

Stamp Collecting Month Overview

Stamp Collecting Month (SCM) provides an exciting way for middle and upper primary school students and teachers to engage with interesting learning focus areas through stamps. This year's theme In the Garden was highlighted by primary school teachers as a topic that will appeal to children while offering a range of learning opportunities and links to both the curriculum and real life. Encourage learning about sustainable living, biodiversity and minimising environmental impact.

Lesson Overview

This lesson will analyse the impact of native birds, animals and insects on school gardens and highlight ways we can support and protect them by designing and building nest boxes to install around the school. The students will observe and record bird, animals and insect visits, explore the needs and habits of some species of native birds, insects and animals, and design and build nest boxes for native birds, insects and animals to be displayed in the school garden or around grounds.

Learning intentions

Students will understand:

- The importance of wildlife in our ecosystems
- The impact birds have on pollination
- The needs of some of our native birds
- How to use design techniques for α purpose
- How to use inquiry skills to solve α problem
- How to use observation skills to gain information

Assessment

There are a number of informal assessment opportunities throughout this lesson including:

- Class discussion
- Student questioning
- Work samples
- Observation
- Student reflection
- A summative assessment of the finished resource

Resources

- Activity sheets
- Interactive whiteboard (IWB)
- School garden
- Large design paper, A2 or A3
- Felt tip pens, pencils, rulers
- Construction equipment
- Recycled or donated plywood, 15mm thick

Differentiation

As with all of our lesson plans, we encourage teachers to differentiate the activities by making any necessary modifications in order to cater for diverse student learning needs.

Note: the suggested duration of the activities found within this module may require adjustment to cater for the needs of your students.







Teacher Note

Design and construction

In this lesson students will be designing and constructing a model with a range of materials. They may need access to a range of resources including wood cut-offs, hammers, nails, screws, drills etc. Please follow your school's policy and procedures when giving students access to these materials and ensure adequate supervision is available for students to conduct their activities in safety.

Curriculum links

Science

ACSSU044 Living things can be grouped on the basis of observable features and can be distinguished from non-living things (ACSSU044 - Scootle)

Design Technology

ACTDEP014 Critique needs or opportunities for designing and explore and test a variety of materials, components, tools and equipment and the techniques needed to produce designed solutions (<u>ACTDEP014 - Scootle</u>)

ACTDEP017 Evaluate design ideas, processes and solutions based on criteria for success developed with guidance and including care for the environment (<u>ACTDEP017 - Scootle</u>)

Introduction

Activity 1

- 1. Display the Pollinators Stamp (hyperlink) on the Interactive Whiteboard (IWB).
- 2. Invite a discussion with children on the living things we find in our garden and record their ideas in a table on the IWB which sorts ideas into three categories; Plants, Animals and Insects.

General capabilities

- 📃 Literacy
- 🔚 Numeracy
- 😨 Critical and Creative Thinking
- 😩 🛛 Personal and Social Capability
- 😔 Ethical Understanding

Cross curriculum priorities





- 3. Focus on the animals and insects columns. Ask the children why these animals and insects might come to visit our gardens? Encourage them to think about their needs.
- 4. Ask the students how the behaviour of these animals and insects might help us?
- 5. Identify the process of pollination (if this has not been volunteered by the children). Explain that animal assisted pollination is a key process in growing plants, fruits and vegetables in our gardens. It results in seeds and fruits being produced and the growth of new plants. You may want to explain how pollination occurs with different animals and insects, i.e, bat-assisted vs bee-assisted.
- 6. Explain to the students that this project will focus on the birds in our garden and ask which birds children recognise already. Take a look at some of the nest boxes for a variety of animals in the following article https://www.sgaonline.org.au/nestboxes/. Discuss the animals mentioned and as a class, decide which animals/ birds or insects/ they will create next boxes for.





Activity 2

- 1. Over a period of time (ideally at least one week) record which insects, animals or birds visit your school garden. You may wish to use http://birdsinbackyards.net/finder to help children identify the birds.
- 2. When you have a list of the animals that visit regularly, split the class into small groups. These will be their groups for the duration of this project.
- 3. Explain that the groups will be designing and building a nest box for an animal or bird that visits our school garden.

Activity 1

 Encourage students to choose and research a native animal or bird from the list created by their birdwatching efforts. Alternatively, assign each group a different bird.

Teacher note:

Only birds that build their nests in tree hollows will successfully nest in nest boxes. You may wish to adjust the list of suitable birds to ensure groups can only work on these species during this project.

2. Groups should use a range of sources to research their bird or animal, such as information texts and websites. If possible, invite an ornithologist or horticulturist to speak to the class and answer any questions.

Teacher note: The research period is important for groups to gather information on their bird. Ensure that groups have sufficient time to do this, or assign this as a homework activity.

- 3. Distribute the activity booklet Native Animal Research (hyperlink) to each group and encourage them to fill in each section with the information they discover.
- 4. When all groups have completed their research booklet provide them with an opportunity to present their findings to the class.



Activity 2

- 1. Using the IWB display each type of nest box and discuss how each would be suitable or unsuitable for the animals the groups have chosen.
- 2. Distribute the Nest Box Evaluation activity sheet to each group and encourage them to identify the advantages and disadvantages for each nest box shape for their chosen animal.
- 3. Hand out large paper (A2 or A3). Groups will now design a nest box for their chosen animal. Encourage them to think about the animal's individual needs. Students should consider the animal's size, whether it will need to bring twigs and grass into the nest box, how far off the ground it will need to be, how to keep predators away, and other practical implications.

Teacher note: We recommend ensuring that students include a way for humans to easily access the interior of the box (such as a hinged lid) as a way to check for unwanted species entering the nest, such as introduced birds (Common Myna birds or Starlings) or bees. Some baby birds will need a way to climb out of the box once they are ready to leave the nest. We recommend encouraging children to think of ways to solve this problem if they have designed a nest box with an entrance at the top.

- 4. Encourage groups to make notes on their designs to describe each feature that has been included and the reason for it.
- 5. When all groups have finished their designs, provide them the opportunity to present their design to the class and gather feedback from their peers. Using this feedback, students then make any necessary changes to their design before they begin the construction phase.







Activity 3

- 1. Now for the fun part! Groups gather the materials they need to make a model of their design.
- 2. Provide each group the opportunity to present their finished nest box and encourage (positive) critical discussions with the following questions:
 - Does it represent their plan well?
 - What has been changed and why?
 - Will it be suitable for the group's chosen animal?
 - Is it suitable to hang in our school garden?

Some nest box building tips:

- We recommend using recycled or scrap plywood at least 15mm thick for the nest boxes.
- Ensure that there are holes drilled in the base of each nest box to allow air to circulate.
- Use a pencil on the wood to mark out any design before cutting it.
- Always ensure safety goggles and gloves are available when using wood saws, hammers and drills.
- Always ensure adequate supervision when working with tools.
- If using wood glue, ensure vinegar is available to dissolve any glue that gets on furniture, floors or the students.
- Put a waterproof coating on your box with varnish or find another way to keep the inside of your box dry.
- You may want to consider painting or camouflaging your nest box, depending on its intended surrounding area.

Further Reading

- http://birdsinbackyards.net/finder
- <u>http://birdsinbackyards.net/General-Tips</u>
- <u>http://birdsinbackyards.net/Nest-box</u>

Plenary

- Install the nest boxes around the school grounds. You may need to employ the help of your school caretaker or knowledgeable parent volunteer for this.
- 2. You may want to ensure predators such as cats and possums are unable to reach the nest boxes by placing a guard around any tree trunks below the nest boxes.
- Closely monitor any activity around the nest boxes in the following days and weeks, you may wish to make this a whole-school activity.
- 4. Discuss any activity observed around the nest boxes and compare the activity to the observations noted in the initial period of the project. Have the nest boxes succeeded in encouraging more native birds and animals to visit your school garden?

Some tips for looking after your nest boxes:

- Continue to closely observe your nest boxes. If unwanted species begin to nest or visit the boxes you may need to open the boxes and remove them.
- Face the nest boxes away from strong winds.
- Ensure your boxes are waterproof if they are not in shaded areas.
- Monitor the usage of your nest boxes, and share the findings with your local bird club, nature club or council who will be glad to receive the information.
- Keep your distance if you see that your nest box is being used. If disturbed, some animals will leave the box to find more secure lodgings.









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anima	How might our garden help this animal?
Other interesting facts about this (How might this animal help our school garden?

Your name

Stamp Collecting Month	What does this animal eat? Draw or list.	5Bunoh
	Draw and label the eggs or young of this animal	How does this animal look after its
		Where is this animal found in Australia?
AUSTRALIA POST	Description of animal	Where does this animal like to nest?



