

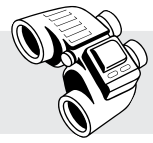


**BIRDS
GEORGIA**

Learning About Birds (LAB)



This curriculum includes activities and materials for educators interested in engaging K-12 students in hands-on, interactive learning about birds, habitats, and conservation. It consists of educator and student guides, as well as supplementary handouts. Each unit is aligned to the Georgia Standards of Excellence in science but can be adapted to cover standards across multiple disciplines.



Birding is a great way to get students outside exploring the natural world and making observations. Preparing students for the activity using these few simple tips will help you lead a successful outing.

Before the Walk

- Set expectations: length of time, bird diversity (what might students expect to see or hear?)
- Remind students that they are most likely to hear birds before they see them and that loud or sudden movements are likely to scare birds away.
- Review birding ethics (respect birds and their environment: avoid stressing birds, limit audio playback, minimize habitat disturbance, use respectful language).
- Integrate your key messages. What is it that you want students to remember?
- Distribute and explain the use of binoculars, checklists, and/or field guides (if applicable).

During the Walk

- Have students close their eyes and listen. Can they point to where the song is coming from? You may want to teach common mnemonics like the American Robin's "cheery up, cheerio," which can be picked up on almost any bird walk in the United States. Some mnemonics for common southeastern birds include:
 - Northern Cardinal, "what-cheer, what-cheer, what-cheer"
 - Carolina Wren, "teakettle, teakettle, teakettle"
 - Blue Jay, "jay! jay!"
 - Carolina Chickadee, "Chick-a-dee-dee-dee"
- Scan fences, telephone wires, poles, open fields, and habitat edges. Don't forget to look up for soaring birds. If the option is available, visit areas near water (a pond, lake, or stream).
- Are you striking out on live birds? Point out the signs they leave behind, such as nests, feathers, cracked seeds, whitewash/droppings, or owl pellets.
- Consider having students journal their observations from a "sit spot" for five minutes. Returning to the same sit spot repeatedly will enable students to track patterns, cycles, and changes through the seasons.

After the Walk

- Wrap up the activity by reviewing the group's observations. How many birds did you see in total? How many species? Did you hear any birds without seeing them?
- Create and maintain a class checklist. Consider submitting your checklist to the eBird database.

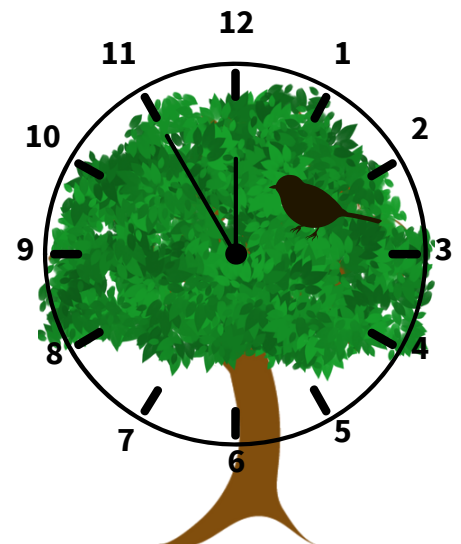
Best Binocular Practices: Tips for Birding with Students

Before you go outside, instruct students to:

- Flex your binoculars, so the eyecups fit YOUR eyes. If you don't wear glasses, raise the eyecups. If you wear glasses, keep the eyecups lowered.
- Focus your binoculars. Use your pointing finger to find the focus wheel on the top of the barrels while you have your binoculars raised.
- Find a small object or text in the classroom to focus on. Stare at it with your naked eyes while you gently lift your binoculars with your hands. Found it? Do this with another object. Then another.

While you are outside, remind students:

- Shhhhh!
- Always keep your binoculars hanging around your neck.
- Always plant your feet while using binoculars. Never run with them.
- Stay together behind the leader.
- Keep the sun behind you whenever possible.
- Use words to describe the location of a bird. Don't point!
- Imagine a "clock in the tree" to indicate where the bird is. For example, the bird is at "2 o'clock."





Cheep Sheet for Bird Songs and Calls

Common Permanent Residents

- Red-tailed Hawk** – "keerer-r-r" (screech slurring downward)
Blue Jay – "jay, jay"
American Crow – "caw, caw"
Mallard – "quack, quack"
Red-Bellied Woodpecker – kwirr, churr, chaw
Downy Woodpecker – descending whinny, "peek"
Mourning Dove – "coo-oooh, cooo, cooo, coo"
American Robin – "cheer-up, cheerily, cheerio"
Eastern Bluebird – "cheer, cheerful, charmer"
Northern Mockingbird – song phrases repeated three or more times
Brown Thrasher – song phrases repeated 2 times
Tufted Titmouse – "peter, peter, peter"
Carolina Chickadee – "feebee feebay, chick'adee-dee-dee"
Carolina Wren – "teakettle, teakettle, teakettle"
White-Breasted Nuthatch – "yank, yank, yank"
Brown-Headed Nuthatch – squeaky toy noises
Pine Warbler – musical trill on one pitch
Northern Cardinal – "what-cheer, what-cheer, what-cheer," "purty, purty"
Eastern Towhee – "towhee," "drink-your-teeee"
House Finch – quick, hoarse, jumbled notes
American Goldfinch – "po-tat-o chip," "per-chik'-o-ree," "babeee"

Common Summer Residents

- Great-crested Flycatcher** – "breeep, breeep"
Red-eyed Vireo – "here I am, over here, see me, where are you"
White-eyed Vireo – "chick-per-a-weeo-chick"
Gray Catbird – "meow"
Blue-Gray Gnatcatcher – "speee, speee"
Summer Tanager – "picki-tucki-tuck," "pick-it-up"
Indigo Bunting – "fire, fire—where, where—here, here here"

Common Winter Residents

- Yellow-bellied Sapsucker** – nasal, cat-like meow
Ruby-crowned Kinglet – call notes like clacking marbles, "je-dit"
Golden-crowned Kinglet – high-pitched "tsee, tsee, tsee"
Dark-eyed Junco – rattling, mechanical trill
White-throated Sparrow – "poor sam peabody, peabody, peabody," "ohh sweet canada, canada, canada"
Yellow-rumped Warbler – musical warble or trill; call is a sharp "chek"

Using a Bird Checklist

Bird checklists outline the species that occur in a region and how common they are during different seasons. You can help birds by keeping a checklist. Recording what you see and reporting your observations to community science projects like *eBird* helps scientists to better understand bird populations and make important conservation decisions.

Use the bird checklist provided to answer the following questions:

1. What geographic area is this checklist for? _____
2. What season is it right now and what is that season's abbreviation? _____
3. What does "PR" mean? _____
4. What does "M" mean? _____
5. What months are the "WR" bird species seen in this region? _____
6. Why do you think there are two statuses for summer, "SR" and "SV"? _____

7. How can you tell if a bird makes its nest in this area? _____
8. Name of a species that is considered "abundant" during this season. _____
9. Name of a bird that is considered "common" during this season. _____
10. Name of a bird that is rare year-round in this area. Why do you think it is rare? _____

11. What information does the checklist user need to provide besides marking the birds that were observed? Why is this information important? _____

12. How are the species organized on this checklist? _____

VOCABULARY

Accidental species — a species that is found on a rare occasion but does not live permanently or seasonally in the area.

Irruptive species — a species found outside of its normal geographic range due to changes in food supply.

Migrant — a species that passes through a geographic area only during its seasonal migration.

Now that you know how to use a bird checklist, take one outside and record what you see. Submit your findings to the Cornell Lab of Ornithology's *eBird* database. Or use the free *eBird* app on your mobile device to record and submit your findings in the field. Keeping a checklist is a fun way to keep track of birds you see at home, at school, or other places you visit—and it helps with bird conservation, too.

Taking it further: Create your own checklist for birds or other organisms you find in your yard, school, or a place you visit regularly.



Brown-headed Nuthatches live in Georgia year-round.



K-2 Observation Sheet

Name: _____ Date: _____

Draw a bird you can see outside. Then fill in the blanks to describe what you see, think, and wonder about the bird.

I see _____

I think _____

I wonder _____

Activity 1: Sound Pictures

Listen carefully to the calls and songs played by your teacher and draw an image (spectrogram) representing each sound in the boxes below. Then describe the song or call with a few words.

<p>Species 1</p> <p>Call</p> <p>Song</p> <p>Description</p>	<p>Species 2</p> <p>Call</p> <p>Song</p> <p>Description</p>
<p>Species 3</p> <p>Call</p> <p>Song</p> <p>Description</p>	<p>Species 4</p> <p>Call</p> <p>Song</p> <p>Description</p>

Activity 1: What's on the Menu?

Draw a line between each bill and the food(s) it is most adapted to eat. Remember, one species may eat different types of food. Look closely at each photo and description for clues. Bonus: Can you figure out what species of birds are featured?



Cone-shaped bill that works like a nutcracker



Small mammals, frogs, snakes



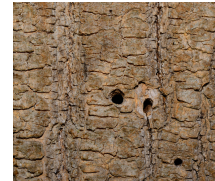
Large, spear-like bill



Insects and other invertebrates



Long, thin bill with a long tongue



Insects living in bark



Long, slender bill, sometimes curved downward



Nuts, seeds, grains, fruit



Sharp, hooked bill



Nectar from flowers



Straight, pointy bill



Aquatic plants and/or animals



Sharp, chisel-shaped bill



Small animals in mud and sand



Wide bill that works like a strainer



Fish, frogs, snakes

Activity 2: Know the Toes

Draw a line between each picture of toes and the behavior they are best adapted to perform.
Bonus: Describe the habitat each foot would be best suited for.



Webbed toes

**Grasping
branches,
perching**



Long, spread-
out toes

**Climbing
around
on tree
trunks**



Strong feet,
long claws

**Swimming,
propelling**



Zygodactyl (2 toes
in front, 2 in back)

**Capture,
kill, and
carry prey**



Sharp talons,
strong grip

**Walking in
soft, wet
habitats**



Independent,
flexible toes

**Scratching,
running,
kicking**

Activity 1. Weave the Web

The organisms pictured below represent common species found in many Georgia ecosystems. Use the descriptions to connect organisms to each other in a food web. Be sure you include all trophic levels. How many combinations can you come up with? Can you connect all of the organisms?



Sun



Black-eyed Susan



Raccoon
Berries
Eggs
Insects
Spiders
Fish

Carolina Chickadee
Insects
Spiders
Seeds



Black Rat Snake
Mammals
Reptiles
Songbirds



Coral Honeysuckle



Oak Tree



Eastern Bluebird
Caterpillars
Insects
Fruits

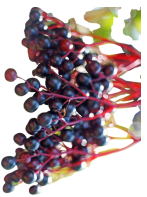


Orb Weaver
Insects



Downy Woodpecker
Insects
Seeds
Nuts

Red-tailed Hawk
Mammals
Smaller birds
Snakes



Elderberry



Caterpillar
Leaves



Grasshopper
Leaves



Insects
Plants



Canada Goose
Grass
Fruit
Seeds

Eastern Screech Owl
Rodents
Songbirds
Insects



Mourning Dove
Seeds
Fruits



Bumblebee
Nectar



Ruby-throated Hummingbird
Nectar
Small flies and bees
Spiders



Chipping Sparrow
Seeds



Mice and other small mammals
Seeds, leaves



Black Vulture
Carrion (dead organisms)
Small mammals



Mourning Dove
Seeds
Fruits



Sun



Black-eyed Susan



Coral Honeysuckle



Oak Tree



Bumblebee
Nectar



Mice and other small rodents
Seeds, leaves



Ruby-throated Hummingbird
Nectar
Small flies and bees
Spiders



Grasshopper
Leaves

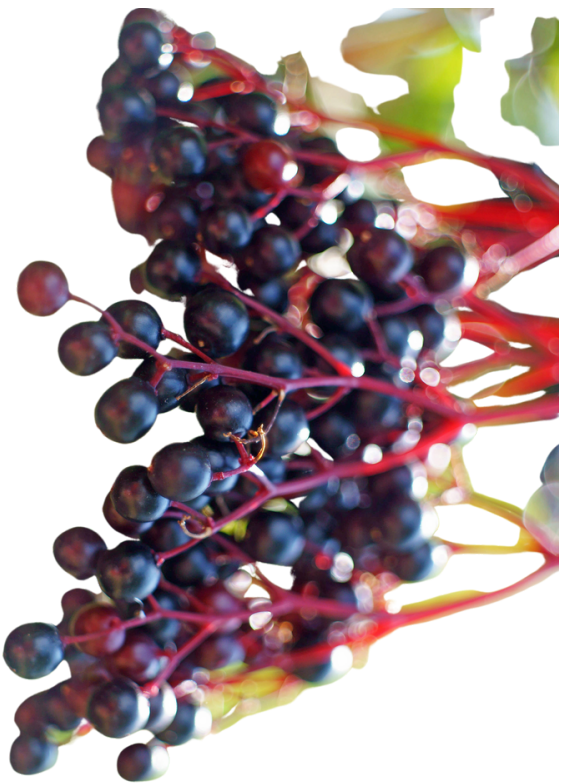


Insects
Plants/Vegetation

Black Rat
Snake
Mammals
Reptiles
Songbirds
Eggs



Downy
Woodpecker
Insects
Seeds
Nuts



Elderberry

**Eastern
Screech
Owl**
Rodents
Songbirds
Insects



**Red-tailed
Hawk**
Mammals
Smaller birds
Snakes

Eastern Bluebird
Caterpillars
Insect larvae
Crickets
Grasshoppers
Fruits





Chipping Sparrow
Seeds

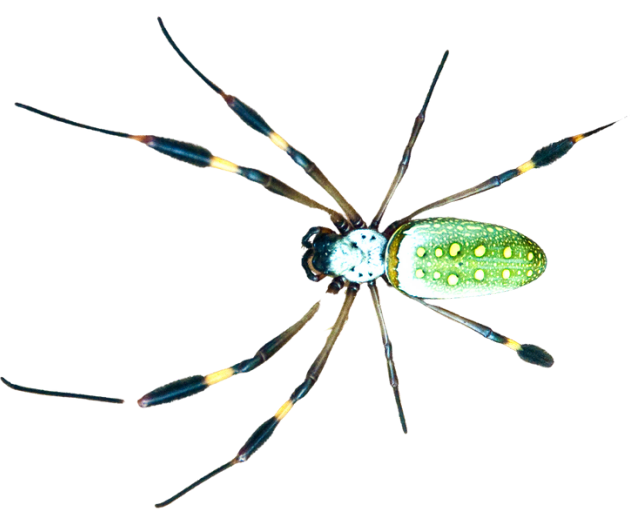


Carolina Chickadee
Insects
Spiders
Seeds

Black Vulture
Carrion (dead
organisms)
Small
mammals



Orb Weaver
Insects



Common Birds of Georgia



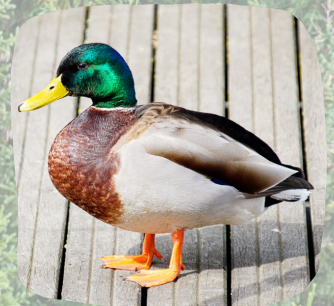
Red-tailed Hawk



Blue Jay



American Crow



Mallard



Northern Mockingbird



Brown Thrasher



Red-bellied Woodpecker



Downy Woodpecker



Northern Cardinal



Eastern Bluebird



American Robin



Mourning Dove



Eastern Towhee



House Finch



American Goldfinch



Pine Warbler



Tufted Titmouse



Carolina Chickadee



Carolina Wren



White-breasted Nuthatch



Brown-headed Nuthatch



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