

Northern Virginia Conservation Trust:  
Celebration of the Potomac Creek Heronry Expansion

**All about BIRDS!**

Objectives:

- Students will learn basic bird identification skills.
- Students will learn about different bird adaptations.
- Students will be introduced to scientific data collection.

Materials:

Bird Observation Worksheet (BOW)

"Beak" tools:

- Pliers
- Tweezers
- Chopsticks
- Turkey baster
- Slotted Spoon
- Envelope

Bird "food":

- Sunflower seeds (in shell)
- Tall vase/sports bottle with water
- Popcorn
- Raisins
- Paper

Potting soil

Cups (number varies on number of students) ("bird stomach")

Plates (number varied on number of students) (surface for bird food)

Small bowl (for potting soil and raisins)

Large pot with water

Liquid measuring cup

## Part 1: Bird Observations

1. For each student, print and fill out Bird Observation Worksheet (BOW). Each student fill out their name and that day's date. .
2. Ask students to find an area to observe outdoor space (i.e. front yard, back yard, window sill, park, etc.). Record the place as well as the time of day in Part 1 of the BOW.
3. Using the BOW, record the data in the given boxes for each bird you see.
4. If you are having a hard time seeing birds, look for signs of birds such as woodpecker holes or feathers.
5. Once the students have completed their sheets, have them hold keep the BOW until the end of Part 2.

## Part 2: Bird Beak Buffet

1. Find Part 2 on the BOW.
2. Set up the Bird Beak Buffet:

### Station 1:

Food: Nut/seeds (sunflower seeds; students must crack the shell to get the seed)

Beak tools: pliers, tweezers, chopsticks

### Station 2:

Food: Insects (raisins in potting soil)

Beak tools: tweezers, slotted spoon, pliers

### Station 3:

Food: Nectar (water in tall vase or sports bottle)

Beak tools: turkey baster, slotted spoon, tweezers

### Station 4:

Food: Insects (toss popped popcorn into the air)

Beak tools: envelope, chopsticks, pliers

### Station 5:

Food: Small fish (crumbled paper floating in large pot of water )

Beak tools: chopsticks, tweezers, slotted spoon

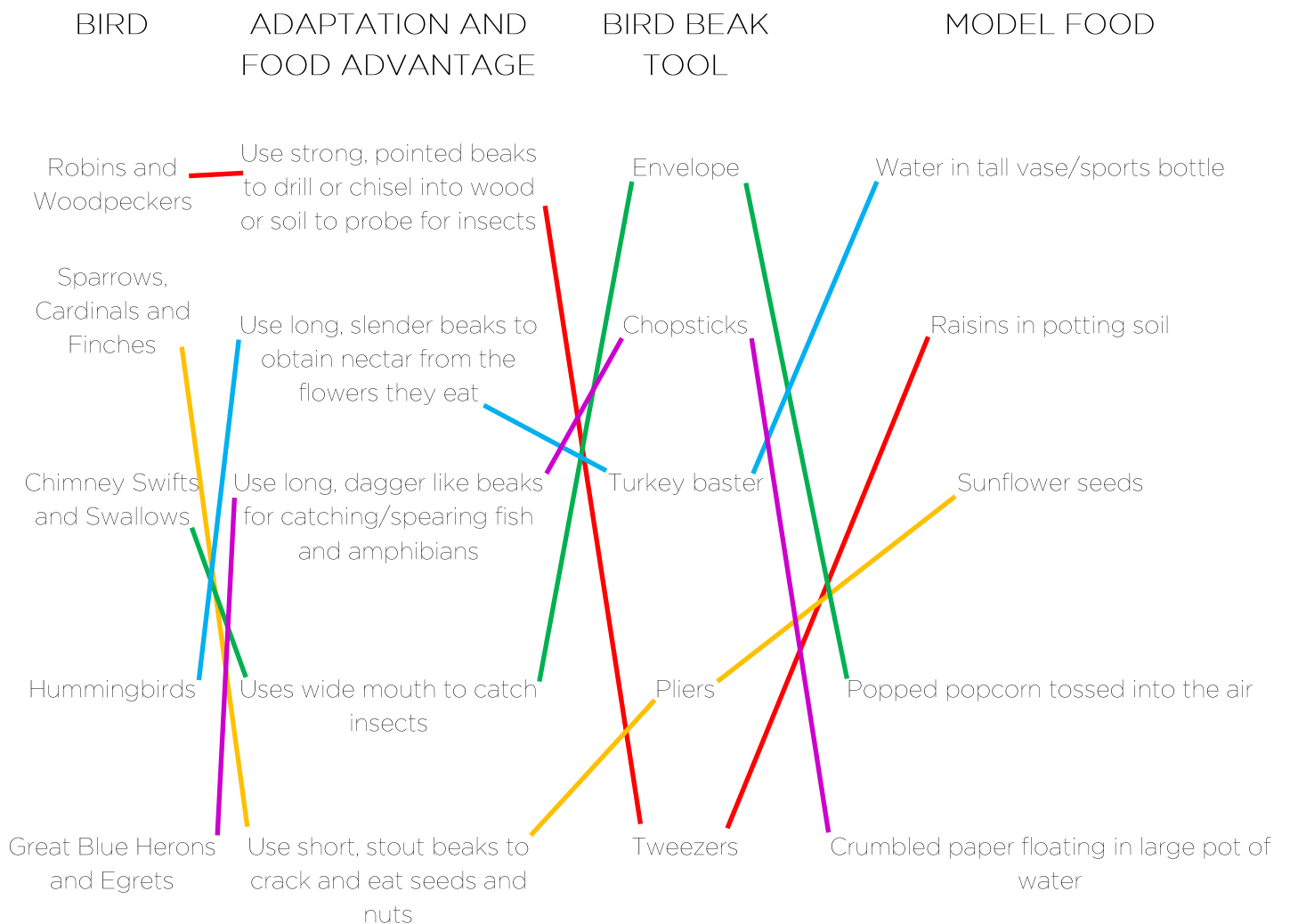
3. When students start each station, have the student fill out the corresponding section on the BOW.
4. At each station, one student at a time will have 20 seconds to try and get as much food as possible using one of the "beak" tools. The student gathering food must keep the hand not gathering the "food" behind their back. Place the "food" in the "stomach" (cup).
5. The student should fill out the number of food items or amount of liquid collected by each beak type. For liquid, use a measuring cup.
6. Fill out the rest of the BOW.

For facilitators:

- For one student participating: Have the student try two of the three tools for 20 seconds each.
- If the students are older/competitive: Have the students decide which tool worked best through Part 2: Step 4. Then try Part 2: Step 4 again with the same best-working tool. Who ever gets the most food in the 20 second time period is the winner. The winner serves as an example of how a faster animal might get more food, leaving the second animal at a disadvantage.

Answers for Facilitators:

- Here are the tools that *should* work best for each station.
  - Station 1: Pliers (stimulates beak of a sparrow or finch)
  - Station 2: Tweezers (stimulates beak of a robin or woodpecker)
  - Station 3: Turkey Baster (stimulates beak of a hummingbird)
  - Station 4: Envelope (stimulates beak of a black phoebe or swallow)
  - Station 5: Chopsticks (stimulates beak of a Great Blue Heron or egret)



Lesson and information adapted from the following sources:

Elijah Kruger, Birds. Letchworth State Park: Humphrey Nature Center. Perry, NY.

Andrew Rush. Bird Beak Buffet. Berkeley Natural History Museums and the Regents of the University of California. Berkeley, CA. 2014.

Association of Fish and Wildlife Agencies. Bird Beak Buffet. Phipps Conservatory: Growing Up WILD: Exploring Nature with Young Children. Pittsburgh, PA. 2017.

Cornell University. All about Birds., The Cornell Lab. Ithaca, NY. 2019.



Northern Virginia Conservation Trust:  
Bird Observation Worksheet (BOW)

Name: \_\_\_\_\_

Part 2: Bird Beak Buffet

How do birds get energy? \_\_\_\_\_

How does a bird get \_\_\_\_\_ (answer from question above) without hands?

Station 1:

Food \_\_\_\_\_

Hypothesis: If I use the \_\_\_\_\_ (tool name), then I will obtain the most food.

Tool used	How much food was obtained

Station 2:

Food \_\_\_\_\_

Hypothesis: If I use the \_\_\_\_\_ (tool name), then I will obtain the most food.

Tool used	How much food was obtained

Station 3:

Food \_\_\_\_\_

Hypothesis: If I use the \_\_\_\_\_ (tool name), then I will obtain the most food.

Tool used	How much food was obtained

Station 4:

Food \_\_\_\_\_

Hypothesis: If I use the \_\_\_\_\_ (tool name), then I will obtain the most food.

Tool used	How much food was obtained

Station 5:

Food \_\_\_\_\_

Hypothesis: If I use the \_\_\_\_\_ (tool name), then I will obtain the most food.

Tool used	How much food was obtained

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Name: \_\_\_\_\_

Wrap Up Activity;

Use lines to connect:

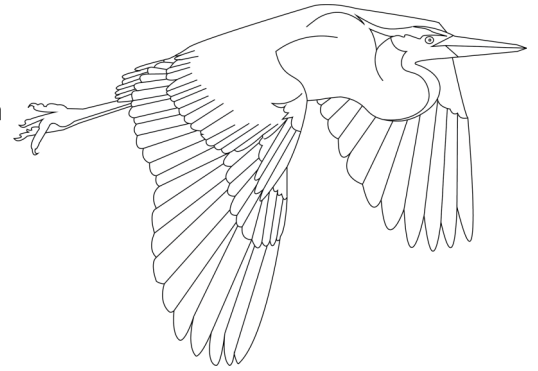
BIRD ; ADAPTATION AND FOOD ADVANTAGE

ADAPTATION AND FOOD ADVANTAGE ; BIRD BEAK TOOL

BIRD BEAK TOOL ; MODEL FOOD

BIRD	ADAPTATION AND FOOD ADVANTAGE	BIRD BEAK TOOL	MODEL FOOD
Robins and Woodpeckers	Use strong, pointed beaks to drill or chisel into wood or soil to probe for insects	Envelope	Water in tall vase/sports bottle
Sparrows, Cardinals and Finches	Use long, slender beaks to obtain nectar from the flowers they eat	Chopsticks	Raisins in potting soil
Chimney Swifts and Swallows	Use long, dagger like beaks for catching/spearing fish and amphibians	Turkey baster	Sunflower seeds
Hummingbirds	Uses wide mouth to catch insects	Pliers	Popped popcorn tossed into the air
Great Blue Herons and Egrets	Use short, stout beaks to crack and eat seeds and nuts	Tweezers	Crumbled paper floating in large pot of water

Northern Virginia Conservation Trust (NVCT) is celebrating the Potomac Creek Heronry Expansion. With the protection of this land, NVCT has protected habitat for the Great Blue Herons that live and nest there.

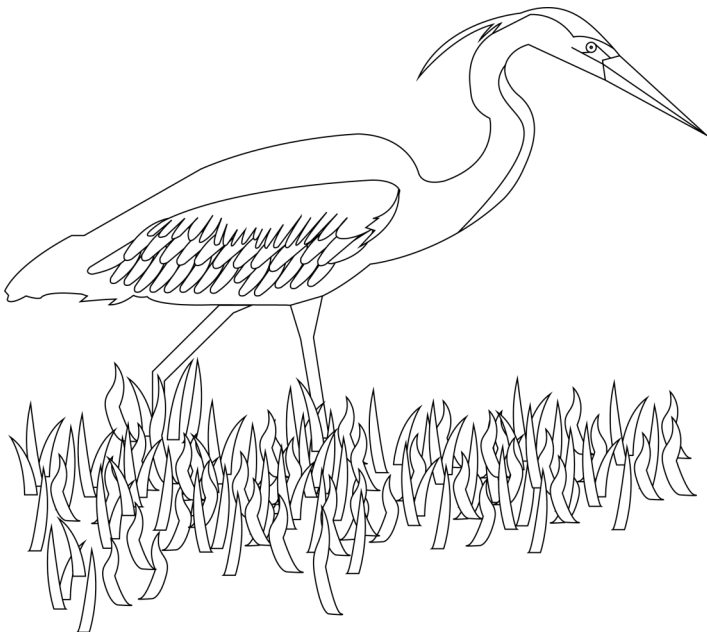


### Size and Shape:

Great Blue Herons are large birds. They have long legs, a long neck and a large pointed bill. In flight, Great Blue Herons curl their neck into an “S” shape, and its wings are wide. While flying, you can usually tell it is a Great Blue Heron because its legs extend beyond its tail feathers.

### Color Pattern:

To many, the Great Blue Heron appears to be a blue-gray color. They have a dark stripe of feathers above their eyes. When they fly, the underside of their wings is two-toned, presenting both light and dark feathers.



### Behavior:

When hunting for food, the Great Blue Heron acts like a statue to help it stalk in shallow water or open fields. Occasionally you can see a Great Blue Heron swaying with the grasses it walks through so its prey might think its legs are just other blades of grass. Once the Great Blue Heron has focused in on its victim, it uses its dagger-like bill and thrust of its long neck to stab its food.

### Habitat:

Great Blue Herons live near salt and freshwater, like coasts, riverbanks, lakes and the marshes present at the Potomac Creek Heronry! In breeding, they tend to gather in colonies called “heronries” to build stick nests high in trees tops. The Potomac Creek Heronry is home to over 200 Great Blue Heron nests. With the Potomac Creek Heronry Expansion, NVCT has protected more land for future nesters!