

BIRDFEEDER

OVERVIEW

The students construct birdfeeders and set them up at home, at school, or at camp. For a week or two, the youngsters investigate bird behavior.



BACKGROUND



Birds are everywhere, yet many of us do not take the time or have the opportunity to observe them closely. Birds, because they fly, use a lot of energy for their size and thus need quite a bit of food. For this reason, eating and hunting for food take up a lot of their time. A good way to attract birds, therefore, is to supply them with food. Constructing a birdfeeder is one way to do this. Backyards, apartment ledges, trees, campsites, and the window ledges of your home or school are good sites for birdfeeders.

By attracting birds to your feeder, you can closely observe birds and their behavior. With a basic platform, a variety of simple foods, and a few days of patience, you can be rewarded by close-up views of local birds such as sparrows, finches, or blue jays. Shy birds will be attracted by the activity of the bolder birds.

BIO Animal Investigation
KEY Bird Behavior
Feeder Construction

CHALLENGE: BUILD A BIRDFEEDER THAT WILL ATTRACT BIRDS, AND FIND OUT ABOUT THEIR FEEDING BEHAVIOR.

MATERIALS



For each builder (or team of builders):

- 1 birdfeeder (See the "Basic Birdfeeder" Equipment Card.)
- 2 jar lids*
- 1 assortment of foods: small seeds* (parakeet or canary food), large seeds* (pigeon food, chick mash), unsalted sunflower seeds, popped popcorn, raisins, suet (beef fat), peanut butter
- 1 plastic sandwich bag*
- 1 large grocery bag*
- 1 copy of the set of Action Cards, the "Eyespot" card, and the "Bird Model" card

For the group:

- 1 Birdfeeder Junk Box* containing: thumbtacks, assorted nails, tacks, fishline (4-6 pound test monofilament), colored construction paper, clay, and masking tape
- hammers
- crayons* and felt pens*
- scissors*
- 1 sheet of Action Cards*
- 1 "Basic Birdfeeder" Equipment Card*
- 1 "Eyespot" Equipment Card*
- 1 "Bird Model" Equipment Card*
- * Available from Delta Education.

PREPARATION



Group Size. This activity works well with from two to thirty youngsters, although construction takes longer with large groups.

Time. Allow thirty to fifty minutes for construction time. Observation time will vary according to the procedure you select.

This is an activity in which kids build the feeders and either take them home to attract birds for viewing or set them up in some other site. If *Birdfeeder* is conducted as a construction activity only, with participants taking their feeders home, allow one to two weeks before gathering your group to discuss their birdfeeder experiences. At a camp or school site, children can construct feeders and within a few days find birds using the feeders. Time can be set aside for children to observe, experiment, and even photograph the feeding birds.

Site. An area with work tables is best, but nearly any open site is good for the construction phase.

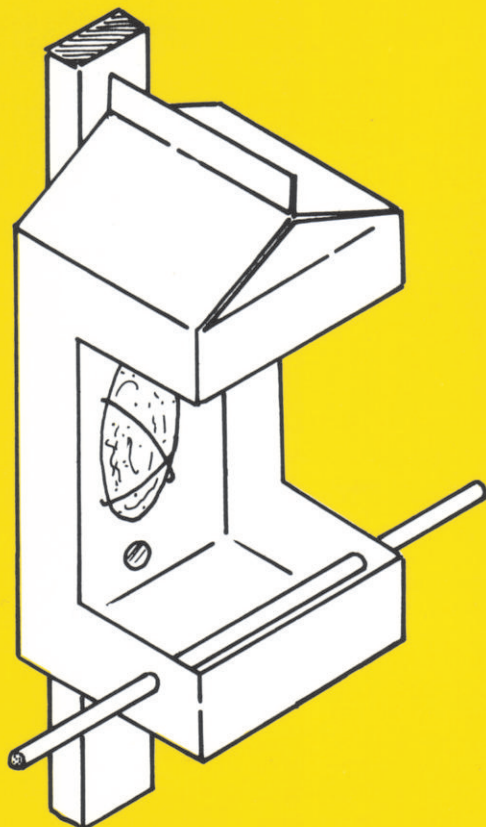
Materials. Familiarize yourself with the Birdfeeder Action Cards, "Basic Birdfeeder" Equipment Card, "Eyespot" Equipment Card, and "Bird Model" Equipment Card. Make one copy of each card for every birdfeeder to be constructed. To help you plan the activity, decide if your group will both construct and carry out the activity or only construct at your site. Make one birdfeeder to be used as an example for the youngsters.

Caution! Birdfeeders attract birds, and a concentration of birds may attract cats. If cats are present, position the feeders out of the cats' reach. Birds can become dependent on feeders as a source of food, especially in winter when natural foods are scarce. Therefore, do not start a feeding program when natural foods are scarce unless you can continue the program.



ACTION

1. Invite the youngsters to suggest ways of attracting birds to a certain place for viewing. If the youngsters do not suggest using food, suggest it. Tell the kids that they will be constructing birdfeeders and assembling other materials to set up at school or to take home. Some children may want to work as a team so they can share a single feeder at one of the team member's homes; others may wish to work alone.



2. For those children who are unsure of how to construct a birdfeeder, explain the procedure described on the "Basic Birdfeeder" Equipment Card, and show them the one you constructed.

3. Show the kids the construction materials you have available and let them make their feeders. Offer assistance where needed.

4. After the youngsters have made the feeders, have each builder or team of builders select three or more of the duplicated Action Cards.

5. Distribute sandwich bags and let the kids select the food for their feeders.

6. If the youngsters will be taking their feeders home, distribute grocery bags for the kids to use to carry their feeders, food, and other materials home.

7. Where to place the feeders.

Emphasize that a good location for the feeder is important, and that feeders should be placed where cats cannot attack the visiting birds. Feeders should be:

- a. Visible to the birds.
- b. Visible to the observer.
- c. Near bushes or trees.
- d. Well secured to trees, fences or window sills, or on a long stake firmly pounded into the ground.

8. Ask a few youngsters to describe where they plan to put their birdfeeders. Tell the kids that it may take the birds several days to discover the feeders.

9. Let the kids cut out their bird models and eye spots. Show them how to position the outlines on or near the feeders to see the birds' reactions.



10. After the kids have constructed their feeders, show them how to keep track of the visiting birds. (See illustration.)

DATE	TYPE OF BIRD
9/14	JAYS, SPARROWS
9/16	SPARROWS, JUNCOS, JAYS

FOOD FOR THOUGHT



If your birdfeeders are established at camp, discuss the children's observations each day. If the children are taking the feeders home, wait one or two weeks to discuss their birdfeeder experiences.

1. How often did the same bird visit?
2. How did different birds approach the feeder?
3. Were there any birds that bullied other birds? Which birds were bullies?
4. Which kinds of birds ate the most?
5. What foods did the birds eat?
6. Did different kinds of birds eat different foods?
7. How many different kinds of birds were seen at a feeder at the same time?
8. Did birds appear at the feeder at the same time each day?

BRANCHING OUT



1. Use an identification guide to learn the names of birds you see.
2. Compare the birds that visit the feeder to those observed in other areas.
3. Move the feeder to different types of sites to see which birds from the new sites will use the feeder.

Birdfeeder Action Card #1



Food Choice. Discover the preferred foods of birds in your area.

1. Use a hammer and nail to punch a hole through two jar lids and tack a lid to each end of your feeder.
2. Offer the birds a choice by filling each lid with a different food. Try one of the following combinations or create your own.
 - small seeds and large seeds
 - seeds and suet (Tie suet down.)
 - raisins and suet
 - popcorn and seeds
3. Check your feeder daily to see which foods the birds choose.
4. Over a period of several days, change the available food choices to discover which food the birds prefer.

Birdfeeder Action Card #2



Background. Discover the color, texture, and/or pattern of background that your birds prefer to eat from.

Divide your feeder in half. Use a different color, texture, or pattern in each half of the feeder. Fill each jar lid with the same food. Experiment for several days to see if the background design has any effect on the birds' feeding preference.

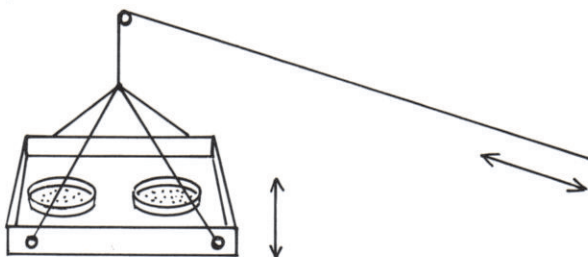


Birdfeeder Action Card #3



Movement. Will birds eat from a hanging or moving feeder?

1. Insert a nail into each corner of your feeder. Attach fishline to the nails, and hang your feeder from a tree limb or from house eaves.
2. While the birds are feeding, move the feeder back and forth, and see what the birds do.



Birdfeeder Action Card #4



Eyespots. How do birds respond to cat-eye and owl-eye spots on moths and butterflies?

1. Using the "Eyespot" Equipment Card, construct a moth model. Thumbtack the model to your feeder. "Flash" the eyespot by pulling the fish line when a bird lands on the feeder. Vary the size and color of the model.
2. What do the birds do when you flash the eyespot? Why do you think moths and butterflies are colored this way?



Birdfeeder Action Card #5



Models. How do birds respond to animal models? Construct models that will attract or frighten birds.

1. Use the patterns on the "Bird Model" Equipment Card and construction paper to make bird models. Paint or color them to resemble birds seen at your feeder. Thumbtack the models to your feeder and observe the reactions of the birds.
2. Try a clay snake model.



Birdfeeder Action Card

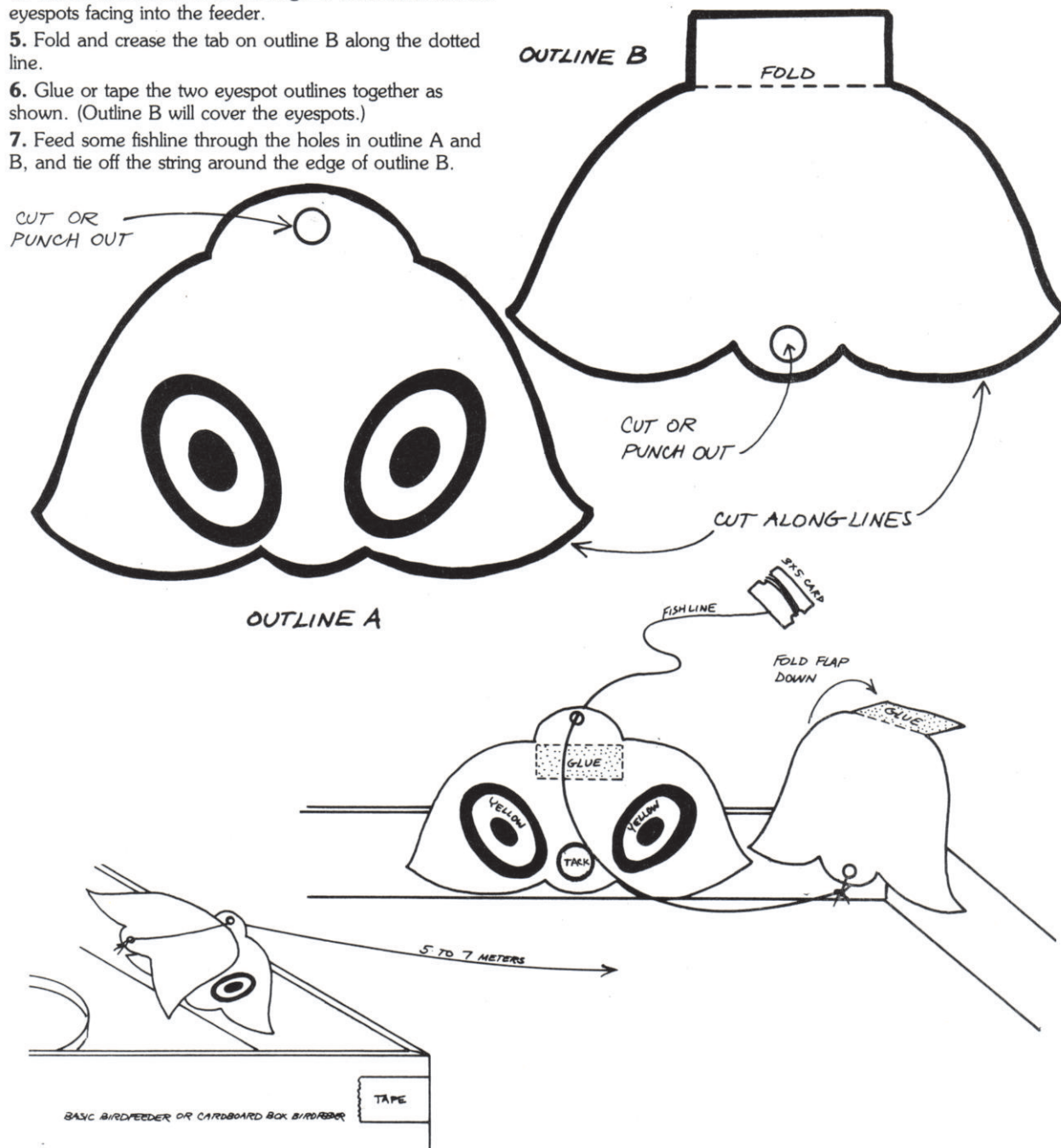


Birdfeeder EYESPOT

Equipment Card

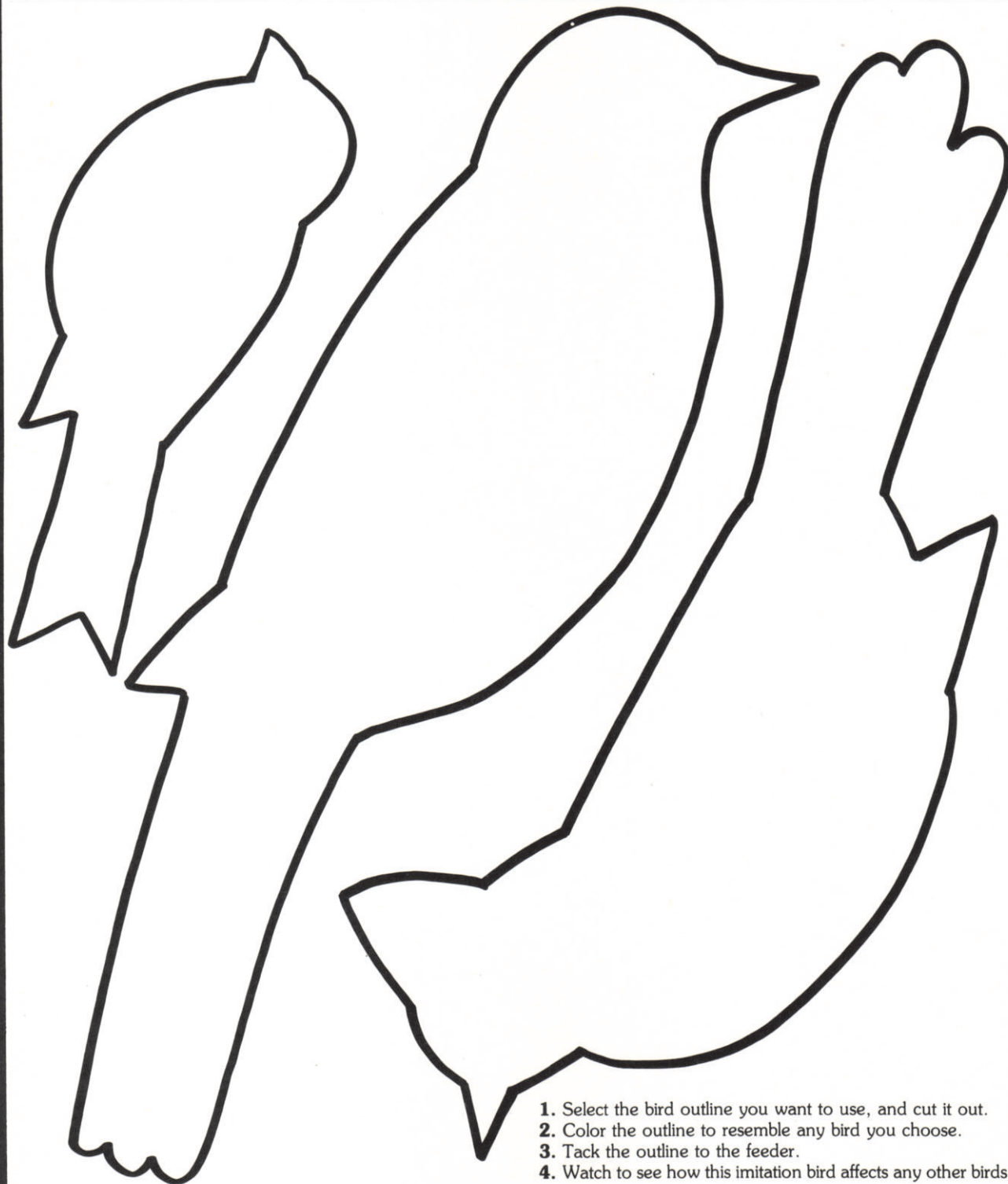


1. Color the eyespots yellow.
2. Cut out outlines A and B along the solid lines.
3. Cut out the small holes on outlines A and B.
4. Thumbtack outline A to the edge of the feeder with the eyespots facing into the feeder.
5. Fold and crease the tab on outline B along the dotted line.
6. Glue or tape the two eyespot outlines together as shown. (Outline B will cover the eyespots.)
7. Feed some fishline through the holes in outline A and B, and tie off the string around the edge of outline B.



**Birdfeeder
BIRD MODEL**

Equipment Card



1. Select the bird outline you want to use, and cut it out.
2. Color the outline to resemble any bird you choose.
3. Tack the outline to the feeder.
4. Watch to see how this imitation bird affects any other birds.

OUTDOOR BIOLOGY INSTRUCTIONAL STRATEGIES

Birdfeeder

BASIC BIRDFEEDER

Equipment Card



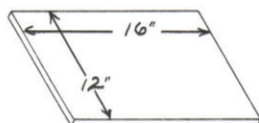
MATERIALS FOR ONE BIRDFEEDER:

- 1 piece of wood* at least 12"x16"x1/4"
- 1 stake* 6'x2"x2" (for free-standing feeders)
- cardboard* (or 1 stiff cardboard box at least 16" on one side)
- 20 tacks*
- large nails*
- 1 hammer
- masking tape*
- scissors* or knife

* Available from Delta Education

BUILDING THE BIRDFEEDER:

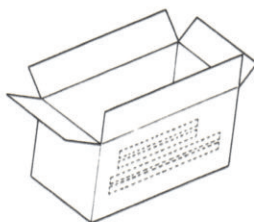
1. The platform can be of 1/4" to 1" wood.



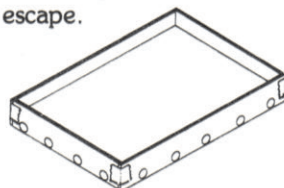
2. Cut edging (to prevent seed from spilling) from a stiff cardboard box.

Two 12"x1 1/2" strips

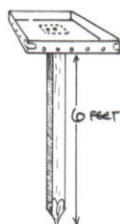
Two 16"x1 1/2" strips



3. Tack the edging to the platform and tape the corners together, leaving small holes through which rain water can escape.



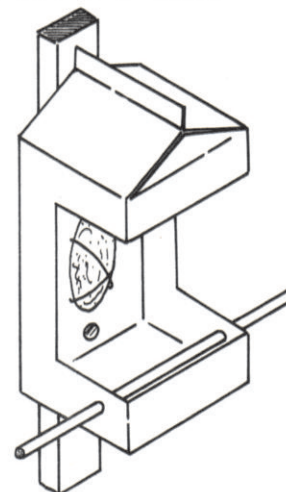
4. Mount the feeder on a window sill, fence, or tree; or nail the platform to a stake pounded firmly in the ground.



OTHER FEEDERS TO TRY

MILK CARTON

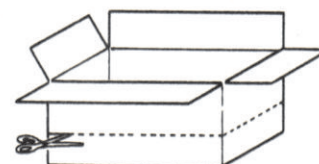
Tie suet to back of milk carton by pulling string through milk carton and tying around the stake.



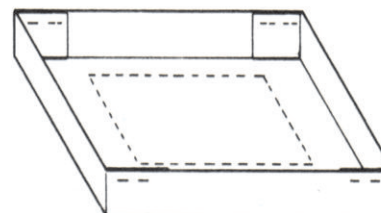
Thumbtack milk carton to stake.

CARDBOARD BOX

Cut the cardboard box.



Glue a large wood block to the bottom for strength.



Nail the platform to a stake.