

# The Boy Who Drew Birds

Book by Jacqueline Davies

Literature based unit study prepared by Jodi Small and Celia Hartmann

## *Social Studies*

### History

**Napoleon**— In our story, we learned that John James' father sent him to America so John James wouldn't have to fight in Napoleon's War.

Napoleon Bonaparte was born in 1769 on the island, Corsica. He became a general when he was 24 years old. During the French Revolution, he led the French army. At age 35, he crowned himself as emperor of France. He is considered one of the greatest military commanders in history, and his military plans are still studied today. One of Napoleon's most famous battles was the Battle of Waterloo (June 1815), where he and his French army were defeated. Soon after the defeat, he gave up the French throne. He died at age 51 in 1821.

Copywork: *He who hazards nothing, gains nothing.* --Napoleon

**Aristotle**— Our story mentions that Greek philosopher Aristotle thought that cranes migrated but that small birds did not. He thought small birds hibernated under water or in logs all winter.

Aristotle was born in 384 BC to a doctor's family in northern Greece. He was interested in nature, biology and anatomy. When he was 17 years old, he went to Athens to go to school under the philosopher Plato. He remained at the school (known as Plato's Academy, or "the Academy") for 20 years, leaving after Plato died.

He married and then became the teacher of a young boy named Alexander, who was son of King Philip II of Macedonia. Six years later, young Alexander would take

over the throne after his father's death and would go on to conquer most of the known world as "Alexander the Great."

After tutoring Alexander, Aristotle returned to Athens and founded a school called the Lyceum. Aristotle often taught while walking around with his students.

He studied astronomy, biology, geography, geology, anatomy, ethics, government, literature, poetry, music, and much more. He did much research in biology through dissection of fish and sea creatures. Aristotle believed the Earth was the center of the universe. Many others believed him, even though he had no proof of his theories. Some of his theories were not proven correct until over 2000 years later, others were proven incorrect as man gained more knowledge. Many consider him to be the most influential philosopher in history. (A philosopher can be defined as a person who is a deep thinker, a person who loves wisdom, a person who tries to figure out things and why they are.)

He died in 322 BC.

Copywork: *All men by nature desire knowledge.* -- Aristotle

## Geography

**France** – John James Audubon was born in France.

Help/have your student locate France on a map or globe. What countries/bodies of water surround it? The capital of France is Paris, which is famous for the Eiffel Tower, the Napoleonic Arc de Triomphe, the Louvre art museum, and much more. Your student may be interested in learning about one of these famous landmarks or another in France. France is the most visited country in the world.

People in France speak French. What are some French words used in the book?

Madame (medam) - Mrs. – used when addressing a woman you don't know

Oiseaux (wazo) - bird  
Musee (myze) – museum

Some other popular French words:

Yes – oui (we)

No – non

Thanks – merci (mer-see)

Hello – bonjour (bon-jzoor)

Goodbye – adieu (ah-dew)

**Pennsylvania** – When John James came to America to learn commerce, he lived in Pennsylvania.

Help/have your student locate Pennsylvania on a map. What states/bodies of water surround it? What is the capital? (Harrisburg) Pennsylvania is one of four states that designate themselves as a Commonwealth. That means that the government is concerned with the “common wealth” or the welfare of the people that live there. Other Commonwealths are Kentucky, Virginia and Massachusetts.

In 1681, King Charles II of England gave the land that is now Pennsylvania to William Penn as a payment for a debt that was owed to William's father. The King called it Pennsylvania, which means Penn's Woods, in honor of William's father. William Penn wanted to establish a land where the inhabitants could be free to worship as they choose. The ideas that William Penn used to set up the government of Pennsylvania were later used in America's Constitution.

King Charles II wanted everyone in England to be part of the Anglican Church, and any meeting of other religious groups was considered "criminal." William Penn belonged to a group called the Quakers (more formally known as Religious Society of Friends) and was jailed several times. So when King Charles paid the debt owed to William's father, he hoped to use the land a place of religious freedom. Many Quakers settled in Pennsylvania to escape the persecutions of England. To this day,

one of Pennsylvania's nicknames is still the *Quaker State*. (Note: Mrs. Thomas in the story was likely of the Quaker religion as she spoke with the characteristic "thee" and "thou.")

Philadelphia is the largest city of Pennsylvania and is a sea port. It was once (1774) America's capitol. It was where the Founding Fathers of America signed the Declaration of Independence. William Penn helped plan the city.

**Map Skills:** Using a world map, track the route from Pennsylvania to France to see how far Audubon had traveled from home. Ask your students questions like: What ocean did John James cross to get to Pennsylvania? (Have him label it.) What direction did John James travel to get from France to America? (Have him draw a compass rose, labeling the directionals.)

Encourage an older child to also label on his map the countries and bodies of water that surround France and the states and bodies of water that surround Pennsylvania.

## ***Science***

**Caves** – a natural underground hole below the earth's crust

Caves are usually formed by water erosion, where water has found itself between rocks and over time has made the crevices larger. Caves can have lakes, rivers, and waterfalls in them. There is evidence of people and animals living in some caves.

Most caves are made of limestone, a soft rock that is easily dissolved. The water that flows through limestone caves contain the mineral calcite. Over time, the dripping calcite results in cave formations.

A stalactite, from the Greek word meaning "drips", is formed from water containing the calcite dripping from the ceiling of a cave. Small deposits of the calcite harden as the water drips making the stalactite longer, in the same way an

icicle forms in the winter.

Stalagmites, from the Greek word meaning “drop”, are formed where the water lands on the floor of the cave leaving the calcite. They gradually grow upwards.

Sometimes the stalactites and the stalagmites meet forming a column.

Animals that live in caves:

Bats hang from the roof of caves during the day and hunt for food at night.

Crayfish and salamanders are blind because of the lack of sunlight. Some have pale white skin also. Some animals like bears and snakes spend their winters in caves.

Animals like porcupines and bobcats hide just inside the cave to hunt for food.

Cave facts:

Longest cave – Mammoth Cave in Kentucky with a total length of 367 miles.

Lava caves – Kazimure Cave in Hawaii is one of the world’s longest lava tubes at 7 miles long.

Sea caves – Fingal’s Cave off the Scottish island of Staffa extends 200 feet into the island.

**Zoology - Birds** - there is so much that can be studied with birds. A scientist who studies birds is called an ornithologist. They will study the physical features of the birds – feather colors, size, beak shape, tail length, and wing span. They also study their nesting habits, what they eat, migration, among other things. Let your student pretend to be an "Junior Ornithologist" this week. Below are some things he can learn about. As the opportunity arises this week, encourage him to discuss what he learns with others (i.e., "share his discoveries" as a Junior Ornithologist).

**Birds species** - God created so many different kinds of birds! Some are beautiful, some have beautiful songs, some act or look silly. Using a field guide for birds in your area, have your student learn to identify and learn the characteristics and habits of some of your native birds.

There are also many birds pictured in the book that he may wish to learn about. If he already knows a great deal about the birds in your area or the ones in the story, have him choose a few that he doesn't know about and research them instead.

A few possible birds to learn about to get you started:

Pewee Flycatcher (featured in the story and now called the Eastern Phoebe) – medium sized, insect-eating birds that live in wooded areas. Usually gray with a wing bars.

Kingfishers (pictured on the title page and mentioned on the collage pages) – large-sized bird with large head and short, stubby tail that live in wooded and wetland areas and eat fish and insects

Wood Thrush (first two pages of story) - Lives in the deep woods and has a beautiful song. Brown back with a white chest that has large, dark spots.

Painted Bunting (from the pages with the nest and eggs) - a small, colorful finch. The males have red chest, blue head, and green back; the females are less colorful, more green. They eat insects, spiders, and seeds.

Hummingbird (from the Aristotle pages) - The Ruby-throated Hummingbird is a tiny bird that is iridescent green. The males have a red patch on their throat, hence the name. They have a long, needle-like beak designed to sip nectar from flowers. They hover at flowers, beating their wings 50-60 times each second. They weigh about the same as a penny! Their eggs are the size of a pea.

Herons, Cranes, and Egrets (from the Aristotle pages) - These are water birds, living around lakes, rivers, ponds, and marshes eating fish, frogs, etc. They stand very still waiting for prey to come near so they can stab it with their long beaks.

American Robin (from the Aristotle pages) - from the Thrush family. Eats worms, bugs, and fruit. Many think they migrate and come back in the spring, when in

reality they quite often spend winter in the woods and are just less likely to be seen.

Cardinal (from the pages with the palette of paint) - the males are a brilliant red and familiar site to many backyard bird feeders in winter. They eat seeds, fruit, and insects.

Chickadees (from the pages with the palette of paint) - The Black-capped Chickadee is a small bird with a black crown and black bib. They often hide their food for eating later--they can remember thousands of hiding spots. Their name comes from their call, which sounds like chick-a-dee-dee.

Redwings (mentioned on the collage pages) – from the Thrush family. Brown with red flanks under their wings.

Grackles (mentioned on the collage pages) – large-sized bird that is iridescent black or purple on their heads

Woodpeckers (mentioned on the collage pages) – large-sized birds that eat mainly insects. Use their beaks to “peck” into trees in search of food. Most species have black, white, green or red coloring

## **Bird Identification**

We often need to know more than just the color and size of a bird to help identify it. Other characteristics that are helpful are: the shape of the bird, the shape and length of the tail and wings and beak, how it walks and flies, what kind of feet it has, etc. Knowing these characteristics can give us clues about what they eat and where they live. For example, a bird with a short, cone-shaped beak probably eats seeds, while birds with a long, slender beak is designed to eat insects and birds with hooked beaks eat meat. Some birds have feet designed to hang to branches, others have flat toes to run, and yet others have webbed feet designed to swim. It's amazing how God thought of everything!

## **Bird Migration**

Migration is the process of first flying to warmer regions in the colder seasons and then returning to their homes in warmer seasons. Many birds migrate, some go very long distances. Birds that normally live in the water must migrate south in the winter to maintain their habitats. God gave birds a 'natural compass' to help find their way during migration...this is called *homing instinct*. An instinct is a God-given ability that is inherited instead of learned. It's "built in." Some species of birds are born with the ability to know where and when to migrate and how to get back home.

## **Nesting**

Birds build nests in trees, buildings, cliffs and on the ground. They use grass, twigs and sometimes mud to hold their nests together. The nests are used for reproduction. Some birds lay only one egg and some can lay up to 16 at one time. The nests are used to protect the eggs and later the baby chicks from predators and the weather.

**Bird Banding** -- John James got his idea for attaching a string to the birds by remembering how medieval kings tied bands on the legs of their prized falcons so a lost falcon could be returned.

About 1595, King Henry IV banded his Peregrine falcon. He was the first person on record to use a metal band. Prior to that, there are only a few instances of banding recorded in history, the earliest being about 218 B.C. In 1803, John James Audubon became the first to mark birds in America, with the incident described in our story. A hundred years later, scientists began to use a numbered banding system to help them better track specific birds.

Banding (or ringing, as it is called in Europe) allows scientists to know how far a bird migrates, where it migrates, how long it lives, and more.



## **Bird Activities**

Make your own bird feeder using an empty juice or pop bottle by cutting small holes in the side and sticking a bamboo stick under the holes for perching. Watch and record what birds come to your feeder.

Make your own bird bath by using a large, shallow pan filled with water.

Go for a walk in the woods in the spring time, during nesting season, nest hunting. Evergreen trees are great hiding places for birds to build their nests. Look for bird poop on the lower branches and there is usually a nest close by.

Use pine cones and cover with peanut butter and then roll in bird seed and hang it where it can be observed.

Hang orange and apple slices by ribbons from trees.

## **Bird Printables**

This file contains several pages of bird printables. You can use these as desired to help your student learn more about birds.

A younger student could use the Bird Life Cycle page to learn more about life cycles. You can ask your student to draw a copy of the bird life cycle in his or her nature notebook.

Your student could also draw a copy of the Anatomy of a Bird Embryo.

Use the Bird Diagram Page to help your student complete the Label a Bird Page.

Your student can record bird facts on the All About Birds 1-2-3 Organizer.

Use the My Bird Report to study one specific species. Draw and paste a picture of the bird in the photo spot.

Bird Beaks and Bird Diets- Your student will need to complete research about bird beaks in order to complete this page.

**Seasons** - John James studies birds during each season. This might be a good time to review the seasons with your student. Have your student write (or narrate) the characteristics of each season on separate sheets of paper. Have him draw a scene from that season.

Autumn – cooler temperatures, leaves change and fall from the trees, harvest time, less daylight hours

Winter – cold temperatures, leaves are bare and dormant, snow falls

Spring – snow melting, trees begin to bud and get new leaves, grass greens

Summer – warm temperatures, flowers bloom, many animals, longer daylight hours

### ***Language Arts***

#### **Vocabulary**

Minuet - a slow, stately dance in triple meter, popular in the 17th and 18th centuries.

Gavotte - an old French dance in moderately quick quadruple meter.

Commerce - an interchange of goods

Crouched - to stoop or bend low

Fond - having a liking or affection for

Lichen – a fungus that grows in leaf-like or branching forms on rocks, trees, etc.

Hibernated - to spend the winter in close quarters in a dormant condition

Clinging - to hold tight

Tufts - A dense clump

Broods - The children in one family (or in the this case, the number of young birds in a nest)

Nestlings - A bird too young to leave its nest

**Letter writing** - At the end of the book is an illustration of a letter in French that

John James wrote to his father. Assuming your child cannot read French, can he guess what the letter might say? (Remember, he just learned that the pewee does indeed return to the same area.) After reviewing the parts of a letter below, have your student pretend he is John James and write his father...what might the letter say?

The parts of a letter include:

Heading – the writer's address and the date indented to the right side of the page

Greeting – Dear \_\_\_\_\_ - says hello to the person getting the letter

Body – the message from the writer of the letter, usually divided into paragraphs

Closing – Your Friend, Sincerely, With Love, etc. - says goodbye and is indented to the right side of the page

Signature – the writer's name, also indented to the right side of the page

Take other opportunities this week to practice writing a letter to someone. Thank you notes are an easy start.

**Onomatopoeia** - A word or words representing a sound

Examples in the book:

*Ffh, Ffh, Ffh* – the sound of the birds' wings in flight

*Clack, clack, clack* – the sound of the birds' beaks snapping together

**Idiom** - Mrs. Thomas thought John James was "*something of a cracked pot*."

What does Mrs. Thomas mean? Did she really think that John James was a pot that was cracked? No, not really! Mrs. Thomas used an idiom, a phrase that does not mean exactly the words that make up the phrase.

In old times, the word "pot" came to mean a person's head and "cracked" was another word for crazy or not right in the mind. So, in this case, Mrs. Thomas considered John James somewhat strange and not quite right because all he ever thought about was birds and this was "*strange for a boy his age*."

If your student has not study idioms much, you may wish to expand on this lesson by discussing other common idioms such as: all ears, a piece of cake, in a pickle, head in the clouds, out on a limb, raining cats and dogs, etc.

## ***Art***

**Watercolor painting** - John Audubon painted pictures of the birds he saw, along with their eggs, nests and habitats. Thanks to him, we have the Audubon Bird Identification books. Look at the picture in the back of the book that he painted of the Pewee Flycatcher. Notice he also painted the branch the bird was perched on. Notice the details in the feathers. He preferred to use watercolors for his artwork.

**Mixed Media Illustrations** - Mixed media is when an illustrator uses more than one technique to create the picture. Melissa Sweet, the illustrator of the book, uses watercolor and pencil on most of her pages. Open the book to the page near the middle that shows a bird's nest/egg, feathers, a frog, etc. Many items on page are not drawings or paintings. The illustrator chose to create a collage of items, incorporating real objects with drawings and paintings. Allow your student to create a mixed media picture.....he could use magazine clippings, scrap pieces of paper or material, real flowers/seeds, etc.

**Nature Journal** - Now might be a great time to make or purchase a special book in which your child can begin his own nature journal. Point out to your student that Audubon not only drew pictures of the birds, but he also drew the pictures of the plants from which they ate, as well as their eggs and nests. In addition, he kept a list of the birds he saw and a count of them, and he would draw record where he saw the bird or the nest. Your student may wish to do something similar. Encourage him to continue his "Bird Journal" through an entire year, so he might see the changes that take place.

## ***Math***

In the science section, under bird activities is a suggestion for another math activity: record the number of different birds seen at a bird feeder. For a younger student, you may wish to have him draw a tally mark for each kind of bird (cardinal, blue jay, chickadee, etc.) he sees (or each that actually land at the feeder). For an older student, have him record only the greatest number of the same species he sees at any one time (male and female) to avoid duplication of numbers. You may wish to have your students graph their findings.

### Story Problems

*"John James watched as two broods of nestlings hatched."* If each brood had 4 nestlings, how many were there all together? ( $4+4=8$  or  $4 \times 2=8$ )

*"John James walked five miles to the nearest village and bought some thread....."*  
How many miles did he walk to the village and back to the birds? ( $5+5=10$  or  $5 \times 2=10$ )

If John James was 18 years old (p. 3 of the story) when he arrived in America in 1803, what year was he born? ( $1803-18=1785$ )

Every year, on his birthday, John James took all the drawings he had done in the past year and he would burn them in the fireplace. If he drew 3 pictures each day (each on their own separate page), how many papers did he burn? ( $365 \times 3=1,095$ )

One scientist believed that birds traveled to the moon each fall and that the trip took 60 days. We now know that the moon is about 240,000 miles away from the earth. How many miles would the birds have to travel each day to get to the moon in 60 days? ( $240,000 / 60 = 4,000$  miles per day)

### Library List

**Audubon: Painter of Birds in the Wild Frontier** by Jennifer Armstrong

**Into the Woods: John James Audubon Lives His Dream** by Robert Burleigh

**John James Audubon: Wildlife Artist** by Peter Anderson.

**John Audubon: Young Naturalist** (*Young Patriots* series) by Miriam E. Mason.

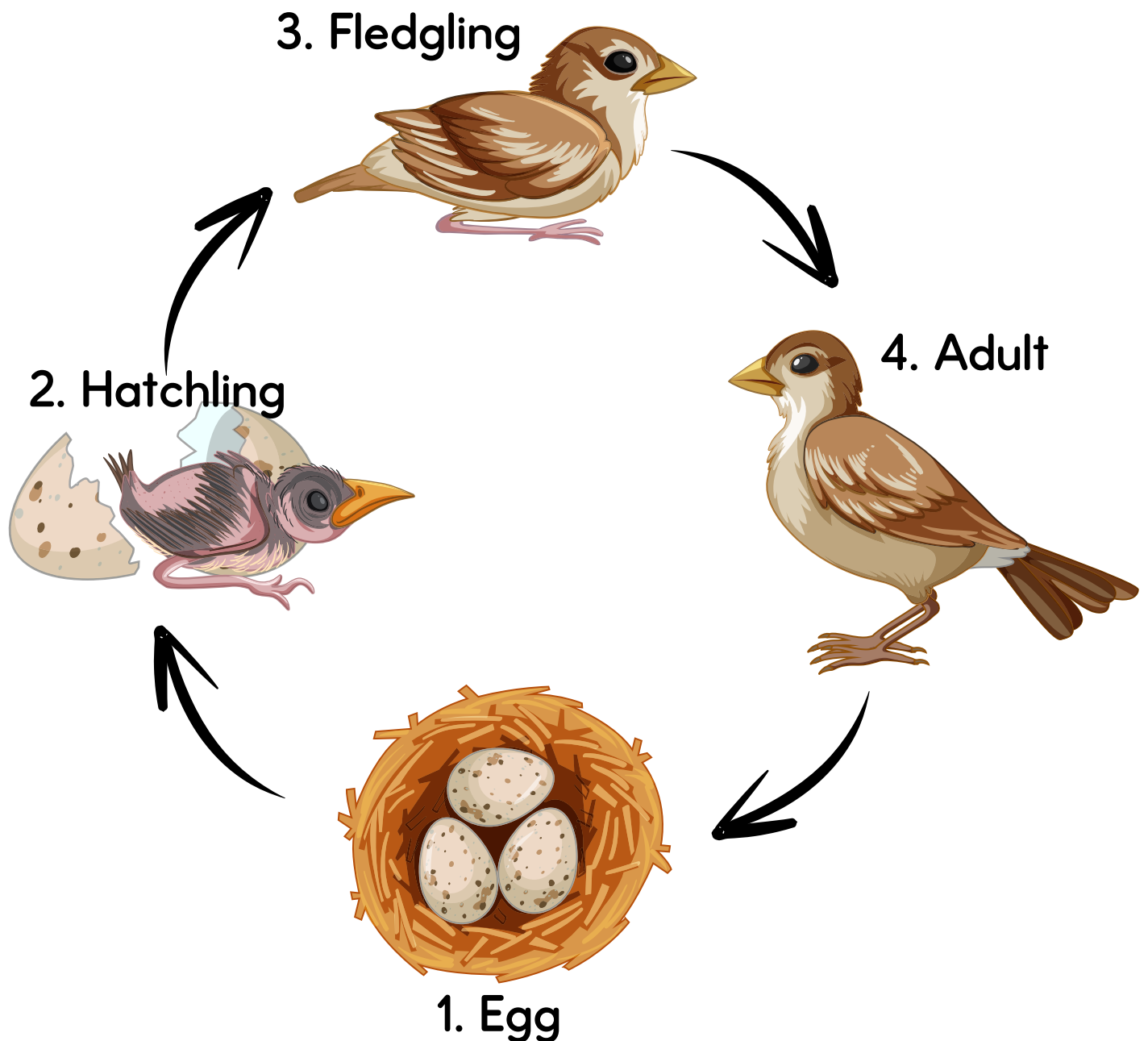
**The Burgess Bird Book for Children** by Thornton W. Burgess. Highly recommended! Elementary children will love reading the stories (or hearing the stories read)! While the birds in the stories are personified, careful attention was given to accuracy of their appearance, habits, and characteristics. 350 pages, 45 stories, over 50 birds.

**Birds, Nests, and Eggs Take Along Guide** by Mel Boring

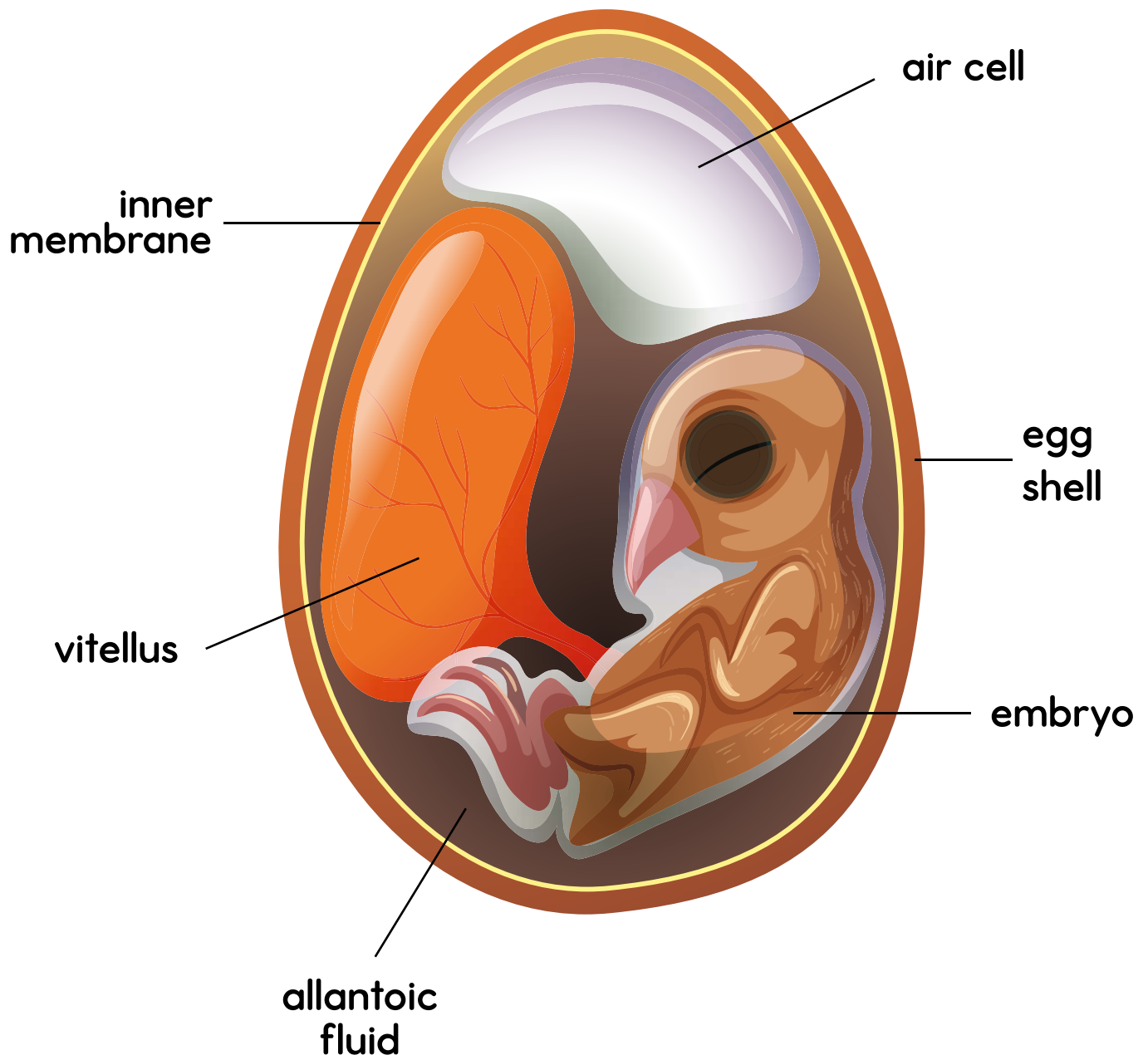
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# Bird Life Cycle

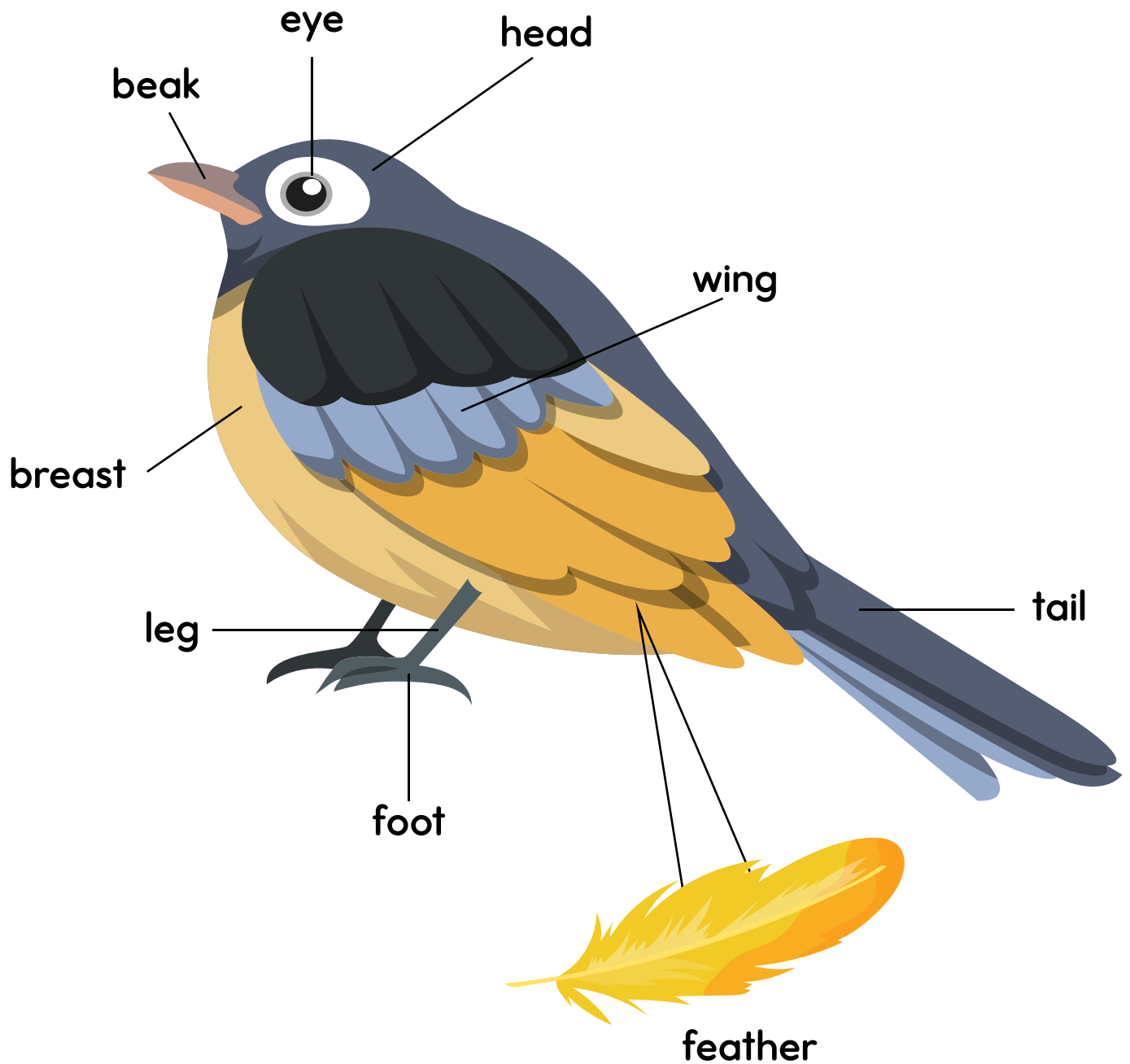


# Anatomy of a Bird Embryo



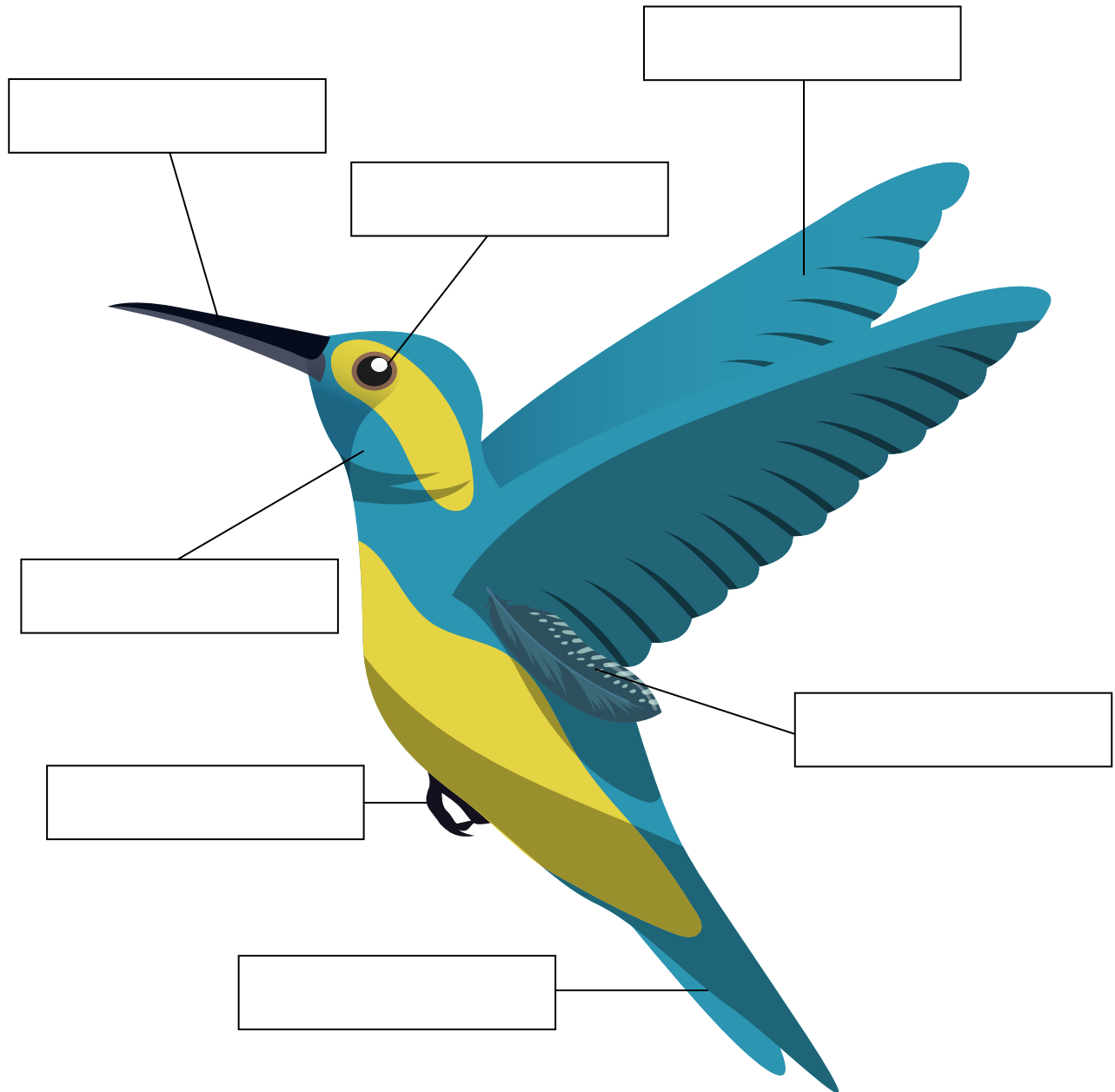


# Bird Diagram



# Label a Bird

Directions: Write the bird body parts in the correct boxes



# All About Birds

## 3-2-1 Organizer

### 3 Things I've Learned

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

### 2 Interesting Facts

1. \_\_\_\_\_
2. \_\_\_\_\_

### 1 Question I Still Have

1. \_\_\_\_\_

# My Bird Report

Paste a picture  
of a bird here

Where do birds live?

What do birds eat?

How does a bird stay safe?



Bird Fun Facts

# Bird Beaks & Bird Diets



cracker  
beak

•



sucker  
beak

•



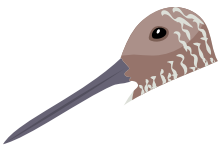
tweezers  
beak

•



chisel  
beak

•



probing  
beak

•



spear  
beak

•



hooked  
beak

•



strainer  
beak

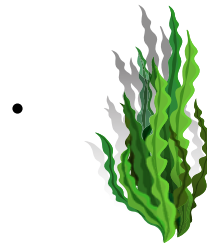
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animals



fish



water  
weeds



flower  
nectar



insects



nuts &  
grains