Module VII

Lesson Plan 1

Summary

Title

Nest box construction workshop

Duration	135’
The age range of students	10 - 14

Summary of the theme

Increasing urbanisation has contributed to a decrease in the availability of natural nesting sites for birds. Well-designed nest boxes can replace these lost opportunities, increasing the number of nesting birds and thus increasing their populations in our environment. It also allows us to collect valuable data.

Learning outcomes

Aim/Learning Objectives

- To understand what an ecosystem is, how it functions, and the role of birds as insect consumers in natural pest control.
- Learn to identify birds and their habits, feeding, reproduction, etc..
- Develop a project and carry out simple carpentry work.

Cross-cutting objectives

- Improve their observation skills and learn about habitats and wildlife on their school grounds.
- Collaborate with peers to optimise the biodiversity of their environment.
- Assess the consequences of our lifestyle on the environment.

Connection to SDGs

This theme is aligned with SDG 15 - "Life of terrestrial ecosystems": sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss. Target 15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity, and, by 2020, protect endangered species and prevent their extinction.

Implementation

Facilitation

- Use the hammer carefully: small taps work much better than hard blows. Be careful not to hit your fingers or those of anyone helping you.
- Before the class, ensure all resources are ready (internet connection, earthen pots, water flasks, etc.).

Resources / Materials needed

All the materials and equipment you will need to develop the topic.

- A wooden board is 15cm wide, 109.5 to 117cm long, and 1.5cm thick (untreated).
- Pencil and tape measure.
- Nails or screws to make the joints
- A waterproof rubber strip for attaching the cover
- Small hammer
- Drill
- Hole saw/crown saw
- Water-based paint or preservative for exterior use.

Ideas to continue

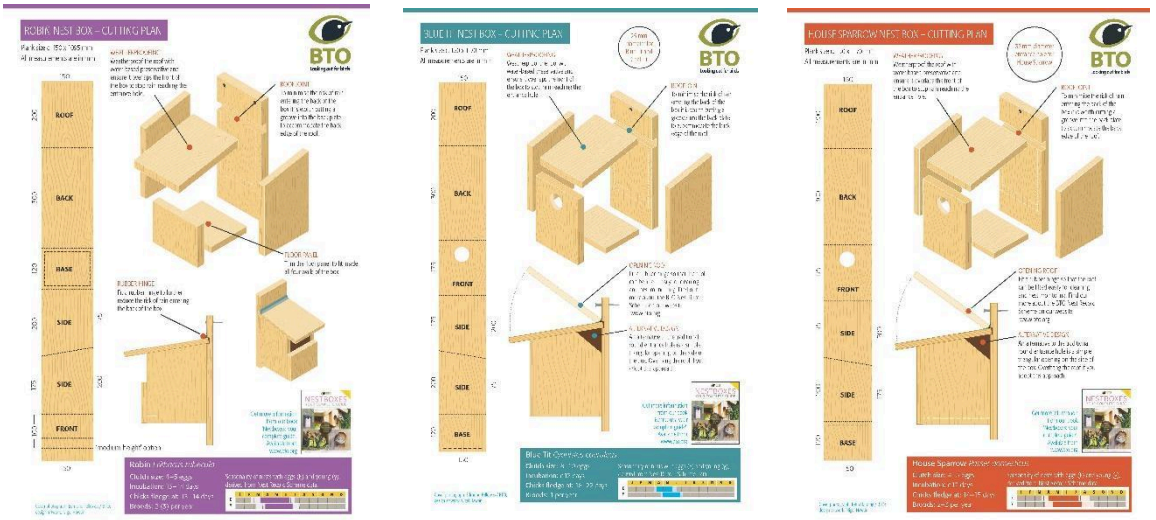
- Search for the most suitable places in the school environment and place the boxes/nest boxes. They can be placed in any wooded area, park, or garden, 2 to 5 m. from the ground, away from curious onlookers and predators. The entrance should be between N and SE to avoid strong winds and direct sunlight.
- Subsequent monitoring of the placed nesting boxes to see their use.
- Maintenance of the nest boxes: annual inspection of the condition of the boxes, repair of damaged boxes and cleaning in October or November, removing all the material of the previous tenants.

Source / Classroom materials and preparation

https://www.bto.org/how-you-can-help/providing-birds/putting-nest-boxes-birds/make-nest-box
https://www.bto.org/sites/default/files/bto-nest-boxes-essential-guide.pdf

https://www.youtube.com/watch?v=jlsMCr8WE6w

Topic outline

Timing	Step-by-step instructions
15'	Initial study and sharing of the species of birds that inhabit the school environment. We decide which species to attract since different species have different requirements.
15'	The class is divided into small groups of three or four people (this may vary depending on the total number of students doing the task). Each group looks for information about one species: habits, feeding, reproduction...
15'	Individually or in groups, study the scheme for constructing the nesting box. Some examples (links in the appendix):  *Figure 8.1.1. Nest box cutting plan.* *https://www.bto.org/how-you-can-help/providing-birds/putting-nest-boxes-birds/make-nest-box* We will measure and mark on the board with a pencil the different pieces that will form the nesting box.
15'	We cut the board along the lines we have drawn to obtain the pieces with which we will build the nesting box: the base, two sides, the back, and the top piece, which will act as the roof.
15'	Drill a couple of holes in the base piece for drainage and in the back piece for hanging. In the boxes with access through a circular opening, use a compass to draw the hole for the entrance and cut it with the appropriate drill bit.
15'	We assemble the different parts of the box with nails or screws every 6 or 7 centimetres.
15'	We join the upper piece, which will act as the "roof" of the box, with the rear piece using the rubber strip, which acts as a hinge. Thus, we can open the box and access its interior. Check that you have not nailed the lid and can open and close it easily.  *Figure 8.1.2 Joining the upper piece.*

	https://www.rspb.org.uk/helping-nature/what-you-can-do/activities/build-a-birdbox
15'	We will number the boxes to identify and track them later. We decorate the outside of the box (never the inside) with non-toxic outdoor paint so that it camouflages as much as possible with the environment in which it will be placed.
15'	Elaboration of Poster on the task and sharing.

Formative evaluation

Oral questions will be asked to assess students' progress and understanding of the topic, and group discussion will be encouraged.
Each group will produce a poster on the completion of the task, including information on the species for which the nest box is intended and its construction process and present their work to the class.
We end with a sharing session to discuss the aspects that have aroused the most interest and the difficulties encountered. This will allow us to adjust the instructions to address specific needs or difficulties.

Feedback

Net Promoter Score (NPS) is a widely used tool to measure the loyalty and satisfaction of customers or, in an educational context, students. It measures the likelihood that students will recommend the subject or course to others.
How to analyse and apply NPS is explained below:
Development of the NPS question:
- Main question: "On a scale of 0 to 10, how likely are you to recommend this lesson to other students?"
- Follow-up questions "Why did you choose that score?" and "How can we improve this lesson?"

Collection of responses:

- Digital surveys: Use online tools such as Google Forms, SurveyMonkey, or Typeform to collect student responses.
- Paper surveys: At the end of the lesson, paper questionnaires are distributed for students to complete. The Annex shows a template for collecting responses with paper surveys.
- Interactive applications: Interactive applications such as Quizziz, Mentimeter, or Kahoot! are used to collect answers in real-time.

Classification of responses:

- Promoters (Score 9-10): Students are very satisfied and likely to recommend the subject.
- Passive (score 7-8): Satisfied, but not enthusiastic students; they could easily change their minds.

- Detractors (Score 0-6): Dissatisfied students who are unlikely to recommend the subject; they could provide constructive criticism.

Calculation of NPS:

- Formula: NPS = % of promoters - % of detractors.
- Score interpretation: NPS ranges from -100 to +100. A positive score (above 0) is generally good, and a score above 50 is excellent.

Analysing and using comments:

- Review the comments to understand the reasons behind the scores.
- Identifies patterns and specific areas for improvement among detractors and passives.

Use the promoters' positive comments to reinforce the positive aspects of the issue.

Annexes

Diagrams of nest boxes for different bird species:

- https://www.bto.org/sites/default/files/house_sparrow_nest_box_plan.pdf
- https://www.bto.org/sites/default/files/blue_tit_nest_box_plan.pdf
- https://www.bto.org/sites/default/files/bto-robin-nest-box-plan.pdf

Sample survey:

QUESTIONNAIRE TO COLLECT FEEDBACK ON THE TOPIC

On a scale of 0 to 10, how likely would you recommend this subject to other students?

0	1	2	3	4	5	6	7	8	9	10

Not likely at all — Extremely likely

Why did you choose that score?

How could this issue be improved?