

# WHAT DO SCIENTISTS DO? TIE-IN: RECYCLED BIRD FEEDER

60 minutes | Grade 4-6



**SUPERNOVA**  
DALHOUSIE UNIVERSITY | HALIFAX, NOVA SCOTIA

## OVERVIEW

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### Description

*Participants will learn about recycling old materials into new creations, and how recycling can help different inhabitants of our environment.*

*Note that bird feeders should be cleaned regularly to prevent spreading avian flu or other pathogens. Please check with your local environmental sources and [Environment Climate Change Canada](#) to make sure it's alright to use bird feeders.*

### Learning Outcomes

- Learn about recycling/upcycling and reusing
- Learn about the importance of birds in the ecosystem
- Observe species of birds and how the weather and climate affects their behaviour

### Outline

1. Making bird feeders
2. Clean-up
3. Hang Your Feeder
4. Observe!

### Materials

Item	Quantity
● Plastic Pop Bottle or Tetra Pack	● 1
● Wooden Skewers	● 2
● Jute Twine	● 1 foot
● Scissors	● 1 pair
● Thumb tacks	● 1
● Bird seed	● 1 bag
● Art supplies (Sharpie, markers, etc.)	

## SAFETY CONSIDERATIONS

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- Precautions for Instructor and Participants.
- Please use caution, and explain each safety measure to the participants. Ensure any incidents are reported appropriately.
- Indicate with an 'x' next to the items that apply to this activity.

Material/Chemical Safety	
	SDS Required ( <i>attach in write up</i> )
	Electrical Components
	Food &/or Potential Allergens
	Other:
Equipment Precautions	
x	Sharp Objects: <b>Scissors</b> / Staplers/ Scalpel
	Burn Risk: Glue Guns/ Hot Plate/ Flame
	Tools
	Other:

Digital Safety [ ] Yes [X] No	
Special Clean-up Required? (indicate below)	
Safety Equipment or Protection	
	Goggles/ Gloves
	Lab Coat
	Fire Extinguisher
	Other:
Other Safety Precautions? (indicate below)	

## KEY INFORMATION

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### **Topic 1: Role of Birds in the Ecosystem**

Birds help in the ecosystem in many indirect and direct ways, called ecosystem services. Birds help their ecosystem by spreading seeds, either by burying or dropping them or through waste after they eat the seeds. By eating seeds they can help remove hard seed coats through digestion, which makes the germination process easier. Birds also have an important role as pollinators, just like bees! Birds are also important waste removers, often foraging fields for pests and waste material from crops, which they help digest, decompose, and return to the ecosystem.

### **Topic 2: Recycling/Upcycling**

Recycling is the process of taking materials such as plastic, glass, or paper and converting them into new or reusable material. Upcycling is a new process in which recycled material is turned into a material or product that is of higher value or functionality than before. Upcycling is popular in fashion and crafting niches.

### **Topic 3: Nova Scotian Birds and Birdseed**

Birds aren't picky eaters and eat lots of foods including apples, bananas, pasta, rice, eggshells, cheese, seeds, peanut butter, and raisins. Sunflower seeds are favored by many birds. Common birds in Nova Scotia include doves, pigeons, woodpeckers, seagulls, eagles, falcons, hummingbirds, hawks, ducks, swans, sparrows, cardinals, crows, ravens, blue jays, and finches.

## LESSON PLAN AND PROCEDURE

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**An adult should be present to help cut the recycled bottles or packs with scissors.**

### **Making Recycled Bird Feeders**

#### **1. Plastic Bottle Bird Feeder**

- a. Poke small holes in the bottom for drainage with the thumb tack.
  - i. This will allow for drainage to keep the seeds from getting mouldy.
- b. Poke two small holes opposite each other about an inch up from the bottom of the bottle.
- c. Insert a wooden skewer through the holes to create a perch.
- d. Cut a small hole (about an inch in diameter) above the perch for birdseed access.
- e. Create a hole in the center of the bottle cap.
- f. Thread twine through the hole and knot it.
- g. Screw the cap back on.
- h. Knot the free end of the twine into a loop or leave it open for tying.

#### **2. Tetra Pack Bird Feeder**

- a. Cut a rectangular hole on the front for seed access.
- b. Create a hole below the opening on the front and back.
- c. Push a skewer through the holes to create a perch.
- d. Create two holes at the top of the container.
- e. Thread twine through the holes and knot to create a loop.

#### **3. Customization**

- a. Decorate the outside of your feeder with art supplies.
- b. Don't colour on the inside of the feeder—this may cause some ink to touch the seeds which isn't great.

#### **4. Clean-up**

- a. If your feeder breaks or you want to take it down, all the materials can be recycled. Wooden skewers and twine can be composted, tetra packs and bottles can be recycled.

#### **5. Hang Your Feeder**

- a. Hang your bird feeders in quiet, safe spots at or above eye level, a few meters from windows, and out of reach of cats and squirrels.

#### **6. Observe!**

- a. Keep an eye on your bird feeder, especially in the spring as migratory birds may come to have a snack on their migration path. Notice which kinds of birds come by, and what the weather is like when they do.
- b. Are there patterns to when birds show up? Are there more birds in the morning, afternoon, or evening?

### **Resources**

- [eBird](#): Explore local birds and get involved with the birding community
- [iNaturalist](#): User-community based site and app that can help identify birds; data can be used in citizen science initiatives
- [Cornell Lab Merlin Bird ID](#): App that can identify birds based on photo, colours, and even bird songs