



Get Ready

Materials to collect:

1. Items for the "bird canteen":

- 4 bowls or containers representing water reservoirs,
- 6-8 disposable plates,
- 4 glasses or small disposable cups,
- 4 pictures of flowers (to put under the glasses/cups),
- pieces of bark, wood,
- fresh and dry leaves,
- (pine) cones.



2. Bird food or imitation bird food (the amount required for the whole class):

- 3,5 oz of various types of grains/seeds – e.g., sunflower, or corn,
- 10 toy mice – cat toys, or you can make them yourself out of a sponge,
- 10 small pieces of aluminium foil – cut them out in the shape of fish
- 7 fl oz dyed water (or juice) – yellow or orange. Pour it into the glasses/cups and place them on the drawings of flowers. The dyed water will play the role of nectar.
- a handful of small green plants (can be grass) – to float on the surface of the water,
- 50 pieces (about 2 inches long) of yarn (alternatively, ribbons or tissue paper) in each of the following colors: green – caterpillars (on green leaves); brown or pink – earthworms and soil invertebrates (among dry leaves); red – invertebrates feeding on wood (inserted into dead wood, pieces of bark); orange – pine cone seeds (inserted into the cones); blue – aquatic invertebrates (at the bottom of the bowl of water).



3. Items (implements) representing bird beaks – see "Tools photos" (ideally, 1 implement per student; 2 per team is good enough):

- tea infusers,
- small pliers,
- droppers,
- hairpins,
- tweezers,
- staple removers.

4. Print photos of implements representing beaks or prepare cards bearing the name of the implement.



Preparation:

On the benches in the first row, set out plates, glasses, and bowls with food (toy mice and fish, grains, and nectar) and other food hidden amongst leaves, in pine cones, and on the bark of trees.

On the benches in the second row, arrange empty plates and bowls. Students will move food from the full to the empty dishes with the help of the implements. Place a photograph of an implement representing a particular bird beak beside each empty plate. Thus each group collects food on its own plate (e.g. children with tea infusers collect food on a plate with a photo of an infuser beside it, etc.)





Movement game

Time to take on the role of birds. How would you “handle” food if you couldn’t use your hands, but had beaks instead? Try!



Prepare and arrange essential props and other items for the game before the lesson. You will find instructions on how to do this at the end of the lesson plan, in the Get Ready section (“Bird canteen” button.)

Students play the role of birds bringing food to their nests. Their task is to obtain as much food as possible. Students cannot touch food with their hands – they can only use tools representing bird beaks.

1. Divide students into groups according to the tools that they will use. There will be 6 groups: droppers, tweezers, hair clips, pliers, staple removers, and tea infusers.
2. Ask students to imagine that the empty dishes are nests in which there are chicks to feed. Remind them that it is important to bring them healthy food – bearing in mind what is edible for birds and what isn’t.
3. Give out tools to students – ideally each child in each group should have one tool – e.g., in the dropper group, each child should have one dropper. 2 per group is good enough – then students can pass on the tools, as in a relay race.
4. Students carry the food to “their” dish – which will have a photo of their tool (beak) beside it. As time is limited, allocate 5 minutes for this task. Students don’t have to collect all the food.



Look out for the students’ safety during the task – instruct them to carry their tools low, cover them with their other hand, and only use them to collect and carry food.



Observing

PBL: How to feed neighborhood birds? After making observations, the students build a feeder for birds living in the neighborhood. They learn to identify different birds and recognize their habits.

Execution of project

1. OBSERVATION STAGE:

The students observe what kind of birds are living in their neighborhood. They gather the knowledge they need to help them decide what kind of bird feeders to build and what kind of food to put in them. With this aim in mind, they come up with their own investigating questions, to which they will then find answers. They write down their questions and observations on the Project Sheet.

Hints: If possible, the students should try and identify different species (they should see how easy or difficult this task is). They observe whether there are a lot of birds or only a few, whether there are different kinds of birds or one dominant species and how different species behave towards one another (e.g. do they fight over food). If possible, they will also observe what exactly these birds eat.



Source: [flickr](#)

2. ANALYSIS AND INFORMATION GATHERING STAGE

After they have determined the species of birds living in their neighborhood, the students broaden their knowledge on the topic: what characteristics do these birds have and what is their natural food. They seek information in different sources: in lexicons, bird albums, in books and on the internet. On this basis, they decide what kind of food to place in the bird feeders they plan to build and what these feeders will look like.

3. CONSTRUCTION OF THE FEEDER

Construction stages:

1. The design stage (including deciding on where to locate the feeder – the students consider what factors should determine the choice of place).
2. Gathering of the materials needed to make the feeder.
3. Construction stage.
4. Testing stage (to determine whether the feeder can be installed in the chosen place, whether it is convenient and safe for birds, etc.)
5. Introduction of any possible adjustments and corrections.

Students themselves come up with their own ideas on what their bird feeder should look like. The design of the feeder should be their own idea. They can, if necessary, use tips in the form of ready concepts – such as this one:

<https://www.youtube.com/watch?v=xKa5R2N8YqY>

They can find other ideas here:

<http://www.diyncrafts.com/3515/home/23-diy-birdfeeders-will-fill-garden-birds>

The easiest are: Pinecone Feeders and Wooden Spoon Feeder

However, it would be best if the students themselves found concepts that interested them.

Students should remember not to put any food in their feeders that might harm the birds. More information on this subject can be found here:

http://www.humanesociety.org/animals/resources/tips/feeding_birds.html?referrer=https://www.google.pl/



Source: [flickr](#)

4. OBSERVATIONS OF THE BEHAVIOR OF BIRDS COMING TO THE FEEDER AND DRAWING

CONCLUSIONS

If the students put the feeder in a place where they can watch birds feeding from it, they can begin to make more careful observations, and note what they look and sound like. Did the birds they observed during the first stage of the project come to the bird feeder? Or did other species also appear, which the students hadn't seen earlier? Now they can identify them. They can make use of websites that suggest what to look for when birdwatching:

<https://www.allaboutbirds.org/building-skills-the-4-keys-to-bird-identification/>

Do the birds behave in the way the students had assumed – are the birds eating what the students have prepared for them? Did anything surprise the students?



Source: [flickr](#)

5. PRESENTATION OF PROJECT RESULTS

During the meeting, i.e. when summing up the results of the project, the teams present photographs of the bird feeders they made. They share conclusions from the observations they made. One interesting idea would be to present films showing birds actually using the feeder.

6. FEEDBACK

At the end of the project and after presenting the results, the students should give each other feedback and engage in self-reflection. Each student gets as many Feedback Tickets as there are people in the group. S/he writes a message for each of his/her teammates, which addresses the feedback (from - to). S/he finishes the following sentences: (i) I like... by writing about what went well in their work together together with the strong points of their teammate's work, and (ii) I wish... by noting down what could be improved in the way their teammate works (and their work together) – what the ideal model would be. On the last piece of paper the student writes down feedback on him/herself, assessing his or her own work and level of engagement.

The Project Sheet includes space for the Teacher's own feedback – write down your tips for each team for the future.