

I have put together many of the documents I made from my first-time coaching feather friends. **They are not specific to this years bird list!!!** These are my materials that you can hopefully use some of, and get an idea of teaching ideas that you can modify for this year's bird list.

First week – we played bird bingo and did worksheets on parts of the bird

This is what I got – there are other options on Amazon.

https://www.amazon.com/Lucy-Hammett-Games-5511892-Bingo/dp/B0088HWLY0/ref=sr_1_2?crid=2M1YDG2DVEHL7&keywords=bird+bingo&qid=1646186779&srefix=bird+bingo%2Caps%2C183&sr=8-2

2nd week I had them do the beak worksheet for all their birds

3rd week I had them do the feet worksheet for all their birds

The following weeks I had them fill out the blank nest, migration, habitats, food, and behavior sheets, all why discussing which birds are ***different***. For instance, most of our birds nested in trees like robins. Which ones differ from this?

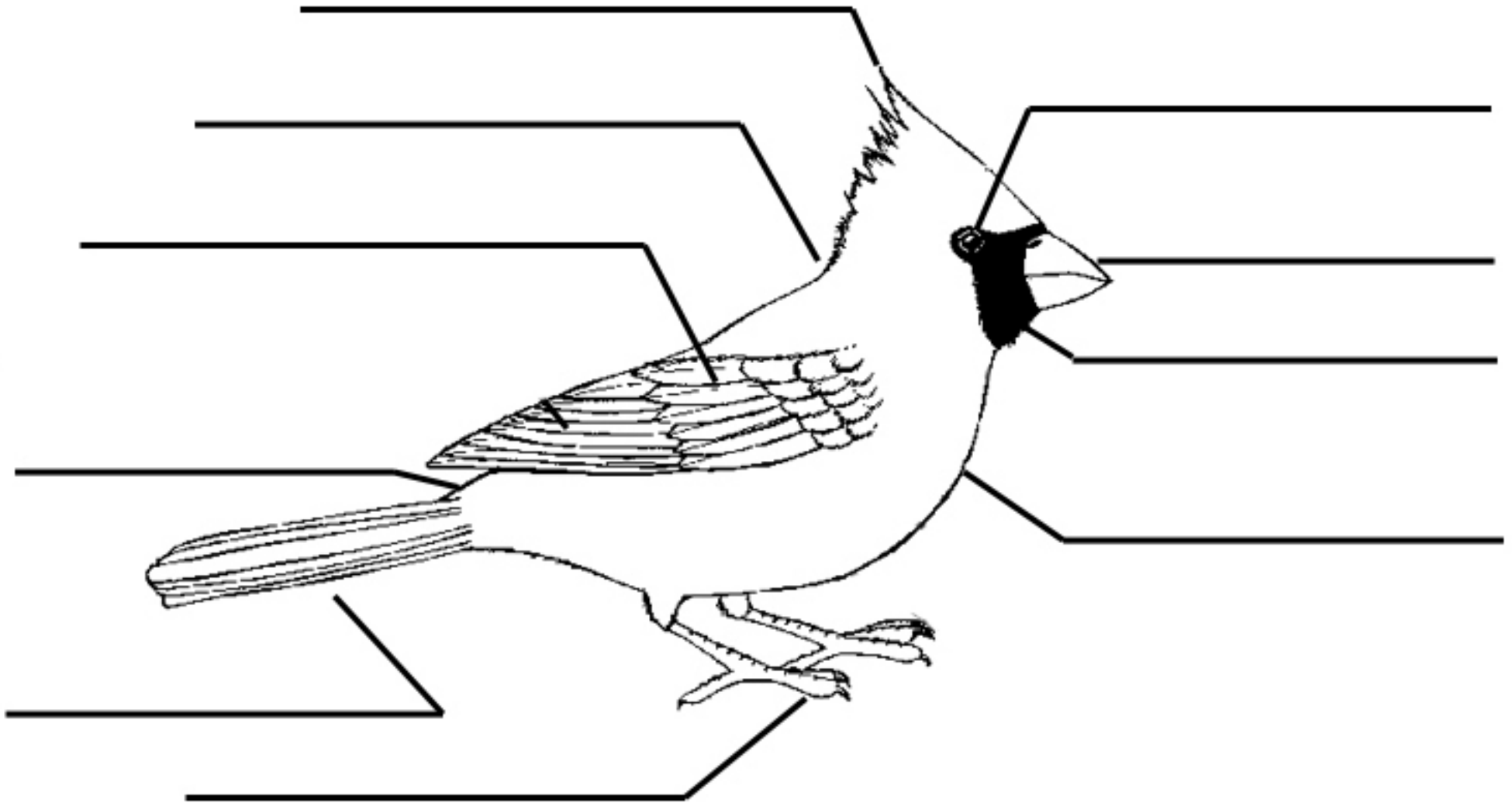
Next worksheets were on flight patterns and feathers (owl vs. hawk – look at the difference and why)

The last activity is one in Eberwhite Woods where they found the lengths of the woods using the app: MapMyRun and distances. Then calculated area and figured out Eberwhite Woods is (sadly) too small to support nesting pileated woodpeckers. They need habitat more the size of the Arb.

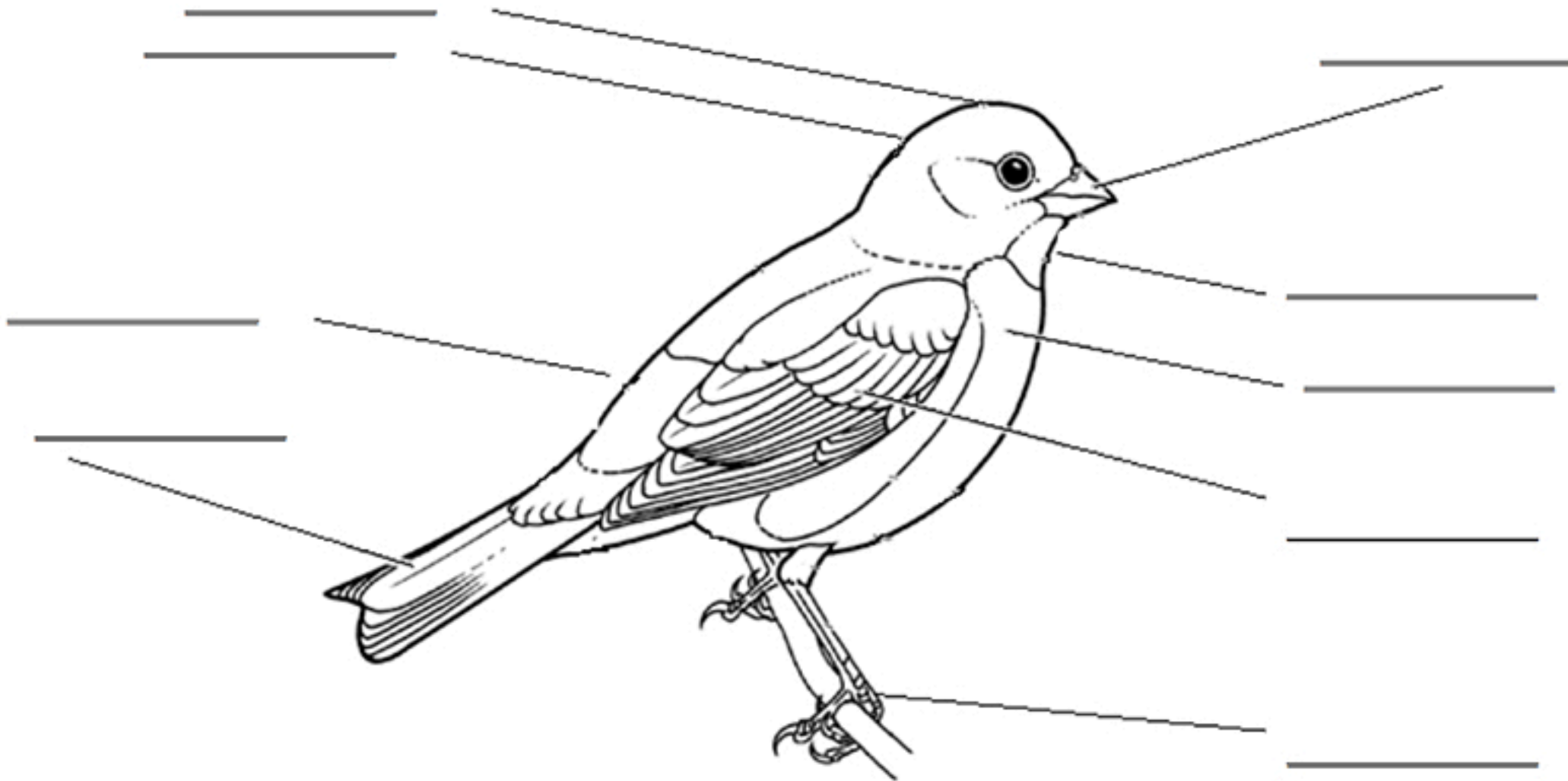
We mostly met at lunch. I put a bird feeder out in the woods by our school and we'd do our worksheets on a blanket by the feeder and watch for birds.

Hope this helps!

Name the Parts of a Bird



Beak, Breast, Claw, Crest, Eye Ring, Rump, Nape, Tail, Throat, Wing



Beak, Breast, Claw, Crown, Head, Rump, Tail, Throat, Wing

2nd Grade

1. Which of your birds have a crest?
2. What 3 colors are on the wing of the Red-Winged Blackbird?
3. What color is the throat of a Ruby-Throated Hummingbird?
4. What bright color is the crown of the Downy Woodpecker?
5. What color is the beak of the American Robin?
6. What color is the nape of the House Finch?
7. What color is the breast of the American Robin?
8. What color is the head of the Mallard?
9. What color surrounds the eye ring of the Black Capped Chickadee?
10. What color is the rump of the House Finch?
11. What color is the tail of the Blue Jay?

3rd Grade










1. Which of your birds have a crest?
2. What color is the wing of the Eastern Bluebird?
3. What color is the throat of a White Throated Sparrow?
4. What bright color is the crown of the Downy Woodpecker?
5. What color is the beak of the Mute Swan?
6. What color is the nape of the House Finch?
7. What color is the breast of the Rose Breasted Grosbeak?
8. What color is the head of the Common Loon?
9. What color surrounds the eye ring of the House Sparrow?
10. What color is the rump of the House Finch?
11. What color is the tail of the Red Tailed Hawk?








4th Grade

1. Which of your birds have a crest?
2. What 3 colors are the wing of the Baltimore Oriole?
3. What color is the throat of a White Throated Sparrow?
4. What color is the crown of the Chipping Sparrow?
5. What color is the beak of the Herring Gull?
6. What color is the nape of the Barn Swallow?
7. What color is the breast of the Kirtland's Warbler?
8. What color is the head of the Indigo Bunting?
9. What color surrounds the eye ring of the House Sparrow?
10. What color is the rump of the Cedar Waxwing?
11. What color is the tail of the Red Tailed Hawk?

5th Grade

1. Which of your birds have a crest?
2. What color are the wings of the Scarlet Tanager?
3. What color is the throat of a Cerulean Warbler?
4. What bright color is the crown of the Evening Grosbeak?
5. What color is the beak of the Common Merganser?
6. What color is the nape of the House Finch?
7. What color is the breast of the Kirtland's Warbler?
8. What color is the head of the Brown Headed Cowbird?
9. What color surrounds the eye ring of the Red Breasted Nuthatch?
10. What color is the rump of the Scarlet Tanager?
11. What color is the tail of the Red Tailed Hawk?

Shape	Type	Adaptation	Your Birds
	Tearing / Shredding	birds of prey they have sharp, hooked beaks they use to pierce prey, pull off fur, tug away skin, pluck out feathers, and tear meat into bite-sized, easy-to-swallow chunks.	
	Cracking seeds/nuts	thicker and stronger than other types of beaks seed eaters short, wide, pointed beak	
	Sipping	Long and slender for probing flowers for nectar	
	Drilling	chisel-like tip for drilling holes in wood	
	Tweezers	short, slender, tweezer-like beaks that enable them to grab insects	
	Probing	slimmer beaks used to probe in mud and shallow water for worms, crustaceans, and insects	
	Striking	pointed beaks useful when hunting fish, frogs, crustaceans, and other small animals that live in and around water sometimes bird uses its beak to spear its intended dinner	
	Straining	lives in the water looks like the bird is drinking the bill helps strain small animals, insects and plants out of the water and the mud.	
	Multi- Purpose		

Shape	Type	Adaptation	Your Birds
	Climbing	2 in front, 2 in back Help birds climb trees (up, down, and sideways) Sharp claws for digging into wood Two back toes so bird doesn't fall backwards	
	Swimming	Webbed feet help paddle through water more efficiently	
	Perching	3 in front, 1 in back Useful for perching on tree branches Wrap toes around branches to balance	
	Grasping	Predatory birds Called talons For capturing, killing, and carrying prey	
	Scratching	Scratch at dirt for insects Strong nails	
	Walking / Running	For running quickly, all toes point forward	
	*Bonus* Feathers on feet	Why do these birds have feathers on feet?	

The birds that have two feet in front and two feet in back are generally what species:

Having two feet in front and two feet in back helps with what?

Birds that perch in trees have how many feet in front and how many in back?

Turkeys and pheasants use their weak / strong (circle one) toes to get food how?

What bird has feathers on its feet?

Birds who swim have what kind of feet?

What kind of feet do *predatory* birds have?

What does predatory mean?

Birds who run or walk (don't perch) don't have what "toe" that most other birds have.

What kind of beak does a cardinal have? What does this tell you about its primary kind of food?

Birds with a *tweezers* beak eat mostly what kind of food?

If you were a fish, what beak would you be worried about catching you?

Are ducks drinking water when they put their beak in the water? Explain...

What kind of beak do woodpeckers have?

What kind of beak does an osprey have? Osprey primarily eat fish, do they have the same kind of beak as a kingfisher? Tell me how each bird captures and kills the fish they eat.

Tell somebody who doesn't know anything about woodpeckers about their feet and beak adaptations and how they use them for eating, making nests, and moving around.

Nesting

Match each of your birds with the nest type

Tree	Shrub	Ground
	Ground	Cliff

Migration

Match each of your birds with its migration information for Michigan

[illegible]

Habitat

Match each of your birds with the correct habitat

Open Woodland	Forest	Marsh
Towns	Lake/Pond	

Food

Match each of your birds with the nest type

Omnivore	Seeds	Insects
Nectar	Fish	Mammals

Behavior

Match each of your birds with the behavior

Ground forager	Foliage Gleaner (eats near leaves)	Soaring
		Bark forager
	Hovering	
		Stalking
	Aerial Dive	
		Dabbling

2nd Grade

What birds build their nests INSIDE trees (in tree cavities)?

What birds build their nests on tree branches?

What birds build their nests on the ground?

What birds nest in a colony?

How does a Great Horned Owl BUILD its nest?

Do Great Blue Herons nest in trees or on the ground? Think about what kind of feet they have – why do they have the feet they do – think about their nests!

Do Bald Eagles build a new nest each year?

How many eggs does a Bald Eagle usually lay?

Does a Red-Winged Blackbird build its nest in cattails, tall trees, or on the ground?

Blue Jay eggs look like smaller eggs of what other bird?

What behavior is unique about nesting female cardinals?

What color are Mourning Dove eggs?

How many eggs does a Ruby Throated Hummingbird lay?

What color are American Robin eggs?

What plant do American Goldfinch wait to grow to use to build their nests? I'll give you a hint – the plants name starts with a **T**.

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How does a Tufted Titmouse BUILD its nest?

Do Killdeer nest in trees or on the ground?

Do Red-Tailed Hawks build a new nest each year?

How many eggs does a Common Loon usually lay?

Where do Belted Kingfishers make their nests? What unusual item is found in their nests?

What behavior is unique about nesting turkey vultures?

What color are Eastern Bluebird eggs?

Where does a White Throated Sparrow build its nest?

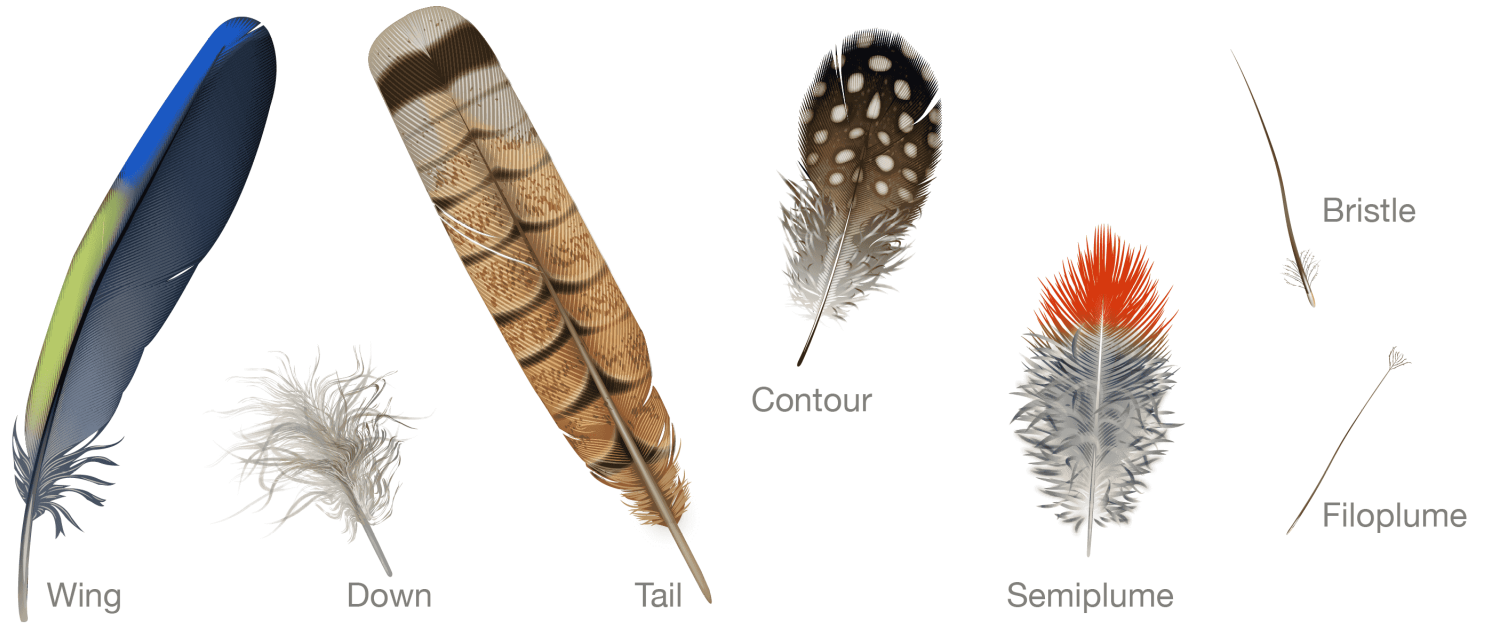
What color are Killdeer eggs? Why do you think they are this color (look at the picture)

How does a European Starling BUILD its nest?



FEATHERS –

- ✓ Insulation
- ✓ Waterproofing
- ✓ Camouflage
- ✓ Display
- ✓ Flight



Wing – for flying. They are windproof

Down – closest to the body to keep the birds warm

Tail – for steering while the bird is flying

Countour – cover the bird's body. Have waterproof tips

Semiplume – hidden under other feathers – help keep bird warm

Bristle – found on the bird's head to protect the eyes and face

Filoplume – are like mammal whiskers – they are sensory

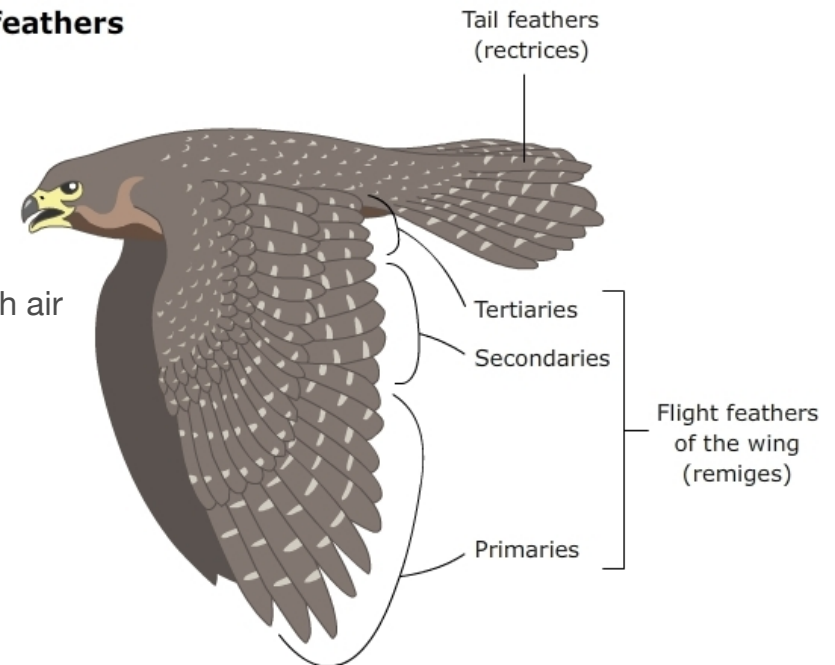
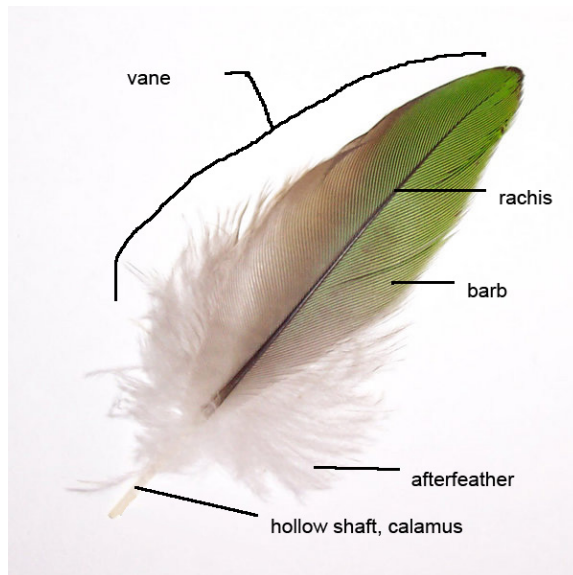
Flight feathers

Primary Feathers:

Largest flight feathers – move bird through air

Secondary Feathers:

Keep the bird in the air – give it lift



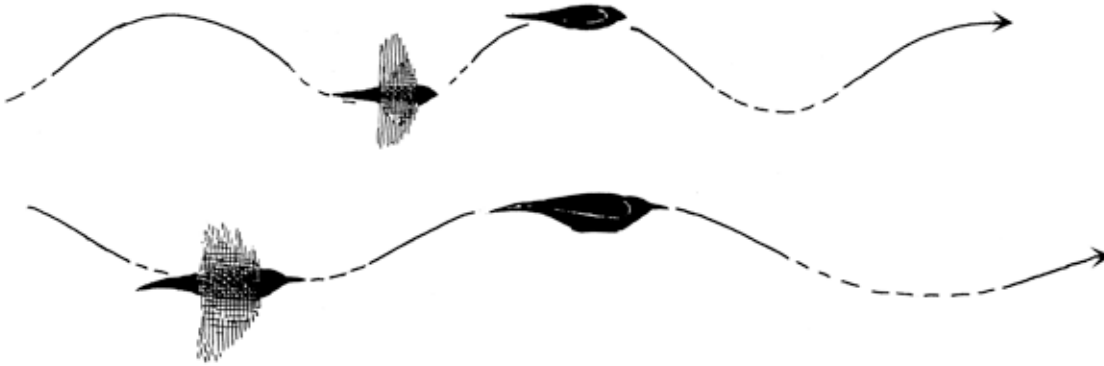
#1



Coming at You Birds of prey are distinctive even in a head-on view. Red-tailed Hawks hold their wings mostly level, but Bald Eagle's are perfectly flat The Turkey Vulture shows wings in a V and teeters with changes in the wind.

Label the three birds in the photo above

#2

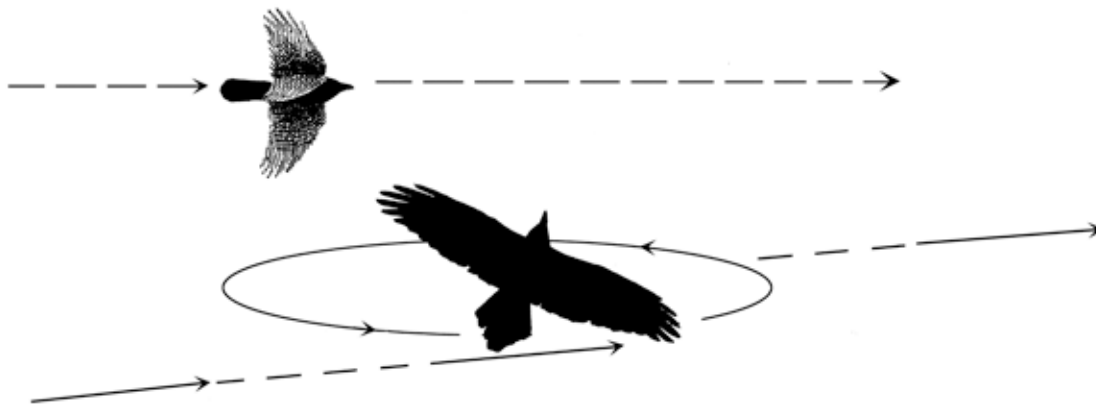


Bouncing Through the Air In flight, finches and woodpeckers rise and fall as they intersperse flapping with gliding. For the tiny finches, this causes them to bounce sharply upwards giving their flight a livelier rhythm than the larger woodpeckers. Sparrows, wrens, and warblers, though they're similar to finches in size, typically fly in a straight and level path.

On the photo above, label the finch and the woodpecker. Label when they are flapping and when they are gliding.

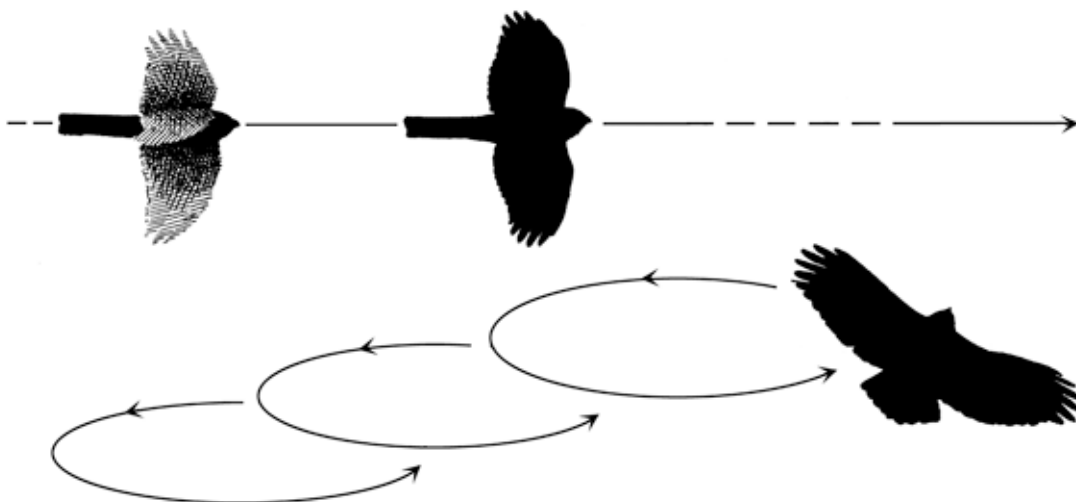
Draw a sparrow (should be the same size as a finch) and draw the flight path of a sparrow

#3



Crows and Ravens Flight style can be a great way to identify birds at a distance. Although crows and ravens look very similar, they fly quite differently. American Crows flap slowly and methodically, whereas Common Ravens take frequent breaks from flapping to soar or glide.

Label the crow and the raven in the photo above
How do crow and woodpecker flight patterns differ?



Cooper's Hawks, usually fly in a straight line, flapping stiffly several times in quick succession and then gliding. **Red Tailed Hawks** fly more deliberately and often spend time soaring in circles on their long, broad wings.

Cooper's Hawks inhabit deeply wooded areas. They have short rounded wings and long rudder-like tails which allow them to maneuver among the trees.

Red Tailed Hawks have long, broad, rounded wings and short broad tails. They prefer a habitat of fields and pastures mixed with open woodlands

Label the Red Tailed Hawk and the Coopers Hawk
Why do Cooper's Hawks have longer tails?

Which hawk are you most likely to see when you are in your car driving by farmland?

Based on how they can fly and where they hunt, which hawk mostly eats:

1. Voles, mice, rabbits, and ground squirrels?
2. Small birds?



Label the Bald Eagle, Cooper's Hawk, Peregrine Falcon, and the Red Tailed Hawk. These are true to (relative) size, so even though 2 of them look similar, you look in your book to see which is bigger.

Here are 3 different ways birds can hunt in the water
Stand in the water and stalk
Hover in the air, then plunge
Sprint back and forth on the beach

Watch this video of kingfishers:

<https://youtu.be/mdlo8U8fLoQ>

Do they hunt in flocks or alone?

What food do they hunt?

Which of the 3 ways listed above do they use to hunt?

Watch this video of a Great Blue Herons hunt

<https://www.youtube.com/watch?v=ChjtPSm4wHo>

Do they hunt in flocks or alone?

What food do they hunt?

Which of the 3 ways listed above do they use to hunt?

In the heron video, what bird do you hear in the background in the first 15 seconds?

Watch this video and tell me **how** barn swallows eat and **what** they eat?

<https://www.youtube.com/watch?v=goAKIBQkkas>

Then watch this video of barn swallows eating.

<https://www.youtube.com/watch?v=f8EYwAo1Uio>

Do cardinals and house finches eat similar foods and eat in the same way as barn swallows? Tell me how they are different? Watch this video for clues.

<https://www.youtube.com/watch?v=C2m9kuB8cAw>

What bird have we been seeing A LOT of eating on the grass at Eberwhite this spring? What food do you think it is eating?

Adult Male



Great Horned Owl primary wing feathers

Adult



0
cm

Red-tailed Hawk tail feathers

Pileated Woodpeckers



On the left is a **Downy Woodpecker** (one of the birds you will learn to identify). The Downy Woodpecker is the most common woodpecker in Ann Arbor, but also the smallest. We'll be seeing a lot of these.

On the right is another one of the birds you will learn – the **pileated woodpecker**. These woodpeckers are BIG – about the size of a crow. I'm going to warn you – I go a little bit bonkers if I see one out birding, so be prepared for that – they are so cool!

Do you think we'll see one in Eberwhite Woods? We are going to conduct a little scientific inquiry to answer that question.

Habitat Fragmentation

Will a pair of pileated woodpeckers nest in Eberwhite Woods?

Let's figure it out!

A pair of pileated woodpeckers need a forest that is at least 700,000 m² (m² is square meters) for nesting. This number is the **area** of forest they need.

(you gals know about **area** – terms like square inches, square feet, square meters)

One meter is about the length of a yard stick. So a **square meter** is a square with all four sides about the length of a yard stick.

Is Eberwhite Woods at least 700,000 m²?

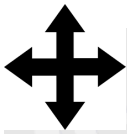
Below is a map of Eberwhite Woods. During our next meeting we are going to take measurements in the woods.

First – let's get acquainted with our map. Look at the map and see if you can figure out where your classroom is. Put an X on your classroom. Find where the flag pole is – draw a little flag there. Anybody know which way is north? I put 4 arrows on and wrote in "east" for you. Write in the direction of north, south, and west.

Second - I want you to look at the map and decide what rectangles we need to measure to **estimate** the area of Eberwhite Woods (Eberwhite Woods is an odd shape, so we'll estimate the area – it won't be exact)

We will use a program on the iPhone where we can have a starting point and walk to an end point – the iPhone will tell us how many meters we have travelled

Your homework is to figure out what "lines" we need to measure to be able to estimate the area. I've seen your math homework – so I know you can do this! Draw the lines on your map that you want us to walk and measure next week.



East

