ONONDAGA
Audubon

JR BIRDER PROGRAM

Become a Junior Ornithologist and explore the world of birds!

Welcome Junior Birder!

Welcome to Onondaga Audubon's Jr Birder Program!

This booklet will help you start your journey into learning about the amazing world of birds and get to know them a little bit better.

We will start by learning what a bird is, then their parts and how to identify them by what makes each unique.

As we go through this book, there will be several activities to help you understand each lesson.

Learn what bird species are found in your own backyard, and their identification field marks, and become a junior birder!

Once you complete this booklet and its activities you can show off your bird knowledge with a Jr Birder Certificate!

Illustrations by Kayla Fisk
Sponsored by Onondaga Audubon

So what is a Bird?

Birds come in so many different shapes, sizes, and colors. But there are many things that make them stand out from other animals.

There are over 11,000 bird species in the world, each unique in its own way!

All birds have feathers and wings, though not all birds can fly!

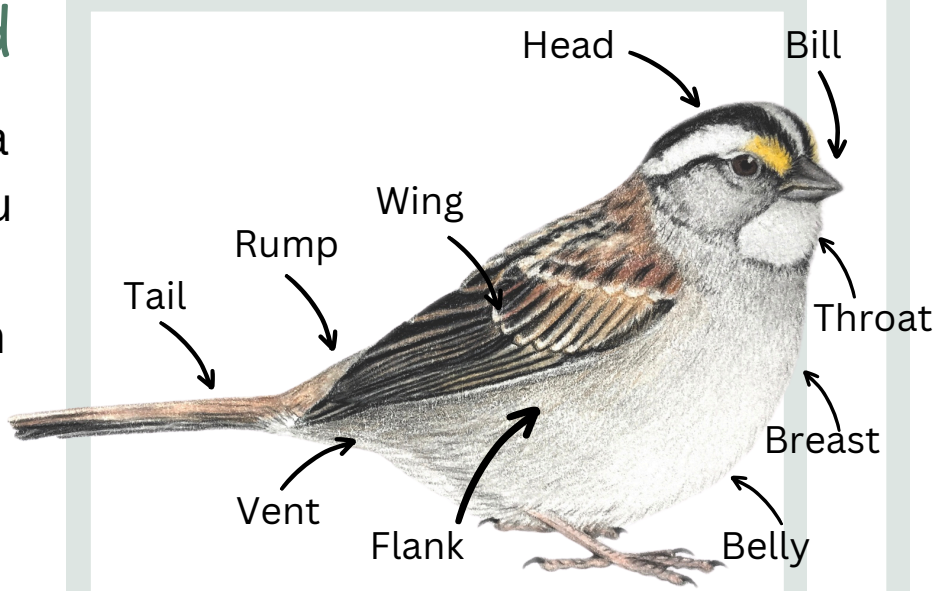
All birds have beaks! They all also lay eggs.

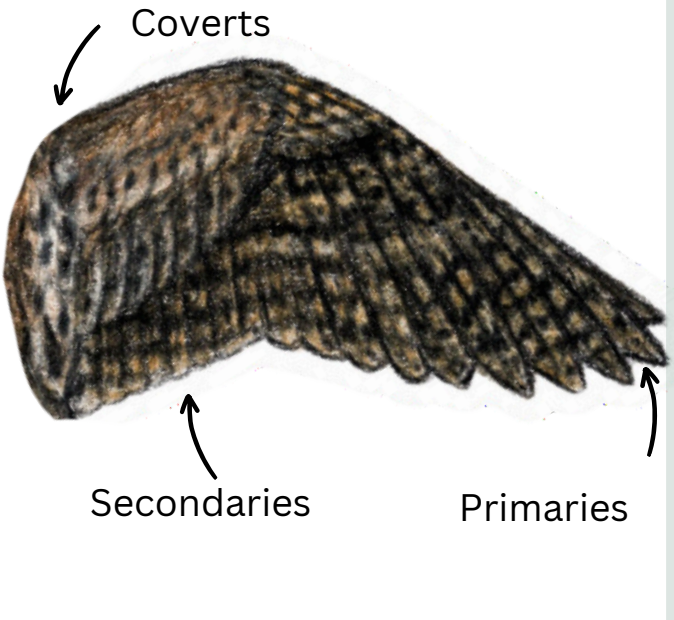
Birds typically make a nest of some sort. Some can be as simple as an indent in the ground, while others are elaborate construction of hundreds of twigs.

Learn Bird Anatomy

Parts of a Bird

Learning the parts of a bird is important if you want to find out what bird you see. Each can have different colors, shapes, patterns and behaviors that make them different from one another.





A bird's wing is also madeup of many parts! Each group of feathers has a name.

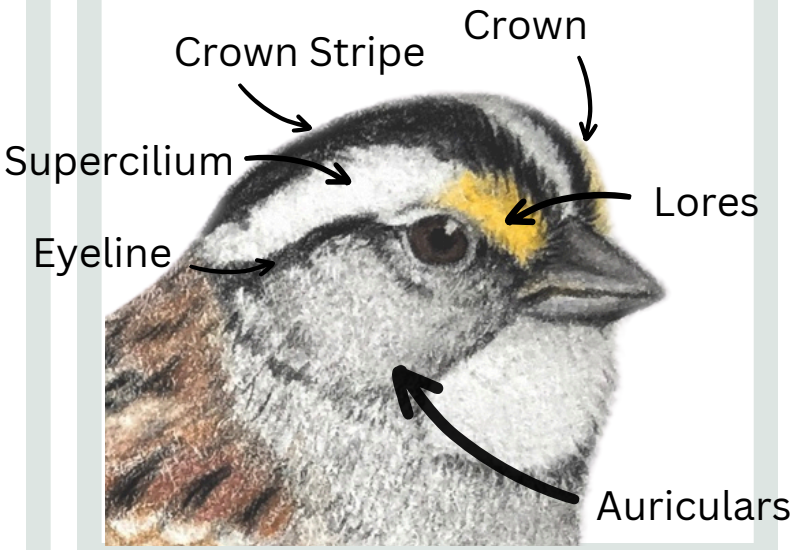
Primaries- feathers on outside part of the wing, provides lift for flight

Secondaries- feathers on the inner part of the wing, these also help with lift.

Coverts- feathers on the outside part of the wing , help the wings be more aerodynamic.

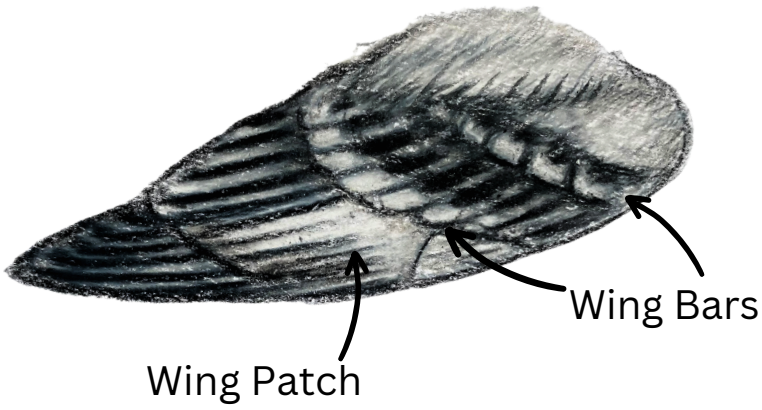
What are Field Marks?

Each species has its own characteristics that act as clues to who they are; these clues are called field marks.



Some parts of a bird's body can have lots of labels. Each field mark can be important to identify the bird. A bird's face is a good example.

Markings on their wings can be just as important to pay attention to.



Definitions

Crown Stripe- stripe in the middle of the head.

Lores- area between the base of the bill and eye.

Auriculars- cheek patch

Supercilium- line above the eye

Crown- top of the head

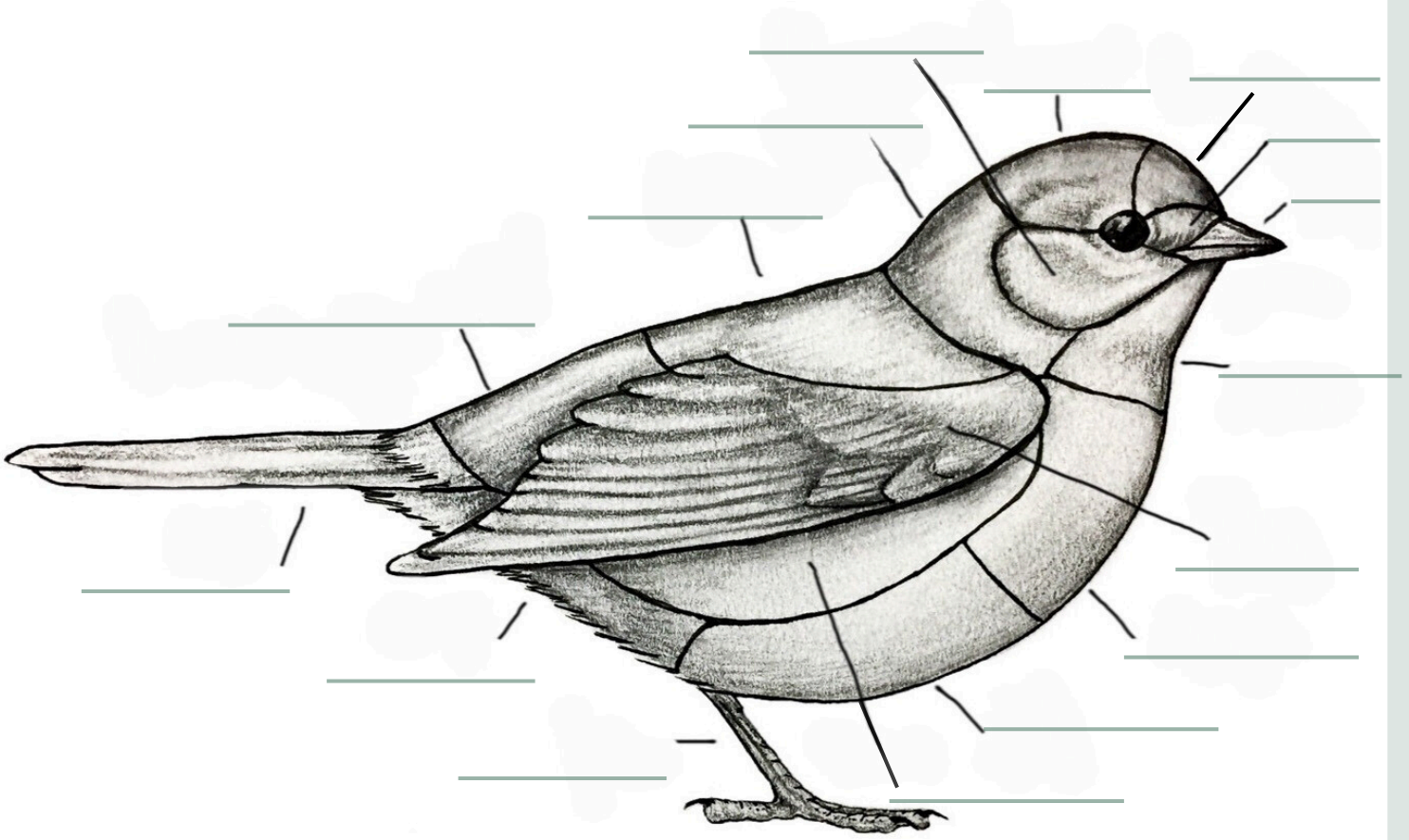
Eyeline- marking through the eye.

Wing Bar- stripe across folded wing

Wing Patch- patch of color on wing

Practice your Bird Anatomy

Write in each part of a bird's body using the word bank below.

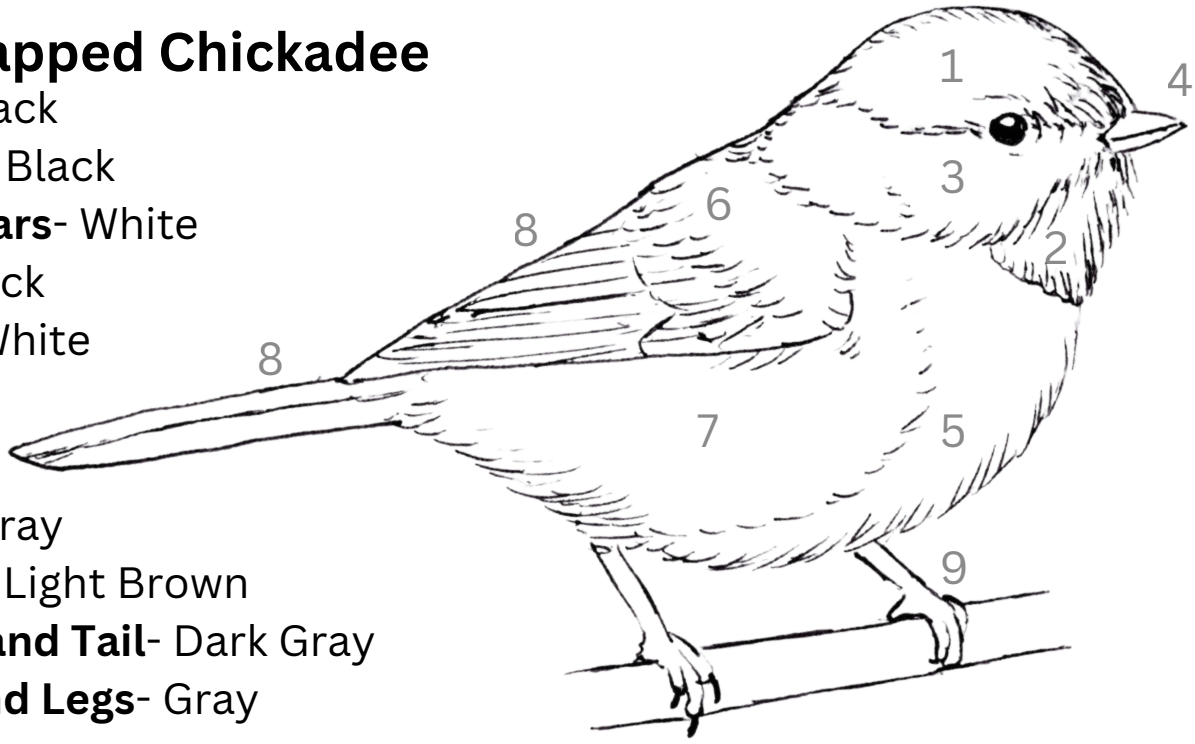


Lore	Feet	Belly
Breast	Beak	Auriculars
Back	Vent	Forehead
Wing	Crown	Nape
Flank	Rump	Throat
	Tail	

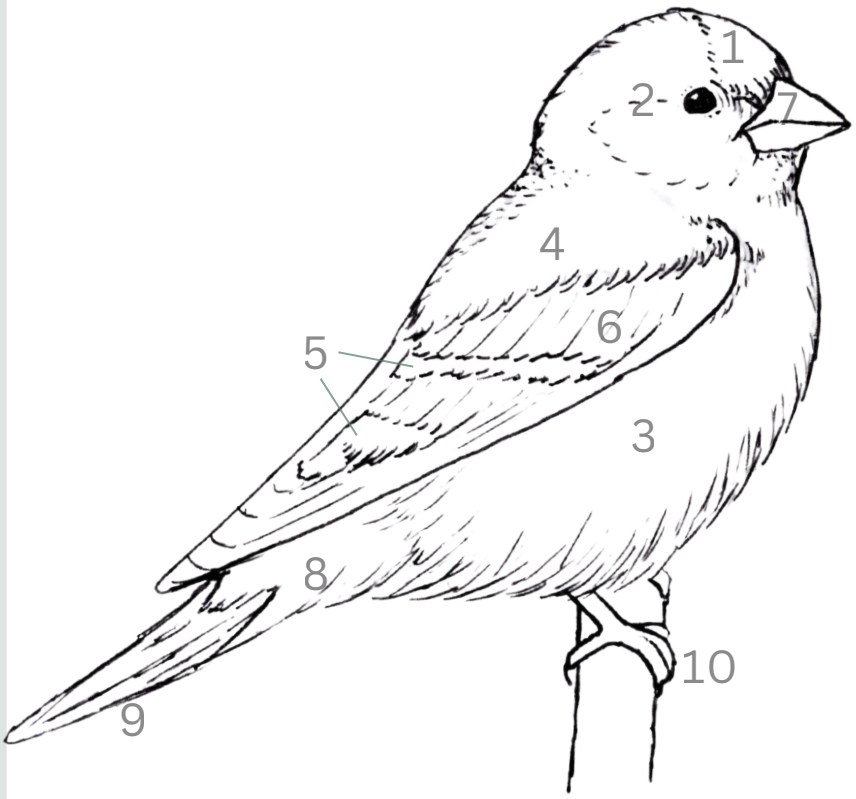
Practice your Bird Anatomy

Black-capped Chickadee

1. **Cap**- Black
2. **Throat**- Black
3. **Auriculars**- White
4. **Bill**- Black
5. **Belly**- White



6. **Back**-Gray
7. **Flanks**- Light Brown
8. **Wings and Tail**- Dark Gray
9. **Feet and Legs**- Gray



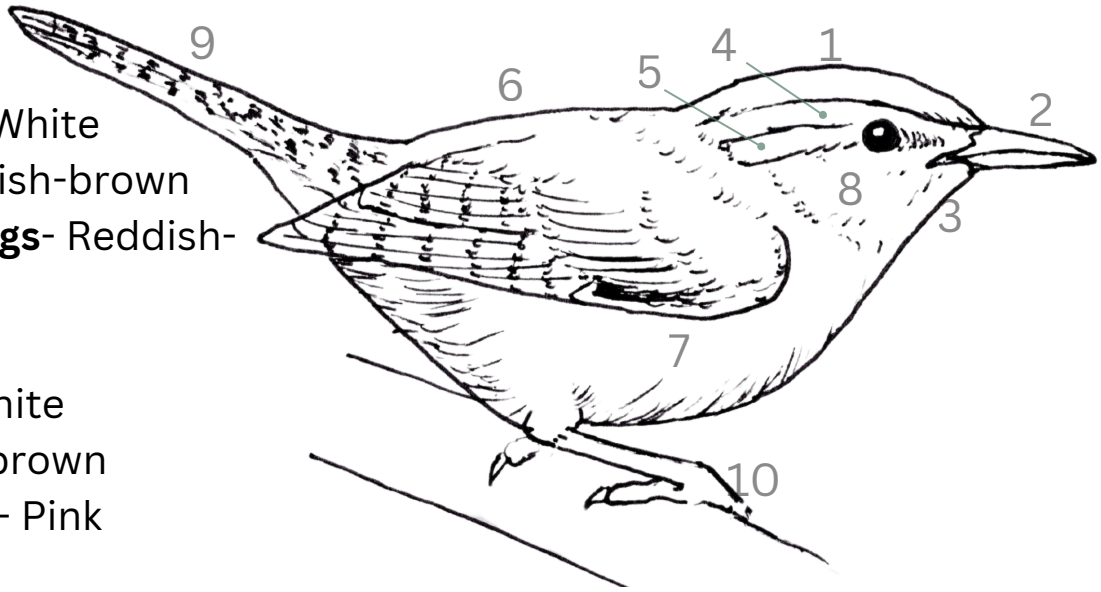
American Goldfinch

1. **Forehead**- Black
2. **Head**-Yellow
3. **Belly**- Yellow
4. **Back**- Yellow
5. **Wing Bars**- White
6. **Wing**- Black
7. **Bill**- Orange
8. **Vent and Rump**- White
9. **Tail**- Black
10. **Legs and Feet**- Light Brown

Practice your Bird Anatomy

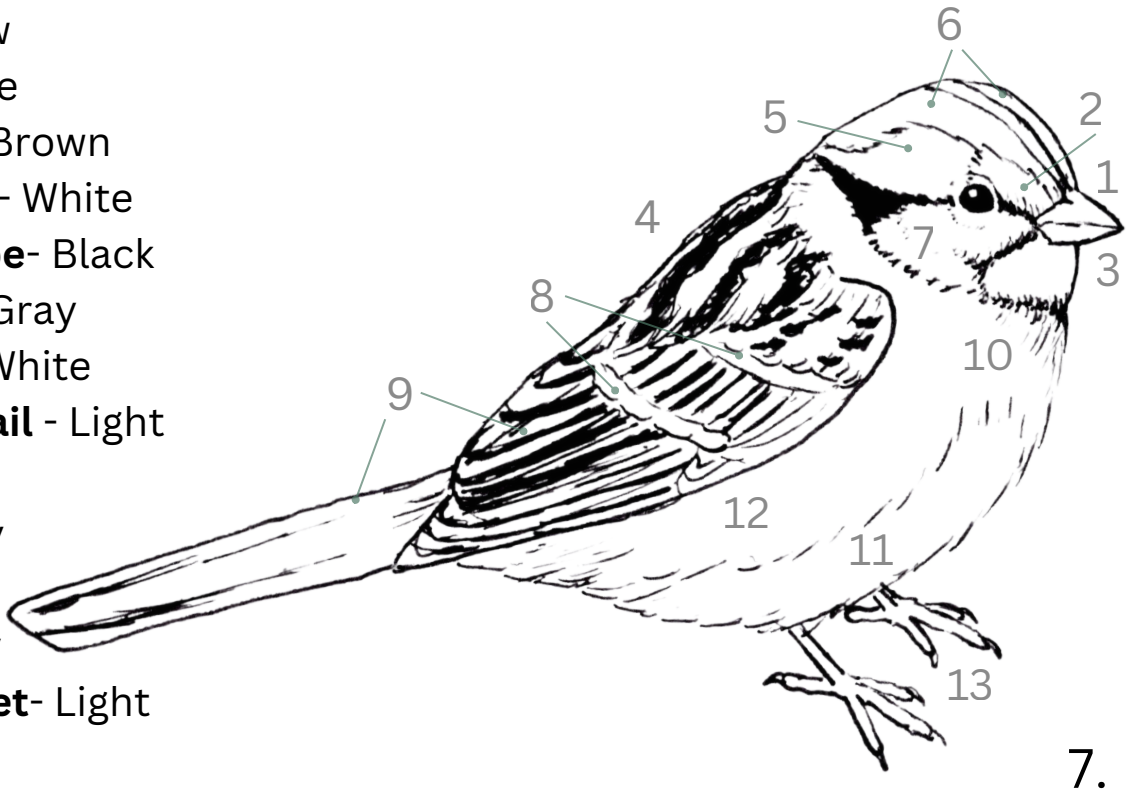
Carolina Wren

1. **Crown**- Reddish-brown
2. **Bill**- Gray
3. **Throat**- White
4. **Supercilium**- White
5. **Eyeline**- Reddish-brown
6. **Back and Wings**- Reddish-brown
7. **Belly**- Orange
8. **Auriculars**- White
9. **Tail**-Reddish-brown
10. **Legs and Feet**- Pink



White-throated Sparrow

1. **Bill**- Gray
2. **Lores**-Yellow
3. **Throat**-White
4. **Back**- Light Brown
5. **Supercilium**- White
6. **Crown Stripe**- Black
7. **Auriculars**- Gray
8. **Wing Bars**- White
9. **Wings and tail** - Light Brown
10. **Breast**- Gray
11. **Belly**- White
12. **Flanks**- Gray
13. **Legs and Feet**- Light Brown



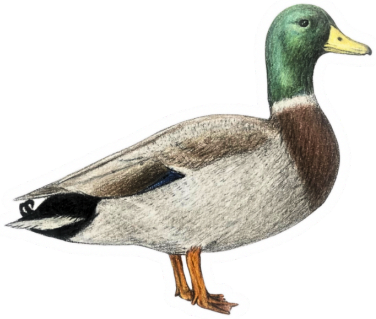
There are many kinds of Birds!

Identifying a bird is easier if you know what type of bird it is first. How big is it? What is their body shape? What habitat are they in? Here are some groups of birds to help you narrow down what species of bird you see!

Each group has its own unique shape, behaviors, and habitat where they can be found.

Birds of Prey

Songbirds



Waterfowl

Shorebirds

Owls

Wading Birds

Learn Your Backyard Birds

Black-capped Chickadee

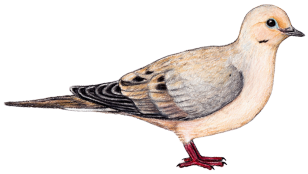
Tufted Titmouse

White-breasted Nuthatch

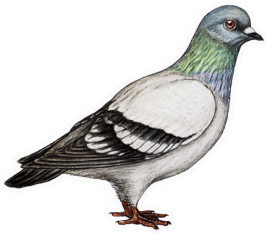
American Goldfinch

Downy Woodpecker

Red-bellied Woodpecker



Mourning Dove



Rock Pigeon

American Crow

American Robin

House Finch

Blue Jay

Common Grackle

Ruby-throated Hummingbird

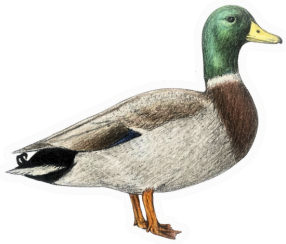
Dark-eyed Junco

Eastern Bluebird

Learn More Bird Species

Barred Owl

Canada Goose

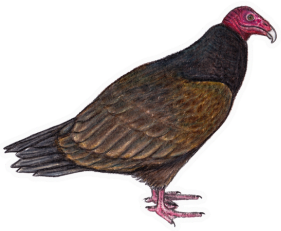


Mallard

Great Blue Heron

Tree Swallow

Red-tailed Hawk



Turkey Vulture

Pileated Woodpecker

Cedar Waxwing

Bald Eagle

Ring-billed Gull

Carolina Wren

Killdeer

Red-winged Blackbird

Barn Swallow

Baltimore Oriole

Life of a bird

A bird doesn't look the same throughout its whole life.

All birds hatch from eggs into hatchlings, who live in the nest until they grow in all their feathers. Once they are ready to leave the nest, they fledge and are fledglings or juveniles. After a while, they become adults.

Egg

Laid in a nest, most songbird eggs take 10 to 14 days to hatch.

Hatchling

Songbird babies hatch naked or covered in light down.

Juvenile

Some species have a different plumage as juveniles and look different than the adults.

Adult

Some birds are considered adults at a year old, other species can take several years!

Lifecycle of the Eastern Bluebird

Write in each stage of the Eastern Bluebird's lifecycle.

Options:

- Adult
- Juvenile
- Hatchling
- Egg

The Eastern Bluebird is New York's State Bird!

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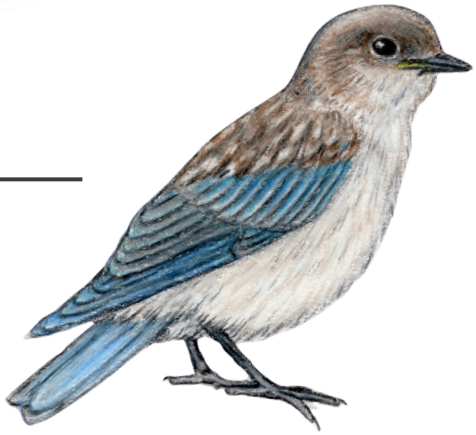

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What is a feather?

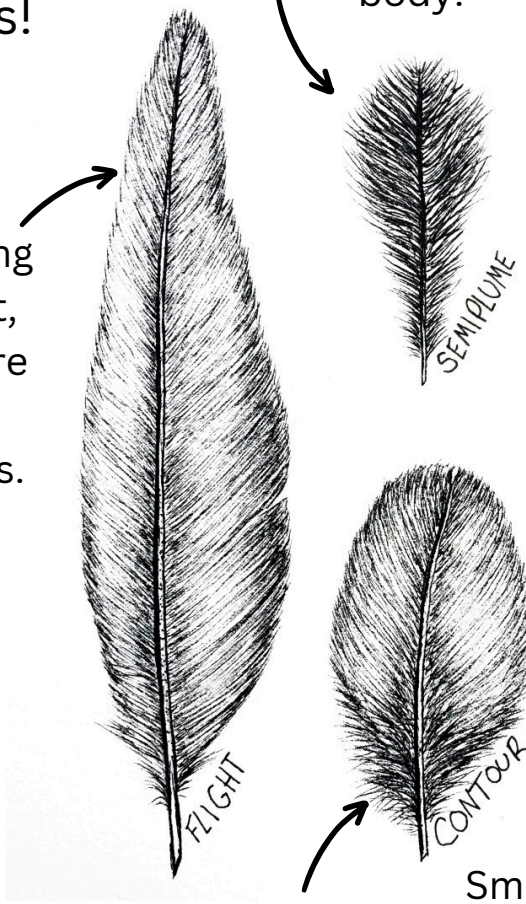
Feathers are what makes birds unique! All birds have feathers. Feathers are what allow birds to fly, as well as keep them warm and dry by providing insulation!

They are made of keratin, just like your hair and fingernails!

Extra insulation and help shape the bird's body.

Fluffy feathers, provide insulation.

For aiding in flight, these are stiff feathers.



Small, thin feather, for protecting the mouth and eye, especially for insect-eating birds.

Shorter stiff feathers, the main body feathers that keep the bird aerodynamic.

Small, thin feathers for sensing air movement and when feathers are out of place.

Feather activity

Match each feather to their name and purpose!

Bristle

Provides Insulation

Contour

Protects eyes and bill

Semiplume

Sensing air movement and when feathers are out of place

Filoplume

Extra insulation and helps shape the bird

Flight

Keeps bird aerodynamic

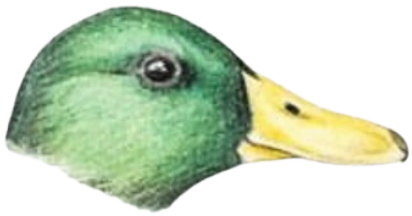
Down

Aids in Flight

A closer look at a bird's beak

Just as birds themselves are unique, so are their beaks!

The shape of their beak is especially adapted to what they eat. Look at the examples below to see how each shape relates to how their beak is used!



Dabbling

Long, flat bill

Perfect for getting underwater plants

Probing

Long, thin pointed bill

For getting insects under the dirt

Catching

Shorter, flat bill

For catching insects

Cracking

Short, thick bill

For cracking thick seeds

Tearing

Short, thick bill with hooked end

For tearing meat

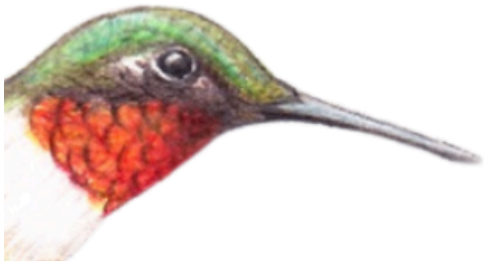
Chiseling

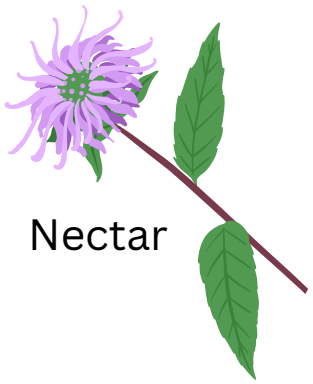
Long, thick bill with blunt end

For chipping away wood

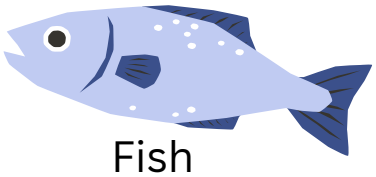
Beak activity

Match each beak to what it eats!





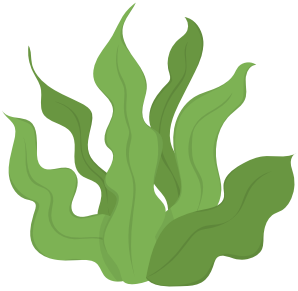
Nectar



Fish

Mice

Seeds

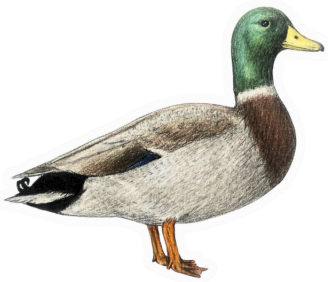


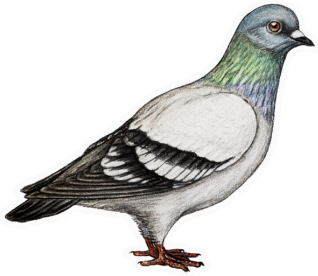
Aquatic Plants

Habitats

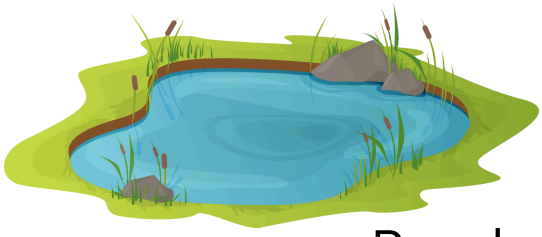
A Habitat is a natural home or environment of an animal, plant, or other organism.

Often, where you see a bird can be a clue to what type of bird they are. Think of each of these species, and where you saw them, then match them up to the habitat you would see them in.





Field



Pond

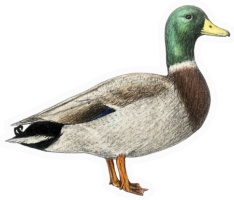
Forest

City

Bird Behavior

How a bird acts or behaves can be a great clue to what kind of bird they are!

Match up each species with the behavior it will typically be doing.



Climbing up a tree trunk

Swimming in a pond

Sipping nectar from a flower

Active at night

Standing on the edge of a pond

Bird Bingo

Birds display a wide variety of behaviors. Paying attention to how they behave and where you find them will increase your understanding of birds.

As you go out and explore, search for birds that show these behaviors. As you do, cross of each until you have Bingo!

Alarm call	Forming a Flock	Perched on branch	Singing	Eating insects
In a park	Sleeping	Flying	Climbing tree trunk	In a field
Building a nest	Bathing	In a forest	Hovering	Preening
Hiding	Chirping	Swimming	Feeding on Ground	Hunting
Drinking	Walking on water edge	Eating seeds	Diving in water	Soaring

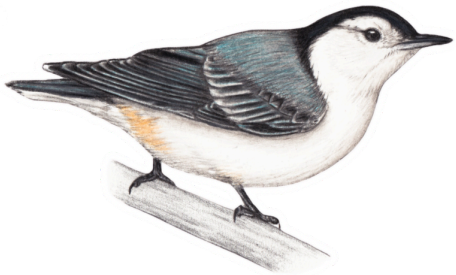
As you document these behaviors, notice what species are displaying that behavior.

Scavenger Hunt

Backyard Birds

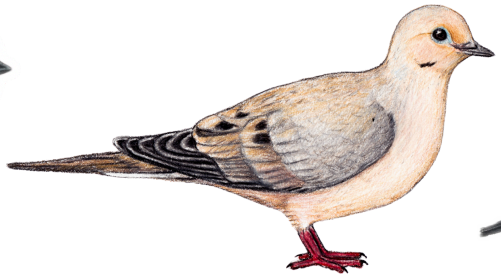
Downy Woodpecker ☐

Tufted Titmouse ☐



White-breasted Nuthatch ☐

Black-capped Chickadee ☐



Mourning Dove ☐

American Goldfinch ☐

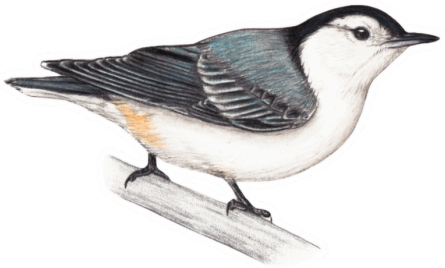
Northern Cardinal ☐

Blue Jay ☐

Dark-eyed Junco ☐

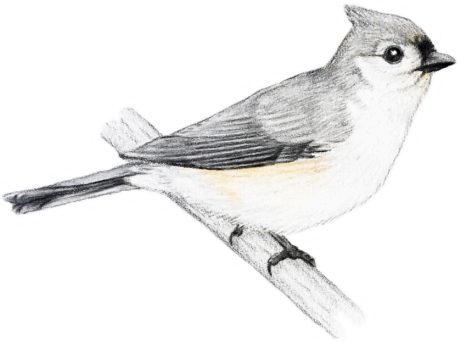
Scavenger Hunt

Woodlands



White-breasted Nuthatch ☐

Red-bellied Woodpecker ☐



Tufted Titmouse ☐

Pileated Woodpecker ☐

Black-capped Chickadee ☐

Blue Jay ☐

Northern Cardinal ☐

Downy Woodpecker ☐

Carolina Wren ☐

Build a Pinecone Feeder

You don't even have to leave your yard to find birds! Putting up a bird feeder is a great way to bring the birds to you. Follow these steps to make your own pinecone bird feeder!

1. Find a pine cone with sturdy open scales!

2. Tie a string around the top of the pinecone

3. Cover pinecone in nutbutter or lard using a butter knife

4. Sprinkle birdseed over the pinecone

5. Secure string around tree branch and watch the birds enjoy their new treat!

Materials

- Pinecone
- Nutbutter or lard
- String or yarn
- Bird seed
- Butter knife

Record the different bird species you see at your new pinecone feeder!

Be a Junior Ornithologist

Now that you know some birds, and how to identify them, it's time to do some scientific research!

There are many ways that people study birds. In the next few activities, we will explore some of those methods.

You will learn to be more observant about what bird species you see when, in what habitats, and how they behave.

These observations are important for understanding birds and developing better observation skills.

Conduct your own bird surveys. Use the next few pages to document what species you see, then show off your ability as a junior ornithologist!

For fun, print these survey pages, put them on a clipboard, and take them with you on your bird adventures!

Keeping a journal

Many birders like to keep track of species they have observed. This alone can be a fun activity, but can also provide important data on bird population trends and when certain species arrive or leave each season.

Print the journal pages found on onondagaaudubon.com/junior-birder to create your own journal to keep track of the birds you've seen and record information such as the date you saw the bird, its location, behavior, and any comments on what you thought of the experience.

Print one copy of the cover and back and as many inside pages as you like, fold it in half, staple the fold in the middle and close!

And that's all you need for your first bird journal or life list!

Let's Do a Bird Survey

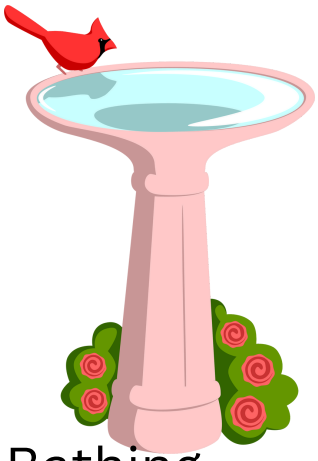
Every year surveys are conducted from November to April called Project FeederWatch.

Complete your own backyard feederwatch survey. Pick a time you can spend at least 15 minutes watching your feeder. During this time, write down all the species you see and at the same time tally the number of each species seen.

Species Name	Tally	Total

Bird Behavior Survey

Documenting and observing bird behavior is important information to note as an ornithologist. Go for a walk outside and tally up each time you observe the following bird behaviors.



Bathing

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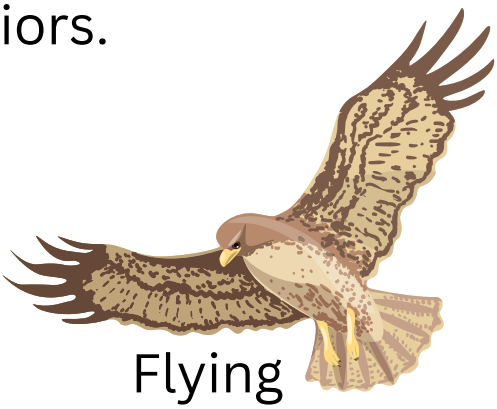

Flying

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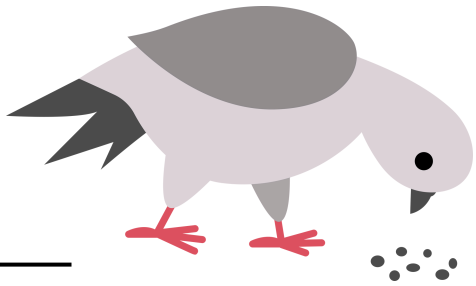

Eating/ Foraging

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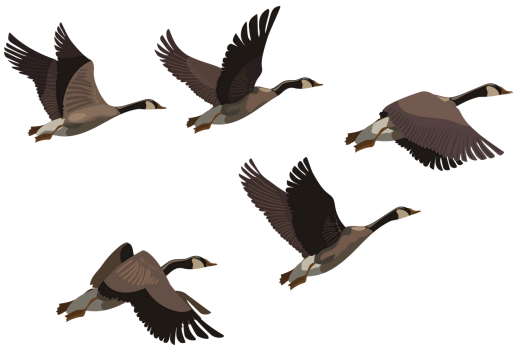

Forming a flock

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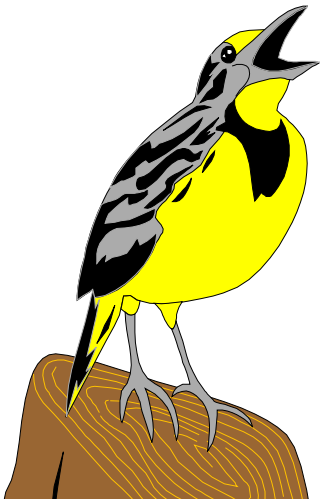

Singing

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Congratulations Junior Birder!

By completing these activities you are now an official Junior Birder! You are on your way to becoming a great birder, with the skills to identify birds and knowledge of their anatomy, behaviors and prefered habitats!

Be sure to have your parent, guardian, or teacher send an email to fisk.audubon@gmail.com to show that you have completed this booklet to get your certificate!