Citizens Count

Cultivating Environmental Citizenship in Youth through Birding & Citizen Science

Activity Sheets

These activity sheets are intended to complement the Citizens Count programme as described in the teacher brochure.

The target audience is children ages 10-12, although some activities are suitable for younger or older children.

All activity sheets can be modified to fit the local bird life and environments around a school. Many activities require that the students have access to the internet to find information about birds in their area and local bird counts, as well as access resources such as videos and visualisations.

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Activity Sheet
Citizens Count

What birds are in your area?

Student: _____

Use a bird guide or go online to find information about birds you would see in your neighbourhood.

Scientific name	Common name	Where would I see it?

Activity Sheet

Citizens Count

What birds are in your area?

Student: _____

Find pictures of local birds. Write the bird's common name under the photo

photo 1	photo 2	photo 3
_____	_____	_____
photo 4	photo 5	photo 6
_____	_____	_____
photo 7	photo 8	photo 9
_____	_____	_____

Activity Sheet

Citizens Count

Observing birds

Student: _____

1: Go for a walk near school (park, lake, coast, woods). Notice which bushes and trees are attractive for birds. Can you guess why?

For each bird you notice, draw or write a short description about the bird's colour, shape, size or characteristics. Use the next page to record your observations.

Use a bird-app or a Handbook to identify the birds. Ask the teacher and the bird guide for help.

Try to remember the size (sparrow-like, blackbird-like or crow-like), the color of the beak, colour of feet, colour of feathers, maybe you even remember the song?

Pictures: Ann E L Cardozo, UiS

Activity Sheet

Citizens Count

Observing birds

Student: _____

1. Outside.

Draw or describe a bird (one in each box):
Can you find its scientific name? Write it here:

Draw or describe a bird (one in each box):
Can you find its scientific name? Write it here:

Activity Sheet

Citizens Count

Observing birds

Student: _____

2) Back at school: Make a mind map of how you looked for the birds. Try to show how you identified the birds when you were outside in part 1. Use different colours and/or arrows to show what steps you took to find out what birds you were seeing. Talk about it to classmates. Include information on how you identified the birds (or not). What was difficult/easy? Why?

Activity Sheet

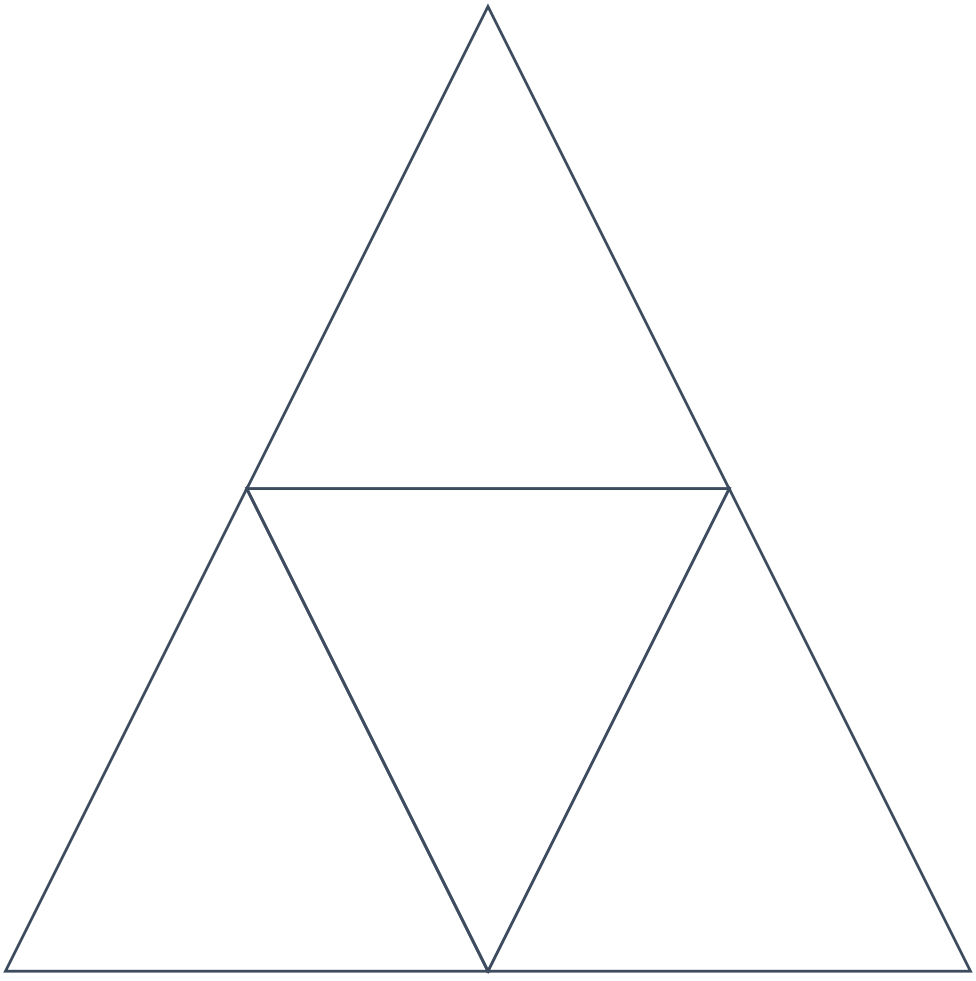
Citizens Count

Observing birds

Student: _____

3. Work in groups.

Explain your process of identifying the different birds by using the mind map, drawing, photo or audio to your classmates. The triangle below represents the whole group and each little triangle represents each one of you. Write a few words in each triangle from your conversation. What was difficult? Did you have to be very quiet or stand completely still not to scare the bird? Did your classmates experience similar things?



Activity Sheet
Citizens Count

Identifying bird song

Student: _____

1. Introduction to birdsong. Take a multiple choice quiz to learn fun facts about birdsong: https://www.bbc.co.uk/programmes/articles/4svLYkz1gBKdf57X8wZChL3/quiz-how-well-do-you-know-birdsong

Why do birds sing?

How do they sing?

How does singing work?

What types of birdsong are there?

2. Basic training. At home, use apps like Avefy (Spain) or the RSPB Bird Song Identifier to learn to recognize birdsongs:
https://www.rspb.org.uk/birds-and-wildlife/bird-songs/what-bird-is-that/
We can practice by guessing bird song in class.

Picture: Adobe Stock

Activity Sheet

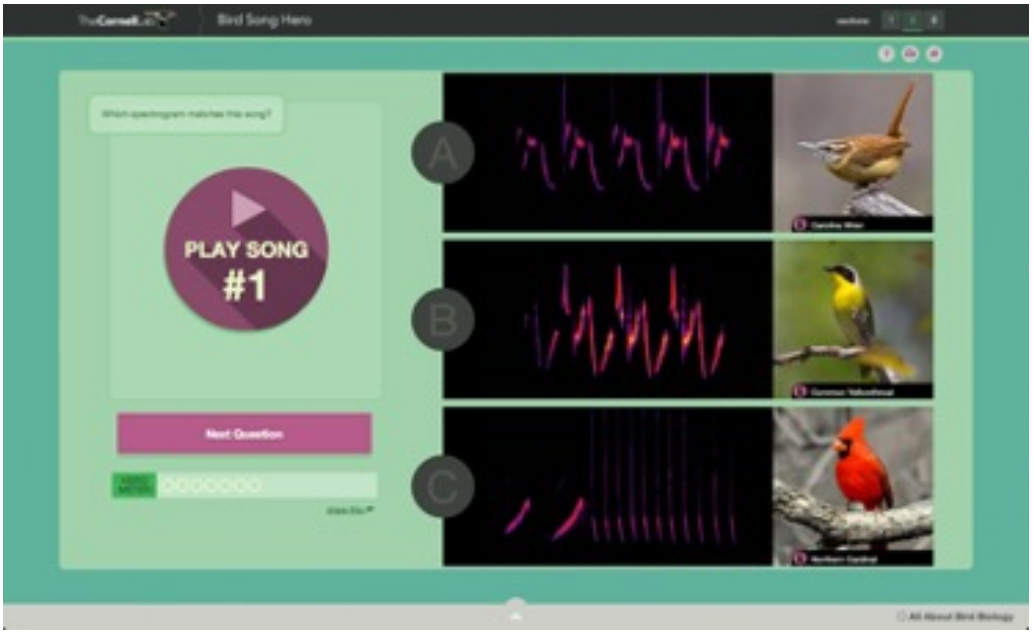
Citizens Count

Identifying bird song

Student: _____

3. Spectrograms. Play the game 'Birdsong Hero' to visualize cardinal songs and their spectrograms. Prick the correct song for each species and learn to draw spectrograms.

https://academy.allaboutbirds.org/bird-song-hero/



Picture: Bird Academy

4. Field trip. Take a walk around your garden, playground, or neighborhood and try to identify five different local species by listening to them. List the birds you heard:

Birds I heard outside

Activity Sheet

Citizens Count

Where do birds go?

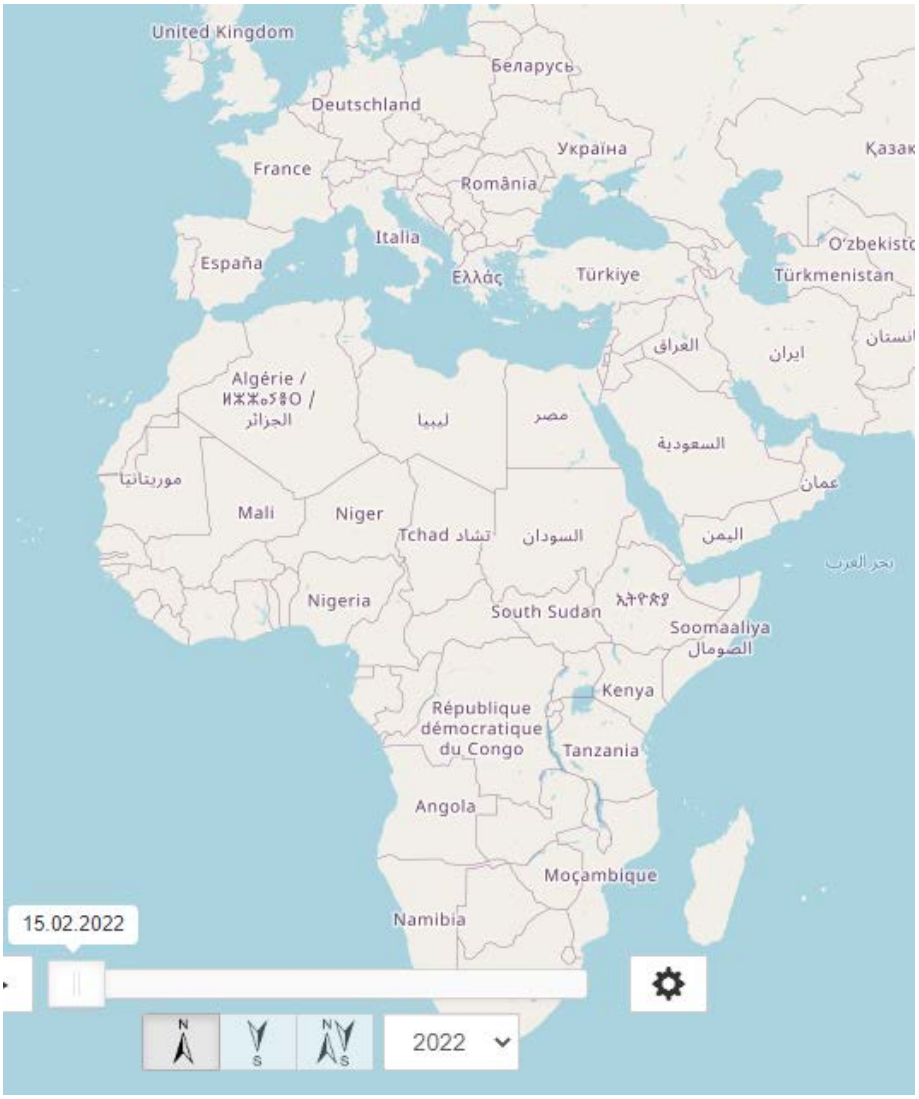
Student: _____

Go to the Bird Migration Map (https://birdmap.5dvision.ee/EN).

1. Watching migration. On the map you can see several migrating birds. By moving the slide at the bottom of the screen to the right, you can watch them migrate this year. You can also click on '2022' and pick a different year.

You'll notice that a lot of bird start flying south near the end of summer. Why do you think they do that?

Choose two bird species of your interest and on the map below illustrate the migration routes they follow.



Activity Sheet

Citizens Count

Where do birds go?

Student: _____

2. Thinking about migration geographies. Select five different bird species and watch them migrate.
What countries do they go through?
How would you describe the environmental connections between those places?
What might be the threats to birds along the route?

Name of bird	What countries do they migrate through?	Possible threats to birds along their migration?

Activity Sheet

Citizens Count

Where do birds go?

Student: _____

3. Migration patterns.
Pick any year you want from the Bird Migration menu at the bottom of the map. On the left, you see a list of birds. Pick one of them. Click the downwards arrow to see a list of names of individual birds. By clicking on their name, you can read a little story about them (you can use google translate to translate it), and below that you can select several years to see how this bird traveled.

Did this bird travel the same route each year, or did it change its route year from year?

Use a birding book or website to look up information:
What does this bird eat?

What sort of habitat does this bird like? (forest, city, etc.)

Activity Sheet

Citizens Count

Where do birds go?

Student: _____

4. Threats to migrating birds

Go to the DataZone Birdlife international website (http://datazone.birdlife.org/species/search). Select Species Type and check of Migratory. Click Advanced Search.

Write down the names of five birds that are marked with red, orange and yellow color according to Global IUCN Red List Category.

Why do you think these species are threatened with extinction or are undergoing extinction? Along their migration routes, what threats might birds face?

Name	Migration Routes (countries)	Possible threats to birds along their migration

Activity Sheet

Citizens Count

Where do birds go?

Student: _____

5. Taking action.
Think about the birds that you have looked at on the migration maps. What kind of actions could you and others take at the local national, and global level to lesson the threats to those birds?

Local actions of environmental citizenship	
National actions of environmental citizenship	
Global actions of environmental citizenship	

Activity Sheet

Citizens Count

Can we find birds in culture?

Student: _____

1. Many countries have a national bird. The national bird is often deeply rooted in the local culture (although sometimes it is chosen for reasons of nature conservation, for example).

What is the national bird of your country?

Can you find examples of your country's national birds depicted in folktales, literature or art?

Describe briefly your findings.

Why do you think this bird was chosen as your national bird? Is your country's national bird an endangered or common species?

Activity Sheet

Citizens Count

Can we find birds in culture?

Student: _____

2. There is a very famous snowy owl depicted in a book and a movie. Do you know who it is? What are the characteristics of this bird and why is it so important to its human friend? Its popularity even unintentionally endangered owls, due to a surge in public interest in keeping them as pets.

Owls as mysterious creatures have left a deep imprint in culture all over the world. Do you know of any other stories or songs that include owls?

This bird used to deliver mail for its friend. Do you know which bird species has been used for carrying messages for thousands of years, and has even been important on military purposes, although they also symbolize peace? Do you know this species in your hometown?

Do you know of any equally compelling literary text, a children's or young adult book about any bird in your language? Tell about it.

Activity Sheet

Citizens Count

Can we find birds in culture?

Student: _____

3. Birds make music and dance.

Birds sing as part of their communication with others. Birdsong has always inspired musicians. Do you know that some famous composers have been inspired by bird songs?
On the webpage https://insidetheorchestra.org/2020/09/05/musical-bird-songs/ you can listen to some of the music that imitates birds.

How have the composers imitated bird song in these examples?
1) https://www.youtube.com/watch?v=cnsbhFYq0X0
2) https://www.youtube.com/watch?v=l-dYNttdgl0

Do you know that birds also can dance? They often dance when they are trying to find a mate. You can see some bird dances in this video: https://www.youtube.com/watch?v=WS3Yt2aqyTE

A poem turned into choir music and a dance about a bird called the corn crake imitates the bird's call and the behaviour. Watch the dance:
https://www.youtube.com/watch?v=krB3oLqSZUM
What does the choreography of this dance tell us about this bird?

Activity Sheet

Citizens Count

Visit a museum

Student: _____

Birds appear in many forms, shapes and sizes at museums. Natural history museums often have stuffed birds on display and as part of their collections, or videos or drawings. In art museums, birds can be in paintings and photographs and sculptures.

A museum is a place where objects of historic, scientific, artistic or cultural significance are stored and exhibited. Often museums are organized according to what kind of objects they collect and display. A museum of natural history usually collects and display things that have to do with science and history. Art museums collect and display artworks. What type of museum you are in right now?

Wilse, Anders B., *Prot: Birds for Tøien Museum,* 1925. Property of Norsk Folkemuseum. NF.WB18802

Museums tell stories about the objects on display. Stories can help us describe how we understand birds in our surroundings. Stories can describe birds that are extinct. Stories can also explain how birds have evolved over time (evolution) or changed their behaviour. In museums these stories can be told through texts, images, or even with the bodies of birds.

Can you find a story about a bird anywhere in the museum? What kind of bird is it? How is the bird shown? What text is with the bird? Is it placed close to other animals or objects? Is it shown in a habitat with soil or water?

Activity Sheet

Citizens Count

Visit a museum

Student: _____

You identified a bird in the museum. Write your own short story about this bird. What is its name? Where did it live? What did it like to do? What species does it belong to? Who named this species, and why are they given this name? Maybe you can draw a picture or take a photo to accompany your story.

Activity Sheet

Citizens Count

Provide for birds

Student: _____

1. We can all do something for birds. In urban areas, birds are a little more dependent on people, so there is more opportunity to help them.

Look around or think about your local area near the school or home area and make a little map of what and where we can do something to provide for birds.

Food
Is there a place to plant an apple tree or a rowan tree (pine, spruce, oak, ash, ash, hazel, rose (*Rosa majalis*), currant are also fine choices)? Is there a lawn nearby? Is it left partially unmown? Constant mowing of lawns means there is no place for insects to live.

Habitat
Think of possible places for nesting: hedges, trees, or buildings providing holes or places under roof tiles for example for swifts and sparrows?

Drink and bath
Is there a place to provide water for birds in hot dry summers? Birds prefer simple shallow bowl, so the tiny birds don't drown, with fresh water to drink and bathe in. This should be placed in shade.

Nest
Is it possible to install nest boxes (following advices on the needs of different species) - think of all the possible dangers: can predators get in or how the species can approach their nest box?

Danger
Are there large glass surfaces where one could stick decorations or drawings, bird silhouettes to protect birds? Are there any places where one could turn off the outdoor lighting or draw curtains or blinds? Are there cats walking freely around in the area? Think of five reasons to explain to cat owners why they shouldn't leave their pets outside alone.

Finally, choose a place for **a feeder** in winter. When the outside temperature drops to zero, it's the right time to start feeding small garden birds.

Activity Sheet

Citizens Count

Provide for birds

Student: _____

2. Make or plan to make your own feeder from recycled materials.

*Think whether it is possible to set up a fixed or hanging feeder. Tits and greenfinches like hanging feeders, blackbirds and yellowhammers prefer fixed feeders. Do you have squirrels and cats around? Think of squirrel-proofing options!

* Consider materials: birds need a place to perch and a roof that keeps the seeds dry in rain.

* The construction depends also on the choice of food. Research what's best for the birds! The most common food in winter for little passerines are fat mixes and sunflower seeds, but also peanuts, oatmeal and millet. No salt or water!

* Once you've started feeding the birds, it's an obligation until spring. Feeder must be easily refillable! [Make sure you put out food on a regular basis. Food should certainly be available in the mornings after cold nights.]

Some examples from the Internet:

https://eestilapsed.ee/ulesanne-nr-1-meisterdame-ise-lindudele-toidumaja/eestilapsed-linnumaja-puust/

NB! Hygiene is very important, as birds might have diseases and parasites and contact with infected specimens **can** cause human **diseases**. Wash your hands after refilling the feeder.

Activity Sheet

Citizens Count

Birds of the Anthropocene

Student: _____

The “Anthropocene” is a word that is used by scientists to describe the way planet earth has been affected by human activity. This means that “the Anthropocene” can be used to describe events where for instance birds change their behavior or biology because of human activity.

Plastic is one of the materials invented and produced by humans in the last 150 years. Plastic does not biodegrade but is broken down to smaller and smaller pieces called microplastics. These particles can end up inside the body of birds. Birds can also get caught in larger pieces of plastic debris such as old fishing nets and ropes.

Activity 1

Go for a walk on a beach, a park or a forest and collect plastic waste that you find. Use gloves and be careful. Clean, wash and dry the plastic waste when you come back to school. Use the collected plastic to create imaginative artworks depicting different birds.

Activity Sheet

Citizens Count

Birds of the Anthropocene

Student: _____

Activity 2: The production of plastics has increased substantially with negative effects in different ecosystems and on the welfare of birds and animals. Most of the plastics are not biodegradable and break down into small plastic particles (microplastics). Due to their size and appearance, these particles are wrongly regarded as prey by marine animals such as fish, which are the primary food resource of many seabirds.

How are the environment, the animals, and humans are impacted due to the production and use of plastic products in our everyday life?

What should we do in order to mitigate those effects and protect nature and its surroundings?

Activity 3: Watch the following video https://www.youtube.com/watch?v=k-ktNnmM8sc

How would you describe the birds of the Anthropocene?

Is there anything we could do at a local, national, or global level in order to protect nature and the environment?

Activity Sheet

Citizens Count

Caring for birds

Student: _____

Birds and people live together in both urban and rural areas. People interact with birds and can also take care of them, for example by creating nesting places or feeding birds in the garden or in the park.

1. Interview adults about birds.

Ask three adults if you can talk to them about their memories of birds. You could talk to one of your parents or grandparents, another relative, maybe a neighbour. Ask each of them the following questions:

As a child, did they ever watch birds? Did someone in their family ever go birding with them?

Did they used to help birds, for instance by feeding them or hanging up nesting boxes?

As a child, were there any birds that they used to see a lot?

Are their any birds they used to see that have disappeared, or become very rare? Do they miss these birds, and what do they miss about them?

2. Bird changes.

In class, make a list together of birds that people mentioned have disappeared or become rarer. Have you seen any of them?

What are birds that you like, and what would you miss if they were gone?

What could you do to help prevent them from disappearing?

Activity Sheet

Citizens Count

Counting garden birds

Student: _____

1. Doing a bird count. Every year many countries in Europe have a census of birds in the winter. A **census** is count of how many individuals there are. Organizations and people concerned about the environment want to find out how many birds are in each place. This helps them to know if the number of birds are going down or up.

Even as a student, you can help the scientists count the birds by counting in your own backyard or around where you live.

To participate in the bird count, you'll need a sheet to count the birds. Fill in this chart with birds in your area and you are ready to go. Paste a picture in the photo box and write the name on the line for each bird.

Bird photo

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24

Bird photo

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24

Bird photo

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24

Bird photo

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7	8	9	10	11	12
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Bird photo

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Bird photo

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19	20	21	22	23	24

Bird photo

1	2	3	4	5	6
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19	20	21	22	23	24

Bird photo

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24

Activity Sheet

Citizens Count

Counting garden birds

Student: _____

2. Counting varies a bit in different countries. You'll need to find out if your country has a specific day or weeks for the national count so that you can do it on the right days. Even if your country doesn't have a specific day or you can't participate in the official count, you can still go out and count the birds you saw and then compare with other students in your class. Can you find out when your bird count is supposed to be?

The counting method varies in different countries. Many countries have an electronic form that you can fill in with your results. Can you find that online? How does the count work where you live?

Then go out and count birds! Use your counting sheet and mark off a number each time you see one of those birds.

After you have counted, take another careful look at your observations:
Do you have any doubts about some of the species? Ask your friends and teacher, study the bird guides.

If you're sure of everything and you've summed up the figures for each species, you can start filling in the online form to help the scientists.

Activity Sheet

Citizens Count

Counting garden birds

Student: _____

3. Summarize your sightings. After you have recorded the birds you saw, fill in your observation table below with one line for each bird species. Add up how many of that bird type you saw. Then calculate the percentage each bird made of the total.

Name of bird	How many I saw	Percent of total
TOTAL NUMBER		100

Make a bar chart or pie chart of your sightings below.

Counting garden birds

Student: _____

4. Analyze your sightings.
Which bird did you see the most of? Compare with your fellow students. Did anyone else have a different bird as the most? What might explain those differerences?

Add up all the bird observations for the whole class. What percentage of the total observations did you make? Which bird had the most observations? Which bird had the least? Why do you think the bird with the least sightings was not seen as often?

Kids count reflections

Student: _____

1. **Field journal.** Think about what you have learned during our birdwatching activities. How did they make you feel? What was your favorite part? Which was your favorite bird?

You can create a journal to record your experiences. Write down what you have done during the day. Take notes of what species you have see. Add feathers and other natural objects like leaves that you found. Draw the birds.

Picture: Cornell Lab of Ornithology

Activity Sheet

Citizens Count

Kids count reflections

Student: _____

2. Interview. Pick a theme such as migratory birds or birds under threat. Then write down questions you would ask an ornithologist (bird scientist).

My questions to ask:

Then see if you can find an ornithologist or another person who works on nature conservation, and ask them your questions.

3. Bird mural. Do a research mural about a bird species. Include pictures, feathers, main characteristics, fun facts, and a migration map. Invite parents and community members to see the murals and have a vote for the best mural.

Picture: Dreams Time

Activity Sheet

Citizens Count

Investigate local environments

Student: _____

Draw a map of your locality and its surroundings. Consider and pay special attention to areas that are good places for birds to live and feed in: hiding and nesting places, shrubs and trees that give berries, seeds or cones, water sources, marshy areas, fishing places. If you encounter birds, mark them on your map as well

Activity Sheet

Citizens Count

Investigate local environments

Student: _____

Looking at your maps, as a class consider ways to either improve some of the places to make them more bird-friendly or create more bird-friendly places. Think about the following questions and write down your observations:

- Are there any places that would need to be cleaned up of litter or poisonous materials?
- Are there enough old trees with burrows for nesting or is there a need for artificial nests?
- Do animals have access to water to drink and bathe?
- Are there enough leftover berries, seeds, and cones for birds to feed in winter or would there be a need for feeders?

Consider contacting your local birding NGO, they are friendly and excited to hear from young people taking interest in birds and wildlife. Discuss these observations with them and receive their feedback. Ask them if there is anything you can do to create bird-friendly areas in your home, school or locality.

Activity Sheet

Citizens Count

Consumption mapping

Student: _____

Choose one item you frequently use or consume. It can be paper, pens, a favourite snack or drink, clothes, shoes or a phone. Using the internet, try finding out what all the elements, packaging, or ingredients of the item are made of, where do they come from, and where do they end up after you are finished with them. Write down or draw a map of your findings.

Where does it come from?	Where does it go?

Activity Sheet

Citizens Count

Consumption mapping

Student: _____

Consider your item and the many places it travels to and from again. Think about the following concepts of circular economy. What do you think they mean? Write it down.

Reduce

Reuse

Repair

Remanufacture

Recycle

Recover