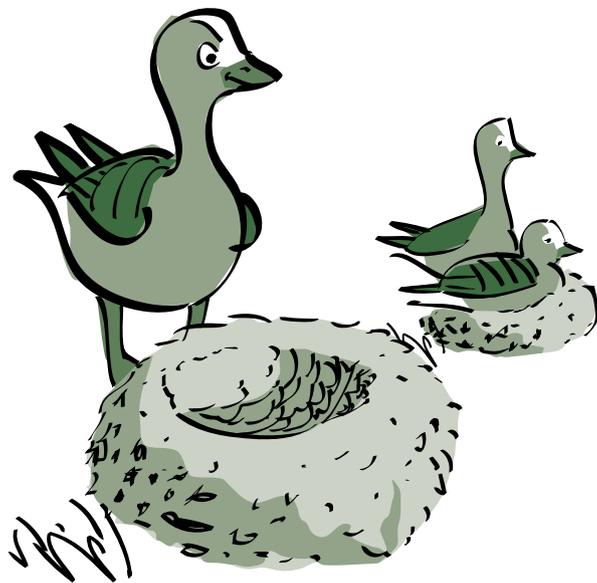
Occupation:

QUESTIONS

- Do you know the Lesser White-fronted Goose? YES / NO
- Have you ever seen Lesser White-fronted Geese? YES / NO
- If yes, where have you seen them (name the place, the area, etc.)?
- Do you know other species of geese? If yes, which ones?
- Where have you seen them around your area?
- Have you noticed any differences in comparison to the past, regarding the populations of geese in your area (are they more or less, did they used to use different areas to now, etc.)?

Goose stories

Location



Illegal hunting? Let's re-think it



in short:

The children are informed about the different types of illegal hunting and role play around the illegal hunting of birds. They examine illegal hunting from three basic perspectives: 1) as observers, 2) as poachers and 3) as birds.

Learning objectives:

To associate poaching with the loss of species, to report different cases of illegal hunting, to gain empathy, to approach a subject from different perspectives, to reflect on the causes of illegal hunting.



Copies of activity sheets, pencils, scissors, white paper sheets



60 minutes

Background information

The Lesser White-fronted Goose is protected throughout most of its range and therefore its hunting is not legal. Illegal hunting can also be referred to as poaching and illegal killing, although poaching can also include the illegal capture of wild animals. Poaching has a serious impact on the survival of the Lesser White-fronted Goose. It is an activity that takes place in the countries of wintering, staging and breeding of the species. The hunting pressure exerted on the species is high in Russia and Kazakhstan and the Eastern main population in China is threatened by over-harvesting. In Hungary, at the beginning of the 20th century, the Lesser White-fronted Goose was a regular and common migratory bird species, mainly in the east of the country. Later, however, and due to hunting, the Lesser White-fronted Goose became rare. In Greece, as the Lesser White-fronted Geese are very similar to the Greater White-fronted Geese grazing with them, the risk of them being hunted by mistake is increased. In Norway, during the spring hunting season, both swans and geese are illegally killed and as a result the accidental killing of Lesser White-fronted Goose is increased.

The activity

Preparation

- Create teams of 4-5 children
- Reprint “**But this is not allowed...!**” activity sheets in an equal number with the teams and the “**How does it look like...?**” activity sheets in so many copies so that each team receives one card
- Cut out the cards from the activity sheets “**How does it look like...?**”

Introduce the task

The facilitator focuses on illegal hunting as a basic threat to wild birds and, in particular, the rare species of the Lesser White-fronted Goose around the world. She/he discusses with the children

the differences of legal and illegal hunting and asks if they know what the difference between illegal and legal hunting is. She/he takes care to make the distinction between the two, by indicating the criteria of legal and illegal hunting in their country regarding: bird species, the area and the time allowed for hunting and the practices being used.

1. Poaching and illegal hunting practices

The facilitator focuses on the practice of poaching and illegal hunting of wild birds. She/he can use the information on the sheet **“But this is not allowed...!”** and discuss with the children the practices mentioned in it.

- Optionally, share copies of the **“But this is not allowed...!”** activity sheet.
- Children read the activity sheet and become informed about the illegal practices mentioned.
- Each team focuses on one of the illegal hunting practices and its corresponding description on the activity sheet.
- Allow time (e.g. 10 minutes) for children to study the activity sheet, encouraging them to take notes (what is the illegal practice, if they are familiar with it, species that are affected, etc).
- Encourage teams to present to others the content of their text.
- Discuss the children’s questions, thoughts and opinions about these practices.

2. Role playing

The facilitator focuses on the different perceptions of illegal practices. They address the issue from the point of view of those partaking in the illegal practices, the “spectators” of these practices (e.g. representatives of local communities), wild birds, scientists or researchers studying birds and so on.

- Distribute randomly one card from the **“How does it look like...?”** activity sheet to each team.
- Ask children to observe the picture of the card and close their eyes for a few moments in order to imagine how the following groups would react:



- A birdwatcher (or a researcher or a resident): What are their thoughts? How does the observer react in front of a scene like that? What can the observer do?
- A poacher: Why do they do this? What do they think when hunting during the breeding period? Are they aware that this is illegal?
- The bird species on the card: How possible is it for the bird to avoid being trapped or killed? How can it escape? Is it scared? Is it in panic?

- Give the teams the options to choose, if they so wish, a different group from the above categories by asking the corresponding questions.
- Each team discusses how they perceive the above and using the information they read and heard before, they prepare a small sketch that represents their card.
- Each team presents their act, while others try to find out what illegal activity is being dramatized.

- In addition, they can render their card in the form of theatrical play. Children can be given as a stimulus questions such as:



- What happened or what was happening before the moment of the act?
- What is happening now?
- What do you imagine can happen after the moment of the act?

- Discuss the way birds react in each of the above situations, but also the impact these activities have on biodiversity.

Reflect and evaluate



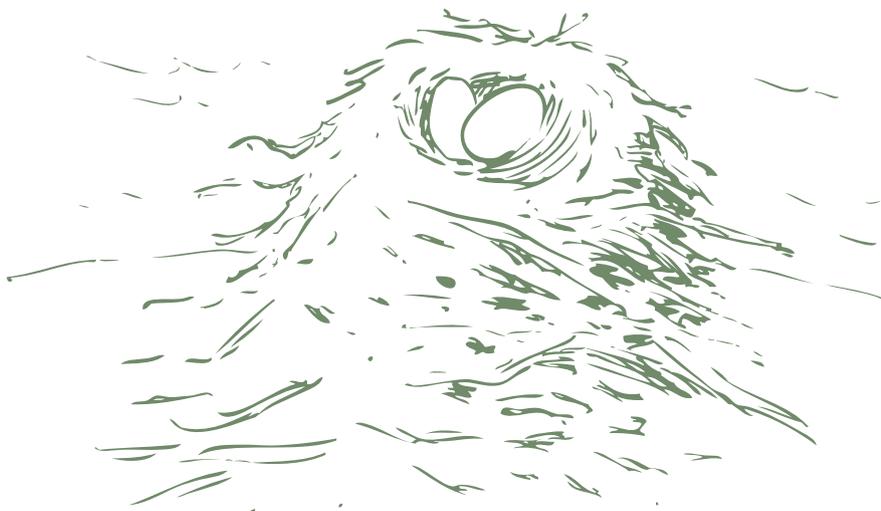
- *What does the continuation of trapping mean for the population of a species?*
- *Why do people resort to such activities?*
- *What could be done to stop the illegal taking and killing of birds?*
- *Can we do something? What actions can we implement to eliminate illegal hunting?*

One step further

The facilitator discusses with the children that scientists use various methods to collect data on bird life. The best known is the ringing where birds are caught using nets and they are fitted with rings by experienced ringers. The debate extends to the illegal hunting techniques mentioned above. Discuss the differences in the two techniques:



- *What are the incentives in each case?*
- *What effects does each action have on the population of a species?*



But this is not allowed...! (a)



1) Cage

Description: A bird enclosed in a cage used to lure other birds. The approaching bird is also trapped in the cage to end up in illegal open-air markets. The ones that end up in the trade are the singing males. Many times, birds are placed in trunks for days or are blinded, as this increases the intensity of their singing, making them even more marketable to those who want to sell them to end up in a home.

Threatened species: Gold Finches, Green Finches, Chaffinches, linnets, serins but also all the species of thrushes, larks, buntings, black birds, tits, robins, etc.

2) Nets

Description: A net spread on the ground that closes when the birds sit on it and are trapped. Birds get tangled in the nets and cannot escape. In their attempt to fly to escape, their wings are also entangled in the nets. They often break their wings, they become very tired, while the ones they make it they end up initially in big cages and then in smaller ones, in someone's home.

Threatened species: Gold Finches, Green Finches, Chaffinches, as well as almost all other songbirds. Several times, although they are not the target, other birds that fly amongst the trees get trapped for example Little Owls, Cuckoos and Scops Owls.

But this is not allowed...! (b)



3) Spring hunting

Description: Hunting outside the hunting season, i.e. the period August - February, is forbidden. Hunting during spring migration was banned in 1985 (in Greece) with the incorporation of the Birds Directive (Article.7) into the Greek law. Why is this period important? On the way to their breeding grounds during spring, birds stop when they have exhausted the fat and muscle mass reserves and are therefore very vulnerable to dangers during that time. They cannot easily avoid danger since they have very little energy reserves. Also, birds at that time travel towards their breeding grounds and as a result, hunting results in a much lower breeding success for the populations (fewer chicks are born).

Threatened species: Birds coming from the South (Africa) to breed in the North (Europe), such as the Turtle Dove, Hen Harrier, Marsh Harrier, Red-footed Falcon, Night Heron, Purple Heron, Little Egret, etc.

4) Unintentional (accidental) killing

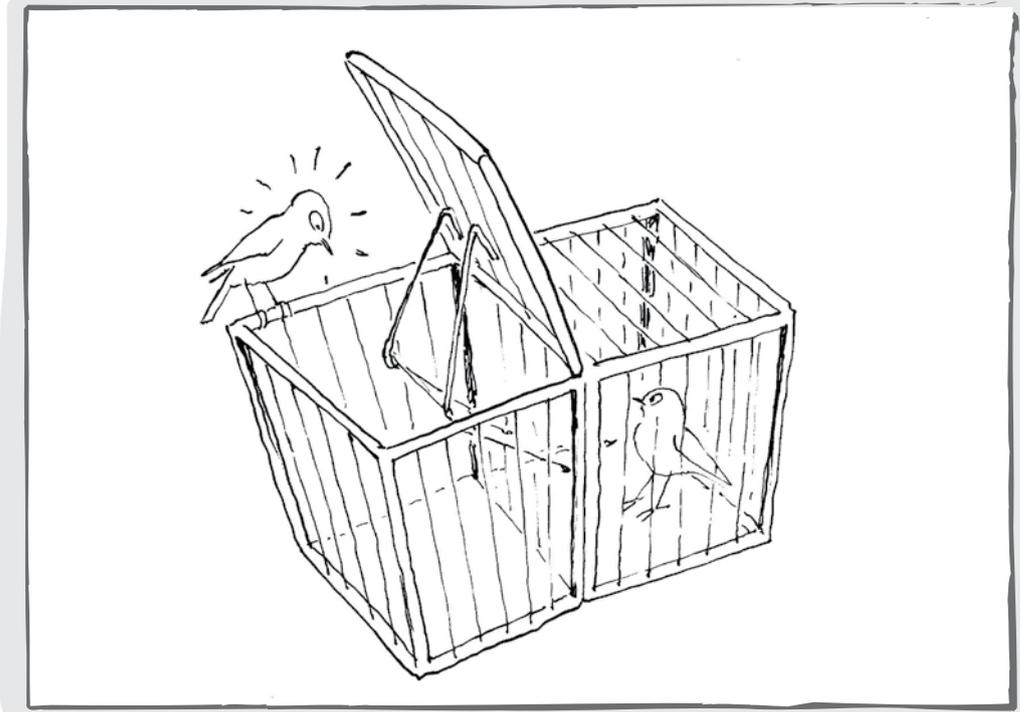
Description: When bird species are killed due to misidentification and ignorance on the identification between huntable and protected species. There are many species of birds that look very similar, especially when the species are at a distance from the hunter or when they are in flight.

Threatened species: Lesser White-fronted Goose, Ferruginous Duck, Red-breasted Goose.

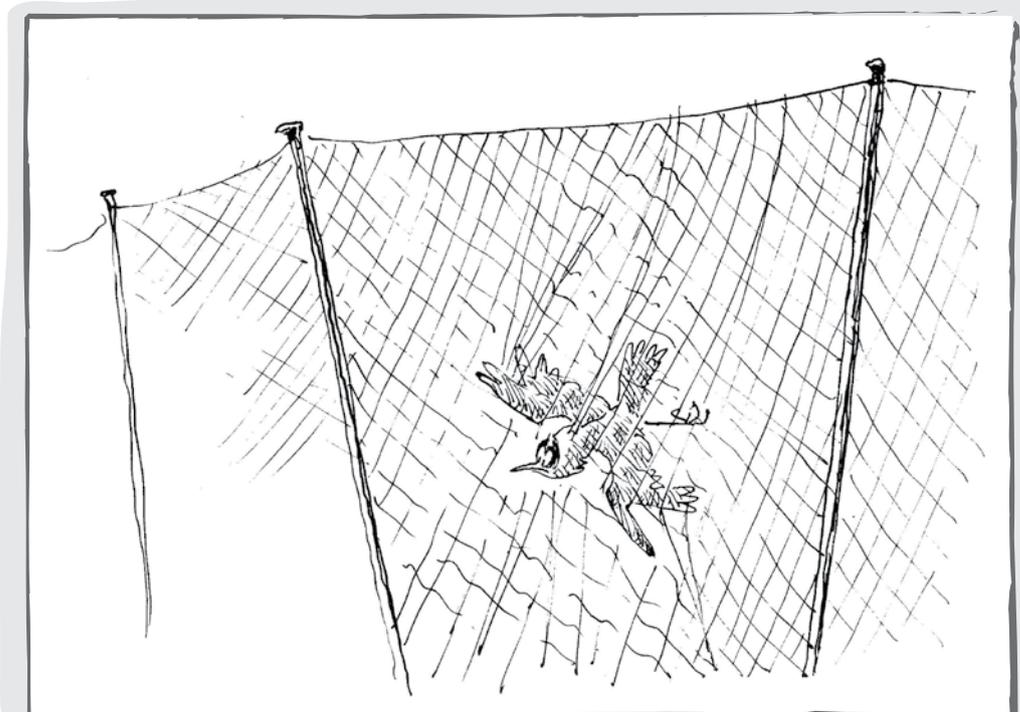
How does it look like...?



1) Cage

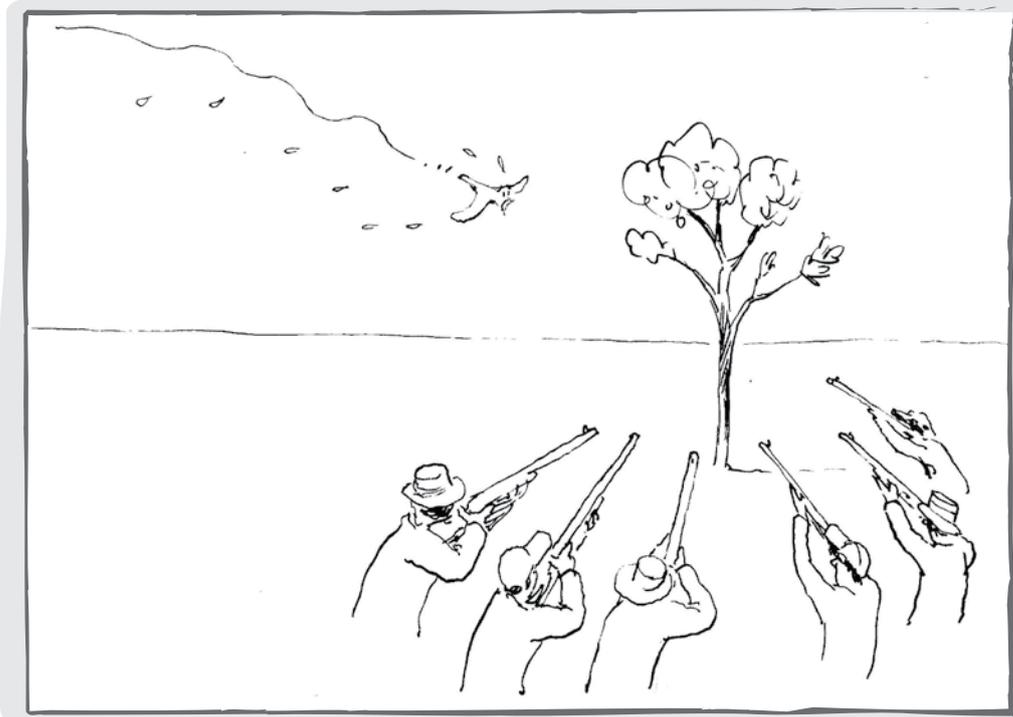


2) Nets



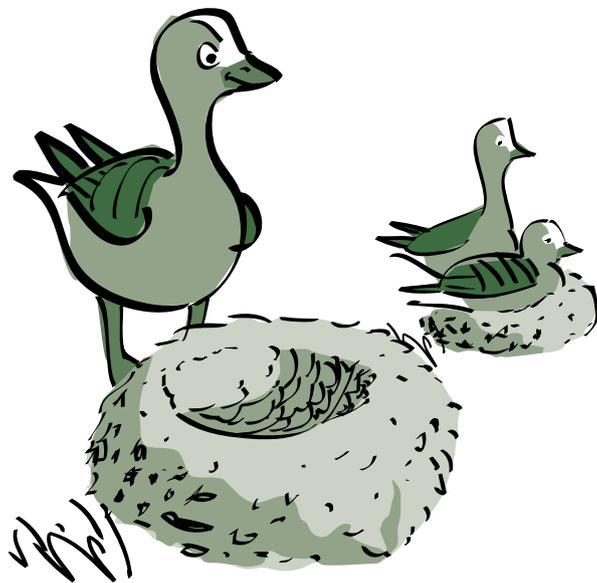
How does it look like...?

3) Spring hunting



4) Unintentional (accidental) killing





Getting closer to the Lesser White-fronted Goose grasslands



in short:

Children identify in a given drawing, the incompatible actions of a visitor in a protected area, evaluate them, draft the decalogue of a good visitor and analyze the scientific monitoring protocols that the researchers use in the field when monitoring the threats facing the Lesser White-fronted Goose.

Learning objectives:

To recognize permissible and unacceptable activities of a visitor in a natural area with a significant presence of birds, to analyze scientific monitoring protocols.



Copies of activity sheets, pencils in two different colours, paper roll



90 minutes

Background information

The natural and cultural environment of the Lesser White-fronted Geese is an open invitation for those visitors who are interested in visiting the countryside for recreation, tranquillity or bird watching. The visitors, need however to respect the restrictions that apply to these areas, to respect the needs and particularities of the nature of the places they visit. For the Lesser White-fronted Goose but also for wild birds in general, practices such as hunting near their habitats, the passing of cars at close distances and, more generally, disturbance, are the main reasons for their departure from a place they previously considered to be safe.

Along the Lesser White-fronted Goose migratory route, scientists monitor this rare species and record its threats. The threat protocols, like any field protocol, are essentially a worksheet on which the researcher completes in corresponding cells, numbers and descriptions about the threats of the Lesser White-fronted Goose. They score on a map, the time, date and their location, as well as what they observe regarding potential Lesser White-fronted Goose threats. With proper processing, this information (e.g. the data) can give us directions on how we can design the actions of protecting the Lesser White-fronted Goose and other species.

The activity

Preparation

- Create teams of 3-4 children
- Reprint **“Find the mistakes”** and the **“Threat protocol”** activity sheets in equal number as the number of teams

Introduce the task

The facilitator starts a discussion about how we behave when visiting a natural area, citing a wetland as an example. She/he asks children to discuss their own experiences when visiting a region where birds live.

1. The decalogue of the good visitor

The facilitator informs the children that they will form teams to distinguish what type of behaviour can be a nuisance to birds and which are not. They use a wetland as an example.

- Give out copies of the **“Find the mistakes”** activity sheet.
- Ask teams to carefully observe the landscape on the activity sheet and focus on the human activities that take place.
- Explain that these activities are distinguished by a) compatible and b) incompatible and ask them to circle these two categories in a different colour.
- The teams focus on the incompatible actions of the image and grade them according to their gravity: For example: “indifferent, almost insignificant, it would be good not to be, important enough, dangerous”.
- Each team presents its image and rating.
- Discuss with the children the mistakes they have identified in the picture and the way they chose to rate them.
- All the children together collect the incompatible and compatible actions, choose ten and write on the paper roll the decalogue of the good visitor in a wetland ecosystem.
- Encourage younger children to paint their own decalogue on paper roll, representing an “ideal” wetland for birds and humans.
- Additionally, children in teams can choose a specific area of their site to find out which human activities are permitted and which are not in these areas.

2. Recording the threats of the Lesser White-fronted Goose in the field

The facilitator “takes” the children to the wetlands where the Lesser White-fronted Goose lives and invites them to think of what can cause a nuisance to the Lesser White-fronted Goose, in the places where it is overwintering. This activity can be used to prepare children before a visit to such a site.

- Share copies of the **“Threat protocol”** activity sheet between the teams.
- Give some time to teams (e.g. 5 minutes) to study it.
- Discuss with children the following issues:



- Why is the recording done at fixed intervals (e.g. every ten minutes)?
- What are the threats recorded by field researchers?
- How can domestic animals disturb the Lesser White-fronted Geese?
- What is the difference between Class A, B and C (see activity sheet)?

Reflect and evaluate



- *Is the decalogue of the good visitor the same in every country that the Lesser White-fronted Goose visits?*
- *What can we do to reduce human activities that disturb the geese and also other species?*
- *What can the difficulties be for a researcher who records the threats of a rare species?*



Find the mistakes



Threat protocol

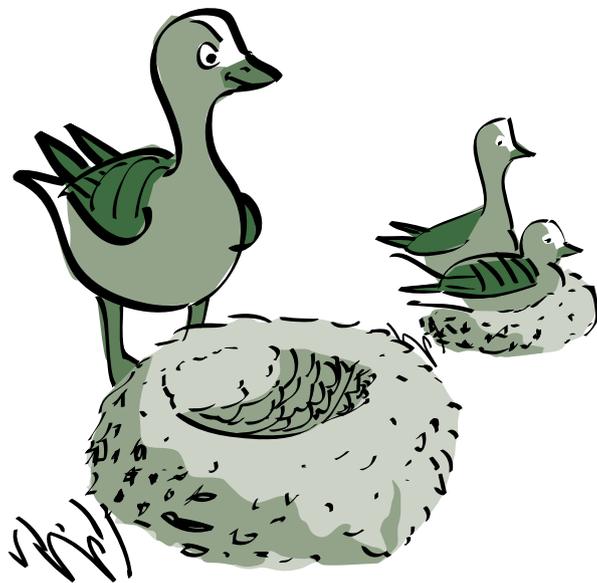


Date:		Area:		
Observer:				
Begin survey (time):		End survey (time):		
LWfG disturbance factor	Number	Effect on the LWfG*		
		A	B	C
Human				
Cars				
Cattle (or domestic)				
Other				

Direction of gunshot	North	East	South	West
Gunshot number				
Effect on the LWfG*	A	B	C	

- * Where **A**: The flock flies and then sits back at the same spot
B: The flock flies and sits further away, but is still visible
C: The flock flies away and disappears completely from the area





in short:

The children, through a short story based on the real adventures of three Lesser White-fronted Geese, decide to solve their problems through the preparation of a theatrical play designed by themselves.

Learning objectives:

To propose solutions to protect the species, to design and to conduct a small theatre performance.



Four or five large coloured pieces of fabric



90 minutes

Background information

Bird ringing is a way of gathering information on the routes that the species follow during their migratory journeys. Birds are caught by specially trained ringers and a small metal (usually) ring is placed on their leg. In this ring is an address (in the form of a code) and an identity number unique for each individual. Based on these data, we can find the details of ringing related to information such as age, species, sex, etc. Each recapture of a ringed bird records two specific points on Earth that have been visited by that individual (ringing area and area of recapture).

Technological achievements of recent decades have allowed the construction of transmitters small enough to be placed on migratory birds. Either through radio frequencies such as radio or satellite, we can now get to know the location of a bird with relatively high accuracy and also to identify migratory routes as well as new breeding, staging and wintering areas.

Increasing information on the areas where migratory birds cross and/or overwinter allows for appropriate measures to be taken in these areas to protect them.

The activity

Preparation

- Create teams of 4-5 children
- Read the story **“The three Lesser White-fronted Geese”**, which is based on actual facts

Introduce the task

The facilitator introduces the children to the concept of migratory birds, the techniques used by scientists and the importance of the knowledge acquired to protect birds. Prior to starting the activity, she/he may repeat part of the **“One for all and all for one”** activity. In particular, she/he can ask children to remember the flying pattern of the Lesser White-fronted Goose and its migratory journey.

- Children initially move freely in the classroom with music accompaniment.
- They gradually recall movements of the Lesser White-fronted Goose (when it grazes, when it flies, when it roosts, etc.).
- Urge the children to become a flock and after a few minutes of moving in the room let them sit down to listen to a story about three Lesser White-fronted Geese.
- Read out a short but true story about three Lesser White-fronted Geese: Finn, Nieida and Imre.

1. What happened to Imre?

The first part of the story describes the placement of transmitters in three Lesser White-fronted Geese and the tracking of their route from the breeding to the wintering countries until the transmitter of one of the three Lesser White-fronted Geese starts signaling from a fixed point for a long time. The facilitator stops the narrative at the end of Part A in order for children to give their own interpretation of the course of action.

- Create a calm atmosphere in the classroom. Alternatively, the action can be transferred outside (e.g. in the school yard).
- Read out Part A of the story **“The three Lesser White-fronted Geese”**.
- Take care of enlivening the narrative by making use of grimaces, body movements and keeping eye contact with children.
- Change the tone, the melody, the tune, the pitch of the speech while inserting pauses, depending on the development of the story.
- At the end of the narrative, give a series of stimuli to the children to compose the continuation of the story in teams. For example, rhythms that signal that the Lesser White-fronted Goose continues its journey, stops to rest, is lost (beep, beep, beep, they are moving on, te-te-teeeeeeeee we have lost them).
- Children are involved in a brainstorm and compose stories about what happened to Imre. They choose the ending of the story, while the facilitator can ask guiding questions like:



- Did Imre lose the transmitter and continued his course without it?
- Did he get lost on his way to his destination?
- Has he found a place/mate and does not want to continue to the final destination?
- Has something wrong happened? What can that be?

2. A theatrical play will give the solution

The second part of the story describes the end of Imre as recorded by the researchers’ experience and the hypothetical scenario that the Lesser White-fronted Geese are informed of the loss of Imre. The facilitator continues the narrative story in order for children to propose solutions to the problems faced by birds and in particular, the Lesser White-fronted Geese.

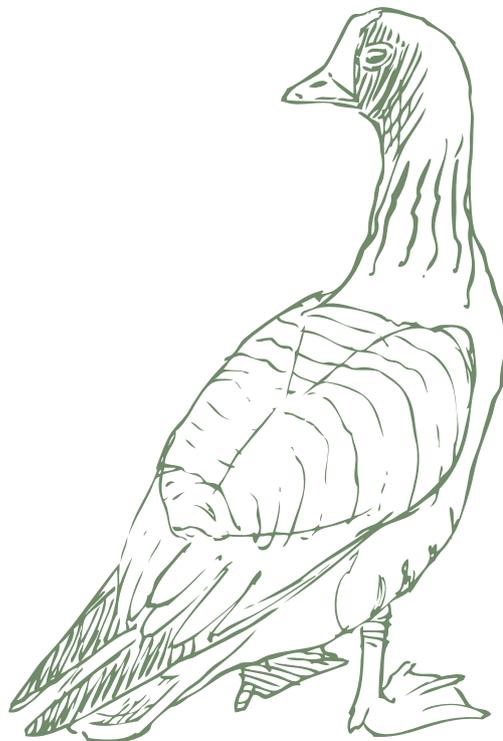
- Continue the narration of the Part B of the story **“The three Lesser White-fronted Geese”**.
- At the end of the narrative, ask the children to think and present the solution to the problems of the species through a theatrical performance.

- Give teams time to prepare (for example, 15 minutes) and encourage them to improvise, by stimulating the story they have heard while drawing on information from previous activities.
- Mention the importance and need of collective effort to protect a threatened species such as the Lesser White-fronted Goose.
- Optionally, give children the colourful pieces of fabric to create a backdrop for their play.
- Teams present their plays on how to protect the species.

Reflect and evaluate



- *What solutions were proposed?*
- *What problem does each proposal solve?*
- *Which of the solutions would help the Lesser White-fronted Goose and why?*
- *What can the children themselves do?*
- *Who else can help?*
- *How can they convince them and give them an incentive to save the Lesser White-fronted Geese?*
- *How will they work together?*



The three Lesser White-fronted Geese

13

Part A

Tomas, Ingar and Janike are members of a team of scientists in Norway. The aim of their team is to save the endangered Lesser White-fronted Goose. They spend many hours of their lives observing and studying these particular geese. They can distinguish them from the other geese, have learned a lot about their habits and the dangers they face. In spring 2006, after strenuous efforts, the team managed to put three very small satellite transmitters onto three Lesser White-fronted Geese called Finn (male), Nieida (female) and Imre (male). What the team wanted to do was to learn more about the routes that birds follow along their migratory route.

A few months after they had put the transmitters on the back of the birds, the Lesser White-fronted Geese began their long journey from the Valdak marshes towards the South. Imre first departed and a few days later Finn followed with Nieida. Finn and Nieida crossed thousands of kilometres and a few months later they arrived in Greece, where they spent the winter, first at Lake Kerkini and then at Evros Delta. Imre, despite following almost the same route as Finn and Nieida, was not that lucky. Although he had come close enough and everyone thought he was coming to Greece, the scientists began to get signals by the transmitter from a fixed location.

Part B

This was an indication that Imre most probably was not alive anymore. A few days later, a friend of Tomas who was near the area where Imre's transmitter was signalling from, recognised the village and even the home from where the satellite transmitter was steadily emitting its signal. He visited the area to learn from a hunter who lived there that he had actually shot Imre in the last days of October.

News travelled quickly in the Lesser White-fronted Goose community. The remaining Lesser White-fronted Geese of Europe, who are approximately 100, are worried about their future. They have found that people's attitudes are already causing serious problems. If no one can help them, everyone says their species will disappear forever after thousands of years on earth! All these years they have endured the ice of the Arctic Circle, they have saved countless eggs from the red foxes, they have put even Lesser White-fronted Goose wardens to guard them when the flock is grazing. However, in a few years, threats like illegal hunting, their striking similarity with their Greater White-fronted Goose cousins and the major changes in cultivation, made the world seem a very dangerous place.

Because these are very big problems for birds to solve themselves, they need help from someone who understands and speaks the language of people, but who also knows a lot about their travels and their difficulties. Could this be us?

Creative writing



in short:

The children participate in word games in order to compose their own story about the Lesser White-fronted Goose with a beginning, middle, end, but also with an overthrow.

Learning objectives:

To evaluate the experience from the implementation of the Lesser White-fronted Goose educational material and to develop creative imagination skills.



Copies of activity sheet copies, printed cards from "The Lesser White-fronted Goose game", paper roll, white paper sheets, pencils, paints



Three 45-minute sessions (each part of the activity is proposed to be implemented separately)

Background information

Limericks are a contribution by the painter and author Edward Lear (The Book of Nonsense, 1846). They are short poems, usually follow a standard structure and use unreasonable elements. For the creation of a rhyme, we keep in mind elements such as: creation of imagery in the verses, action through changing imagery, musicality in expression, use of the absurd element and imagination. The children get familiar with rhyming, they are using spoken word, while the introduction of the element of the absurd makes the writing of a poem very entertaining for the children.

Creative writing is a means of expression in which children do not only describe their experience, but they intervene dynamically in it and recreate it. For example, when they write about the threatened species of the Lesser White-fronted Goose they create a story using their experiences, knowledge and imagination. Creative writing enables children to compose life experiences with knowledge they acquire during the educational process.

The activity

Preparation

- Create teams of 3-4 children
- Use colour copies from the "The Lesser White-fronted Goose game" activity
- Reprint the "The mystery site" activity sheet in as many copies as the teams

Introduce the task

The facilitator discusses with the children the view they have shaped so far about the Lesser White-fronted Goose. For example, she/he may ask questions like:



- What is the most important threat to the Lesser White-fronted Goose?
- What is the best protection action for the species?
- Which characteristic of the Lesser White-fronted Goose has made the biggest impression on you?
- What would you wish for the geese?
- What slogan would you use for the Lesser White-fronted Goose?

The aim of the activity is for children to give their own opinion, taking care to justify their response. This discussion will be the main stimulus to inspire children and engage in word games, composing short poems and writing their own texts for a rare and small sized protagonist, the Lesser White-fronted Goose.

1. Word play

The facilitator explains to the children that they will participate in word games about the Lesser White-fronted Goose so they can experiment with combinations of words and prepare for the next part of the activity.

- Write the word Lesser White-fronted Goose on the board with the letters in the vertical arrangement, like a gauntlet (see below).
- Ask the children to do the same on a white piece of paper.
- Encourage children to try to write a word (a noun) that comes to mind from each letter (e.g. **L** like **Lemon**) and read the combination of words they created. Each team can choose a different part of the the name "**Lesser White-fronted Goose**".
- Repeat again only this time the words that are written next to each letter are linked to the Lesser White-fronted Goose (e.g. **L** like **Little**).
- Ask children to choose two (or more) of the nouns they have thought of and use only articles, verbs and adverbs to combine these two in as many ways as possible, for example. "The **Little** goose hides in the **wetlands**".
- Children choose the phrase that they like the most and they design the image on a paper.
- Urge children to answer the question "What do they think happened before and after the snapshot they designed?" and note their thoughts on a piece of paper. They have just begun to write their story!

Example:

Love	Whale	Friends	Gaffe
Easter	Honour	Row	Oatcakes
Song	Inbox	Oar	Olives
Shelter	Table	Nose	Shop
Ear	Eel	Tree	Eggs
Racket		Evening	
		Doormat	

2. Create a limerick

The facilitator informs the children that they will be composing a limerick, starring the Lesser White-fronted Goose. A limerick is a kind of meaningless poem that, with some variations, follows a particular structure. Using an example for the Lesser White-fronted Goose, a block may have the following structure in five verses:

Example:



*There was a Lesser White-fronted Goose, named Tomas
He was flying upside down, hanging out among us
But he got tired and during one night
In Evros he went and slept all right
That was our belly-up-flier goose friend who could also if needed, drive a bus*

- Present the structure of the lyrics in five verses to the children:



First line: selecting the protagonist (the Lesser White-fronted Goose)
Second line: a characteristic of the protagonist expressed in one action
Third and fourth line: the evolution of action
Fifth line: selecting an absurd adjective for the protagonist (Lesser White-fronted Goose)

- Explain that the first, second and fifth verses rhyme with each other and the third with the fourth.
- Emphasize to the children that rhyme may be optional.
- The following questions may help:

- 
- Who is our hero? (it is the Lesser White-fronted Goose)
 - How does she/he look like? What is she/he doing?
 - What happened to her/him?
 - What is so strange about this Lesser White-fronted Goose?

- Children gradually make up the 1st verse, the 2nd and so on.
- As additional help, encourage children to devise their own words in order to then integrate them into the limerick. The words will be fantastical, but in order to be convincing, their form must have some relation to their content, e.g. belly-up-flier: the goose that flies upside down.
- Children at the end can group together the limericks they made so that the different heroes interact by composing and animating the stories they made.

3. Our own story

Using the activity cards **“The Lesser White-fronted Goose game”** as a stimulus, the children become young authors and write their own story. It can be a fairy tale, a story with mythical heroes, a story of mystery and adventure, a story about the present or the future (or both). Before writing their story, children participate in a team painting of the **“The mystery site”** activity sheet.

- Inform the children that for some time we do not know where the Lesser White-fronted Geese are, reminding them of the relevant excerpt of the story **“The story of the Lesser White-fronted Goose”**.
- Distribute a copy of the **“The mystery site”** activity sheet to each team.
- Encourage children to allow their imagination run free and plan in the empty space of the paper how they imagine this mystery place to be.
- Each team presents its own mystery site to the other teams.
- Give each team three A3 (or A4) cards from the **“The Lesser White-fronted Goose game”** randomly.
- Encourage children to use the cards to compose a story that has a beginning, middle, an overturn and an ending.
- Children decide which card will be the beginning of their story, are inspired by the stimuli they have drawn so far and compose their story.
- Optionally, they can read out their texts in the classroom.
- Their stories can be gathered in a single edition and shared in their school library or organize “Reading Days” at their school.

Reflect and evaluate



- *Are there any common elements in stories presented in the class? If so, what are they?*
- *Do stories relate to the real life of the Lesser White-fronted Goose? If so, how?*



The mystery site



Evaluation sheet for the facilitator

The Lesser White-fronted Goose Environmental Education network is asking for your contribution for the evaluation and improvement of its work. If you wish, please fill in the evaluation sheet below and send it to us:

Address: 80 Themistokleous str., Athens, GR 10681, Greece

Email: info@ornithologiki.gr

Country: _____ **School:** _____

School address: _____

Email: _____ **Class:** _____

Educational material	Implemented (Yes/No)	We				
		Loved it	Liked it a lot	Thought it was ok	Liked it a little	Didn't like it
Introductory texts						
Activities						
1. How many wild birds do you know?						
2. Ducks and geese						
3. Where is my nest and what's for dinner?						
4. The Lesser White-fronted Goose uncovered						
5. Masks and geese						
6. Where we belong						
7. One for all and all for one						
8. A story about the Lesser White-fronted Goose						
9. The Lesser White-fronted Goose game						
10. Goose trails in local culture						
11. Illegal hunting? Let's re-think it						
12. Getting closer to the Lesser White-fronted Goose grasslands						
13. Finn, Imre and Nieida						
14. Creative writing						

Comments

Regarding Activity No. I would like to comment that

.....

Regarding Activity No. I would like to comment that

.....

Regarding Activity No. I would like to comment that

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Evaluation sheet for the children

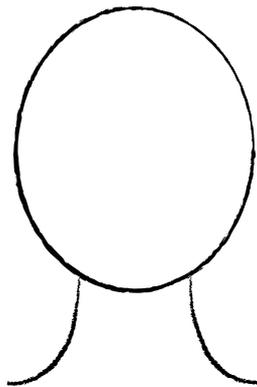


My name is:

My school is:

My class is:

Draw yourself if you like:



 **The activity that made the most impression was:**

.....

Because:

.....

 **What I didn't like was:**

.....

Because:

.....

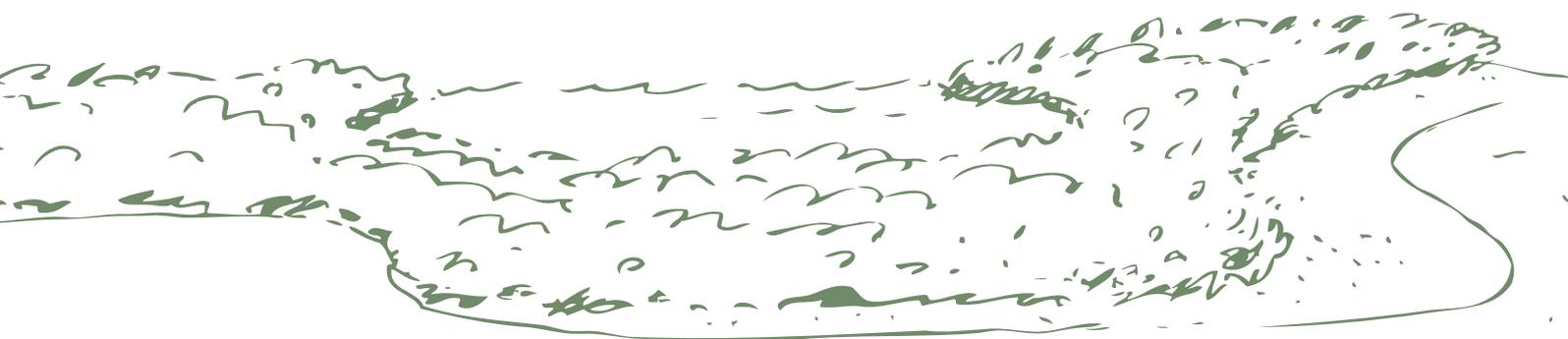
 **The activities would be better if**

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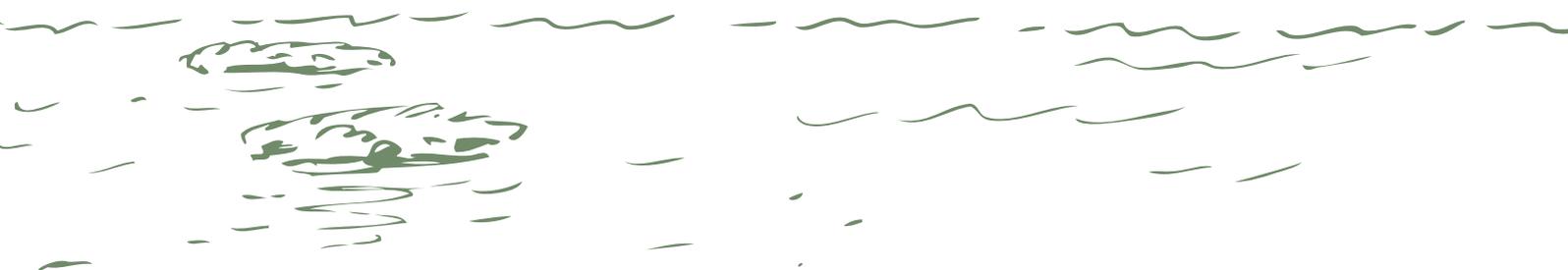
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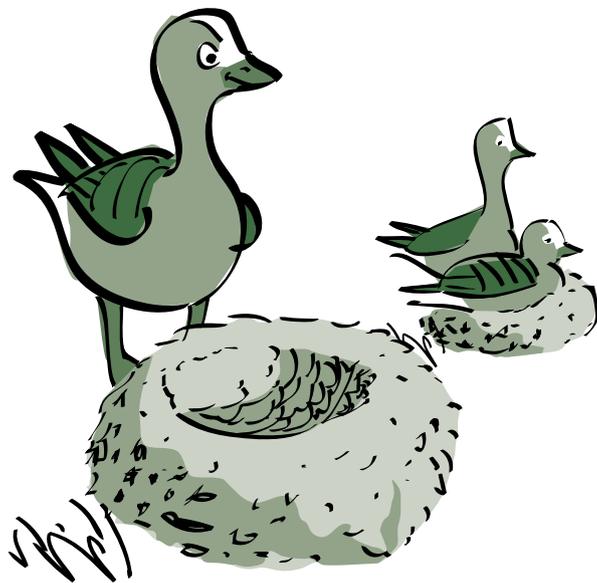
References

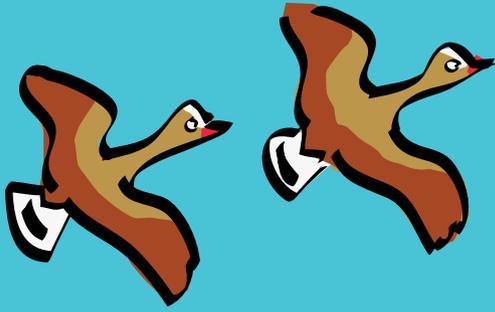
- Avgitidou, S. (2008). *Cooperative learning for preschool education: Research and applications*. Athens: Gutenberg. (in Greek)
- BirdLife International (2017). *Species factsheet: Anser erythropus*. Retrieved on 14/05/2018 from <http://www.birdlife.org>.
- Boal, A. (1979). *Theatre of the Oppressed*. London: Pluto Press.
- Boal, A. (1992). *Games for Actors and Non-Actors*. London: Routledge.
- Brooke, M. & Birkhead, T. (eds). (1991). *The Cambridge Encyclopedia of Ornithology*. Cambridge: Cambridge University Press.
- Ekker, M. & Bø, T. (2017). The Lesser White-fronted Goose – a part of European biodiversity history or here to stay? Pp. 4-6 in Vougioukalou, M., Kazantzidis, S. & Aarvak, T. (Eds.) *Safeguarding the Lesser White-fronted Goose Fennoscandian population at hey wintering and staging sites*. Special publication. LIFE+10 NAT/GR/000638. HOS/BirdLife Greece, HAOD/Forest Research Institute, NOF/BirdLife Norway report no. 2017-2.
- Gill, F.B. (1999). *Ornithology*. New York: W.H. Freeman and Company.
- Gkovas, G. & Kaklamani, F. (Eds.) (2002). Seeking the role of theatre in secondary education. *Minutes from the 1st International Meeting for theatre in education*. Athens: Greek Network for Theatre in Education. (in Greek)
- Gottman, J. (2000). *The emotional intelligence of children. How to raise children with emotional intelligence. A practical guide for parents*. Athens: Ellinika Grammata. (in Greek)
- Gounter, B. (2005). *Ornithology*. Publications Office. Thessaloniki: Aristotle University of Thessaloniki.
- Gray, R. (2004). *Cheetahs: A predator's role in the ecosystem. Teacher's resource guide*. Namibia: Cheetah Conservation Fund.
- Hatzilakou, D. (Eds). (1999). *Concise Guide. Impact of infrastructure and activities on birds and habitats. Bird habitat management*. Athens: Hellenic Ornithological Society. (in Greek)
- Hellenic Ornithological Society (1996). *Birds of Greece*. Athens: Eleftheros Tipos. (in Greek)
- Hellenic Ornithological Society. *The Lesser White-fronted Goose and LIFE-Nature*. Retrieved on 14/05/2018 from <http://www.ornithologiki.gr/> (in Greek)
- Jones, T., Martin, K., Barov, B. & Nagy, S. (2008). International Single Species Action Plan for the Conservation of the Western Palearctic Population of the Lesser White-fronted Goose *Anser erythropus*. *AEWA Technical Series*, No. 36. Bonn, Germany.
- Kamilaki – Polimerou, A. & Karamanes, E. *Folklore – traditional culture. Educational material*. Institute of Life-long learning. Retrieved on 31/10/2013 from <http://repository.edulll.gr/1015>. (in Greek)
- Kontozisi, I. & Panoriou, E. (auth.) (2013). *Travelling with the Lesser White-fronted Goose in the northern Greek wetlands*. Environmental education material for children 9-16 years old. Hellenic Ornithological Society. Athens. (in Greek)



- Legakis, T. (1997). *The threatened animals of Greece. Threat factors, awareness and direct conservation measures*. Kathimerini: 2-31. (in Greek)
- Legakis, A. & Maragou, P. (Eds.) (2009). *The Red Data Book of the Threatened Animals of Greece*. Athens: Greek Zoological Society. (in Greek)
- Martin, K. (2009). The International Single Species Action Plan for the Conservation of the Western Palearctic Population of the Lesser White-fronted Goose. In: Tolvanen, P., Øien, I.J. & Ruokolainen, K. (eds.). *Conservation of Lesser White-fronted Goose on the European migration route. Final report of the EU LIFE-Nature Project 2005-2009*. WWF Finland Report 27 & NOF Rapportserie Report, No 1-2009:76-80.
- Mosley, J. & Sonnet, H. (2011). *101 Games for Social Skills*. UK: LDA. (ISBN 978-185-503-370-2)
- Øien, I.J., Aarvak, T., Ekker, I.J. & Tolvanen, P. (2009). Mapping of migration routes of the Fennoscandian Lesser White-fronted Goose breeding population with profound implications for conservation priorities. In: Tolvanen, P., Øien, I.J. & Ruokolainen, K. (eds.). *Conservation of Lesser White-fronted Goose on the European migration route. Final report of the EU LIFE-Nature project 2005-2009*. WWF Finland Report 27 & NOF Rapportserie Report No 1-2009: pp. 12-18.
- Oltman, M. (ed.) (2002). *Natural wonders: A Guide to Early Childhood for Environmental Educators*. Minnesota Early Childhood Environmental Education Consortium. Retrieved on 18/7/2012 from: <http://www.seek.state.mn.us/publications/naturalwonders.pdf>.
- Rontari, T. (2001). *The grammar of imagination. Introduction to the art of making up stories*. Athens: Metehmio. (in Greek)
- Svoronou, E. (2015). *Cooking up stories: How to write your own texts*. Athens: Metehmio. (in Greek)
- Snow, D.W. & Perinns, C.M. (1998). *The Birds of the Western Palearctic. Volume 1. Non-passerines*. New York: Oxford University Press.
- Svensson, L., Grant, J.P., Mullarney, K. & Zetterstrom, D. (2009). *Collins Bird Guide: The most comprehensive guide to the birds of Britain and Europe*. HarperCollins.
- Trigou, R., Latsoudis, P. & Kontozisi, I. (2008). *Knowing the Nature of the protected area of Kerkini Lake. Environmental Education Package for Primary School level*. Athens: Hellenic Ornithological Society. (in Greek)
- Trigou, R., Latsoudis, P. & Kontozisi, I. (2008). *Knowing the Nature of the protected area of Kerkini Lake. Environmental Education Package for Secondary School level*. Athens: Hellenic Ornithological Society. (in Greek)
- Tsounis, G. (1999). *Birdwatching: Inside the magical word of birds*. Athens: Ellinika Grammata. (in Greek)
- Vougioukalou, M., Kazantzidis, S. & Aarvak, T. (Eds.) (2017). *Safeguarding the Lesser White-fronted Goose Fennoscandian population at key staging and wintering sites within the European flyway. Special publication*. LIFE+10 NAT/GR/000638 Project, HOS/BirdLife Greece, HAOD/Forest Research Institute, NOF/BirdLife Norway report no. 2017-2.
- WWF Greece, Hellenic Ornithological Society & Society for the Protection of Prespa. (1998). *Conservation of the Pygmy Cormorant and the Lesser White-fronted Goose in Greece*. Educational Material. Thessaloniki. (in Greek)
- Zoniou, Ch. (2003). Theatre of the Oppressed. *Education and Theatre, Issue 4*. (in Greek)







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