

2. Building Bird Feeders With Recycled Materials

Source: Adapted from *The Junior Environment Club Manual*, Waterloo Region District School Board and Youth Services Canada

Description

Students will use recycled materials to make a bird feeder, reinforcing the idea that by reusing objects, rather than buying new ones, we can generate less garbage.

Background Information

There is no place on Earth called “away.” All the items we throw away must go somewhere, and usually end up in the soil, air, streams and oceans. By reducing our consumption and reusing everything we can, we will minimize the amount of garbage going to landfill.

There are many birds found in the city over the winter/early spring. To survive, birds either migrate or they have made adaptations to deal with Ontario’s winters. Through the winter in the city, birds survive on insects and seeds that are not covered by snow. Many songbirds use bird feeders as a source of food throughout the winter. However, the bird feeder is only a minor food source, contributing less than 20% of their total diet. Common birds that may be seen around bird feeders during Ontario winters are:

- ▶ White Breasted Nuthatch
- ▶ Black Capped Chickadee
- ▶ House Sparrow
- ▶ Northern Cardinal
- ▶ Blue Jay
- ▶ American Goldfinch
- ▶ Downy and Hairy Woodpecker
- ▶ Tree Sparrow
- ▶ Mourning Dove
- ▶ Dark-eyed Junco

See Appendix A for details.

A bird feeder should be hung near trees, bushes or a treed area and away from windows. This gives birds easy access to the food without becoming vulnerable to predators. The bird feeder should be filled regularly with seed to ensure that it is a constant source of food for the birds that are using it.

Materials

- ▶ one 2-litre pop bottle/milk carton for each student
- ▶ scissors
- ▶ bird seed (be cautious of nut allergies)
- ▶ one stick or small twig per student
- ▶ glue/tape
- ▶ string
- ▶ diagram of bird feeder (Appendix B)

Time Allotment

Introduction: 5 minutes

Craft Time: 30 minutes

Discussion: 5 minutes

Note: It is essential to have 1-2 other adults in the classroom to help with scissors!

Teaching/Learning Strategies

1. Begin the session by being a 'garbage-picker' - select an item from the garbage (only something safe to handle please!) and discuss with students the concept of throwing something "away." Where will this piece of garbage go? What types of problems are associated with continuing to throw things away?
2. Introduce/reinforce the idea that there is no place on Earth called "away." What are the alternatives?
3. Reusing items helps to keep things from going to landfill. Reusing items by making bird feeders allows students to connect to the wildlife in the area.
4. Draw a sample bird feeder on the board (Appendix B), or show students one you have made. Outline the three criteria for constructing a birdfeeder that will work: it a) needs to hang, b) have an opening big enough for a bird to eat from, and c) have a perch for the bird to sit on while eating.
5. Ask students to select either a pop bottle or a milk carton.
6. Instruct students to outline where they would like their perch and feeding hole.
7. With the help of parent volunteers or older students, have students cut out the feeding hole (ideally a square hole 5 cm from the bottom of the pop bottle or milk carton, 10-15 cm high and 10 cm wide).
8. Again with the help of adults, students make a small cut below the feeding hole. Then push the stick or twig into the hole. Use glue/tape to hold the stick in place (if you make a small hole you probably will not require glue/tape).
9. Tie a string around the top of the pop bottle or milk carton.
10. Decorate the bird feeder.
11. Birdseed should be put in the bottom of the feeder.

Follow-up Discussion Questions

- ▶ Brainstorm a list of other items that can be reused instead of being thrown away or recycled.
- ▶ How can you help others realize that there is no place on Earth called “away”?
- ▶ How are our actions connected to what we find in the landfill?

Extensions for additional classroom projects/activities

- ▶ Maintain a reusable materials art centre in your classroom, and encourage students to bring in items to stock it. Have the centre available for creating ‘functional art’ during free time.

Curriculum Connections: Clustering of Expectations

GRADE 1: SCIENCE & TECHNOLOGY—Needs and Characteristics of Living Things (2007)

- 2.2 investigate and compare the basic needs of humans and other living things, including the need for air, water, food, warmth, and space, using a variety of methods and resources (*e.g., prior knowledge, personal experience, discussions, books, videos/DVDs, CD-ROMs*)
- OE 3 demonstrate an understanding of the basic needs and characteristics of plants and animals, including humans
- 3.5 describe how showing care and respect for all living things helps to maintain a healthy environment (*e.g., ...feeding birds during cold winter months...*)

Appendix A *Common Ontario Birds*

White-breasted nuthatch



Identification Tips:

- Length: 13 cm
- Straight gray bill
- Black crown and nape
- White face and underparts
- Blue-gray upperparts
- Rusty undertail coverts
- Short tail
- Sexes similar but female duller
- Feeds by hopping along tree trunks and branches often hanging upside down

House sparrow



Identification Tips:

- Length: 11 cm
- Small, seed-eating bird
- Thick, conical bill
- Pink legs
- Extremely common in urban and agricultural areas
- White patch in wing
- Gray rump
- Black bill in summer; yellowish in winter

Adult male:

- Gray crown
- Black throat, upper breast, and small mask; less black on throat in winter
- Grayish side of neck and underparts
- Rusty-brown nape and upperparts
- Black streaks on back
- Female and immature:
 - Gray-brown crown
 - Buffy line extends rearward from eye bordered below by gray-brown line
 - Grayish-white underparts
 - Black and tawny streaks on back
 - Black wing feathers with wide tawny edges
 - White patch on wing
 - Yellow bill
 - Immature males lack full throat patch of adults

Blue Jay



Identification Tips:

- ▶ Length: 25 cm
- ▶ Black sturdy bill
- ▶ Blue crest and upperparts
- ▶ Black eyeline and breastband
- ▶ Grayish-white throat and underparts
- ▶ Bright blue wings with black bars and white patches
- ▶ Long blue tail with black bars and white corners
- ▶ Dark legs
- ▶ Migrates during the day in small flocks

Downy woodpecker



Identification Tips:

- ▶ Length: 14 cm
 - ▶ Very small black and white woodpecker
 - ▶ Very short bill
 - ▶ Mostly black head set off by broad white supercilium and lower border to auriculars
 - ▶ Black nape
 - ▶ White back
 - ▶ Black wings with white spotting on coverts and flight feathers
 - ▶ White underparts
 - ▶ Black rump
 - ▶ Black tail with white outer tail feathers barred with black
- Adult male:**
- ▶ Red spot at rear of head

Hairy woodpecker



Identification Tips:

- ▶ Length: 19 cm
 - ▶ Medium-sized black and white woodpecker
 - ▶ Fairly long bill
 - ▶ Mostly black head set off by broad white supercilium and lower border to auriculars
 - ▶ Black nape
 - ▶ White back
 - ▶ Black wings with white spotting on coverts and flight feathers
 - ▶ White underparts
 - ▶ Black rump
 - ▶ Black tail with white outer tail feathers
 - ▶ Significant racial variation can result in juveniles with barred outer tail feathers (Queen Charlotte Islands), juveniles with barred backs and flanks (Maritime provinces) and birds with brown feathering replacing the black (Pacific Northwest).
- Adult male:**
- ▶ Red spot at rear of head

Mourning dove



Identification Tips:

- ▶ Length: 27 cm
- ▶ Sexes similar
- ▶ Medium-sized, somewhat slender dove with very thin neck
- ▶ Black bill

Adult:

- ▶ Pale buff-brown head, neck, breast, and belly
- ▶ Purple and green iridescence on neck
- ▶ Small black mark on lower neck
- ▶ Medium brown back and

upperwings, with large black spots on coverts

- ▶ Long tail is pointed at tip
- ▶ Dark brown tail with white tips to outer four tail feathers

Juvenile:

- ▶ Dark brown mottled head neck and breast
- ▶ Scaly neck and upperwings with numerous black spots on coverts and scapulars
- ▶ Pale belly
- ▶ Medium length tail is pointed at tip

Black-capped chickadee



Identification Tips:

- ▶ Length: 12 cm
- ▶ Short bill
- ▶ Black crown and throat
- ▶ White face
- ▶ Pale gray upperparts

- ▶ White edges to wing coverts
- ▶ Grayish-white underparts
- ▶ Rusty flanks
- ▶ Sexes similar
- ▶ Often found in small flocks

Northern cardinal



Identification Tips:

- ▶ Length: 19 cm
- ▶ Large, conical bill
- ▶ Crest
- ▶ Long tail

Adult male:

- ▶ Bright red plumage, dullest on back and wings
- ▶ Black around base of bill
- ▶ Red bill

Adult female:

- ▶ Reddish crest, wings and tail
- ▶ Brownish-gray upperparts
- ▶ Buffy underparts
- ▶ Red bill
- ▶ Juvenile like adult female but has dark bill and crest

American goldfinch



Identification Tips:

- Length: 11 cm
- Small, seed-eating bird
- Short, conical bill
- Short, forked tail

Male alternate:

- Plumage held in Spring and Summer
- Black forehead
- Yellow head, back, breast and belly
- Black wings and tail
- White wing bars and tertial edges

- White rump and undertail coverts
- Pale bill and legs

Female alternate:

- Greenish upperparts
- Yellow underparts
- Pale bill and legs

Basic:

- Plumage held in Fall and Winter
- Yellow face
- Brownish-olive upperparts
- Whitish underparts
- Blackish wings with pale wing bars

American tree sparrow

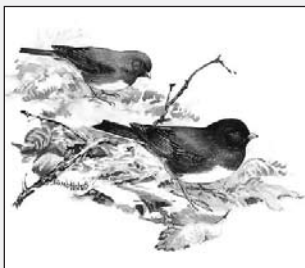


Identification Tips:

- Length: 14 cm
- Dark, conical bill with yellow lower mandible
- Rusty crown and eyeline
- Gray supercilium and face
- Gray breast with black spot
- Rust patch at side of breast
- White belly and

- undertail coverts
- Buffy flanks
- Tan back with dark streaks
- Brown wings with wing bars
- Slim, forked tail
- Sexes similar
- Juvenile plumage (Summer) similar to immature but duller with streaked breast

Dark-eyed junco



Identification Tips:

- Length: 14-16 cm
- Pink, conical bill
- White outer tail feathers

- Considerable geographic variation in plumage
- Various forms were formerly considered separate species

Sources:

<http://www.mbr-pwrc.usgs.gov/id/framlst/i5930id.html>

<http://www.yankeegardener.com/birds/>

Appendix B *Bird Feeder*

