



# WHAT'S YOUR WINGSPAN?



A Cascades Raptor Center Lesson



# TODAY WE WILL LEARN

- The similarities & differences between birds & people
- What are the joints and bones of our arms & how are they similar to the joints & bones of a bird wing
- What is a wingspan?
- How to measure your wingspan
- What bird(s) have the same (or similar) wingspan as you!

Then we'll decide what we think, if we had wings could we fly?



**First let's look at what we  
already know:**

**What do we already know about  
how birds and mammals (us!) are the  
same, and how they are different?**

**TAKE NOTES ON YOUR  
VENN DIAGRAM!**



# ***You might think about***

**How we look**

**How we act**

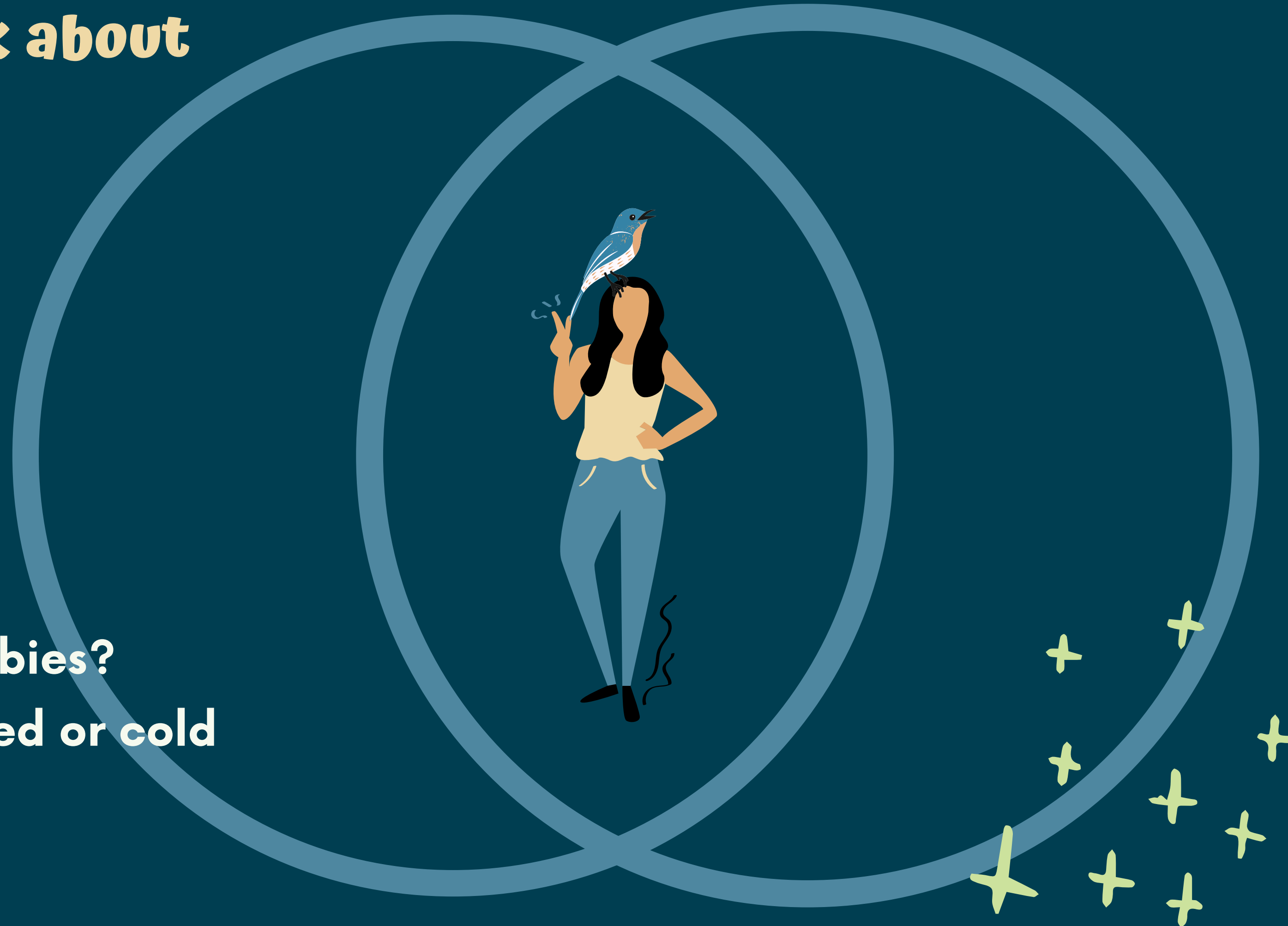
**Where we live**

**What we eat**

**What do our bodies  
have in common,  
what is different?**

**How do we have babies?**

**Are we warm blooded or cold  
blooded?**



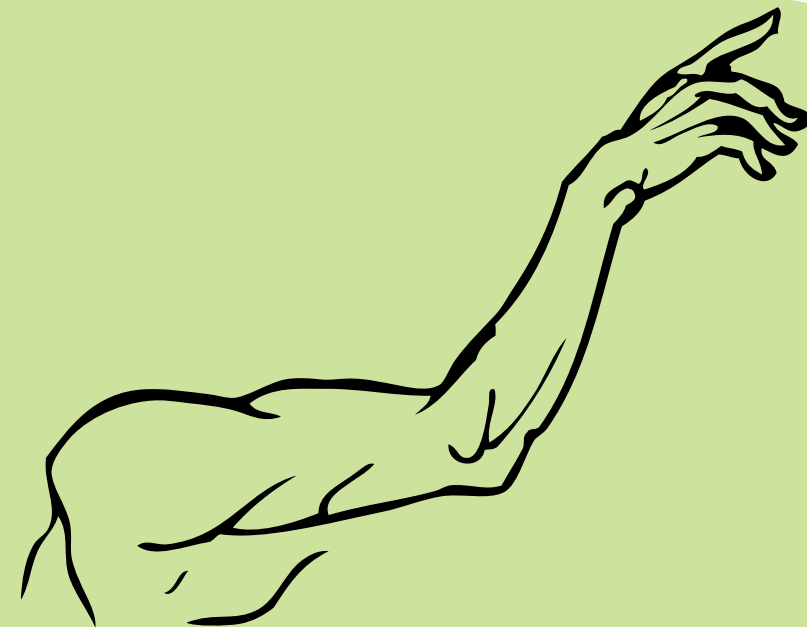
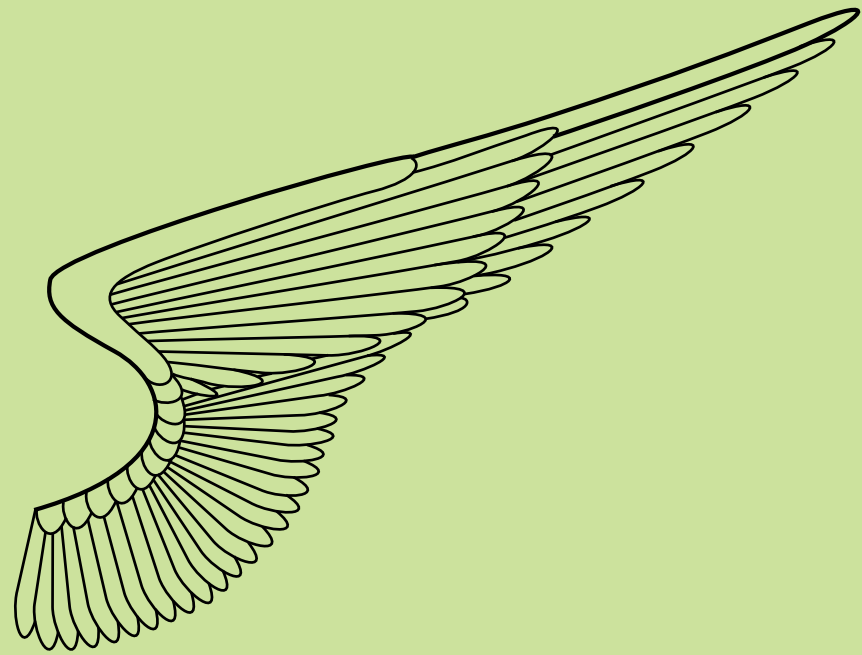


**Now what do you think...**

**Are humans and birds  
more similar or more  
different? Discuss!**



**NOW LET'S TAKE A LOOK AT  
SOMETHING MORE SPECIFIC  
THE STRUCTURE & FUNCTION  
OF WINGS VS. ARMS**





WHAT ARE SOME **FUNCTIONAL**  
DIFFERENCES BETWEEN WINGS &  
ARMS?

REMEMBER, THE FUNCTION OF  
SOMETHING IS WHAT IT DOES OR  
WHAT IT'S USED FOR.

DISCUSS THE FUNCTION OF WINGS VS. ARMS AS A  
CLASS & WRITE THESE IDEAS DOWN ON YOUR  
"WINGS & ARMS" WORKSHEET



# STRUCTURE

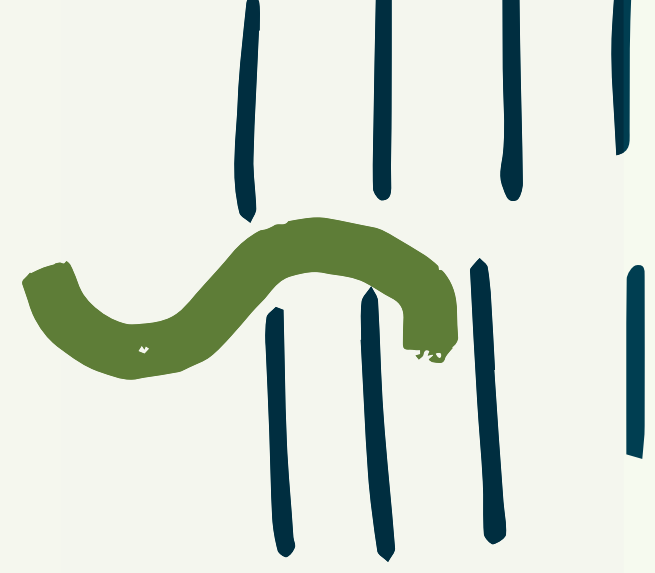
Now, this is where it gets interesting - the function of arms & wings is very different. In many ways the structure is, too, but in some ways the structure is very similar.

Remember, structure is about what something looks like & what it's made of.



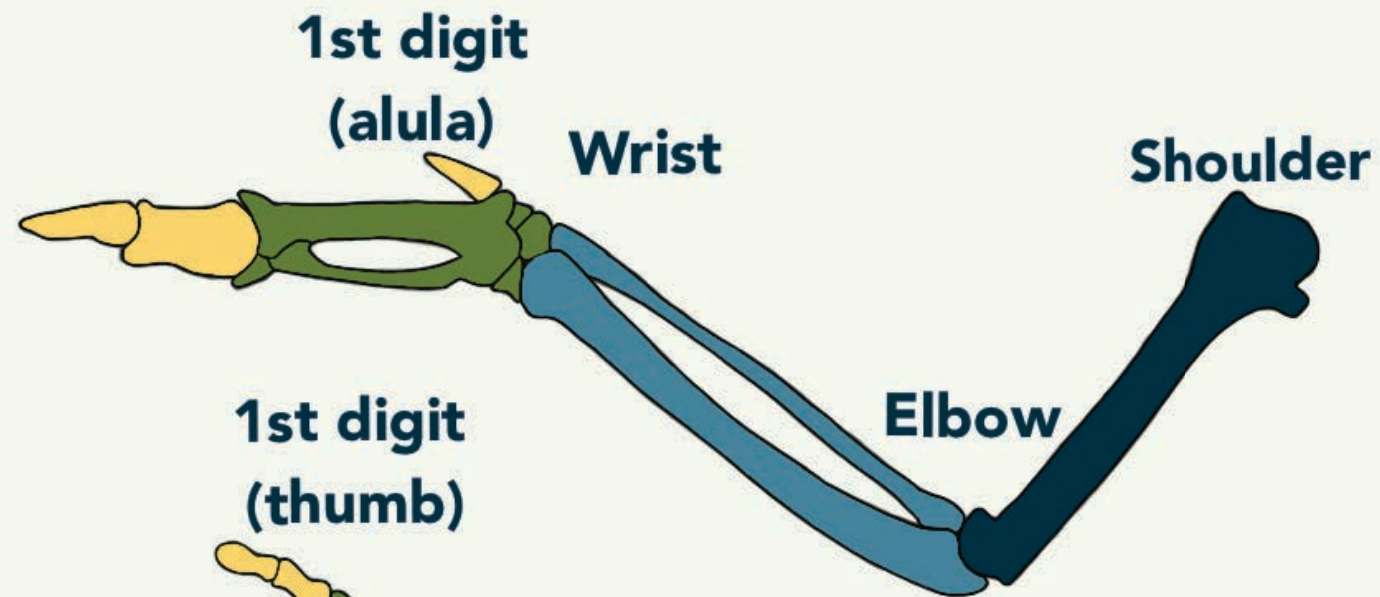


# ON THE INSIDE



Check it out - from the outside bird wings & human arms look very different but here is what the bone structure looks like :

**BIRD**



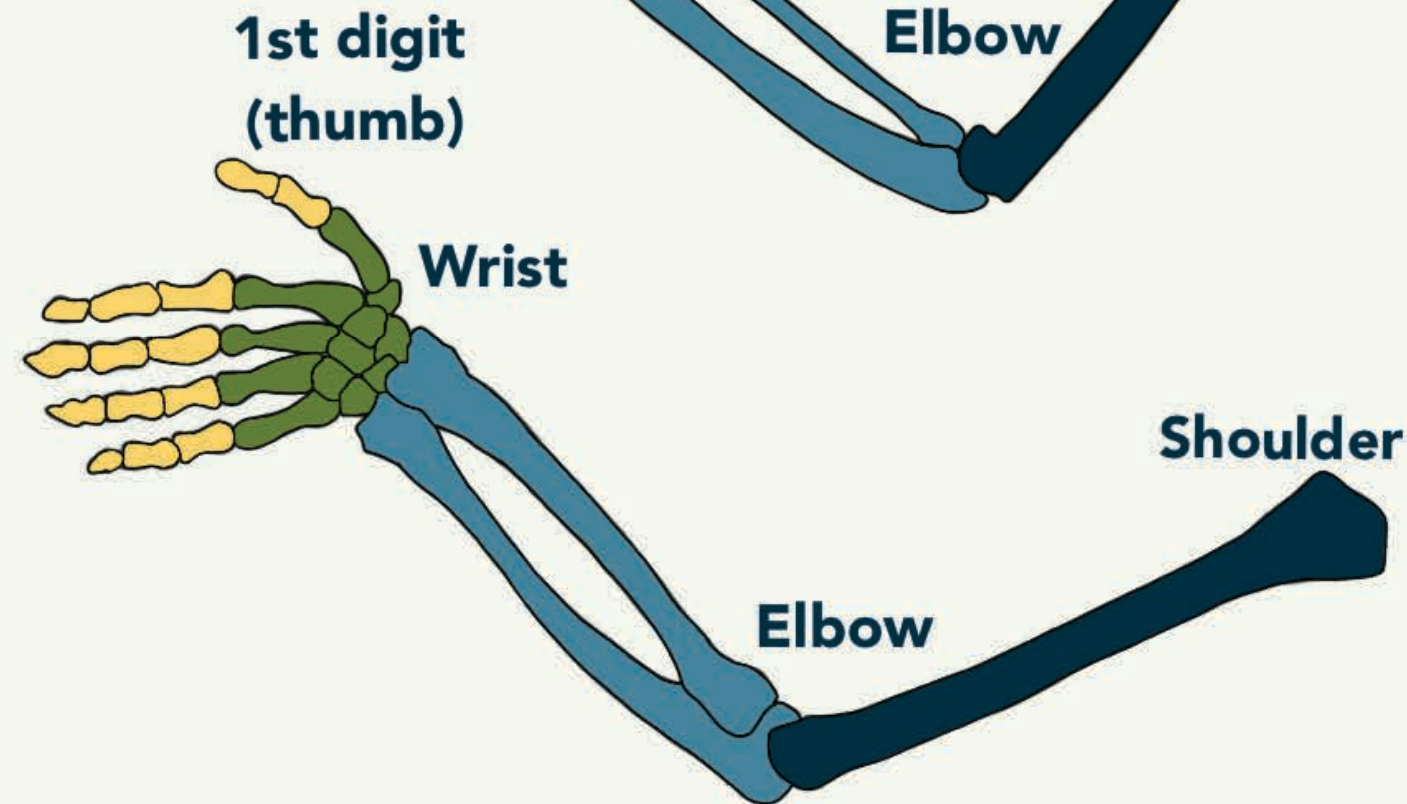
**Phalanges (finger bones)**

**Carpals & Metacarpals (hand bones)**

**Ulna & Radius (forearm bones)**

**Humerus (arm bone)**

**HUMAN**



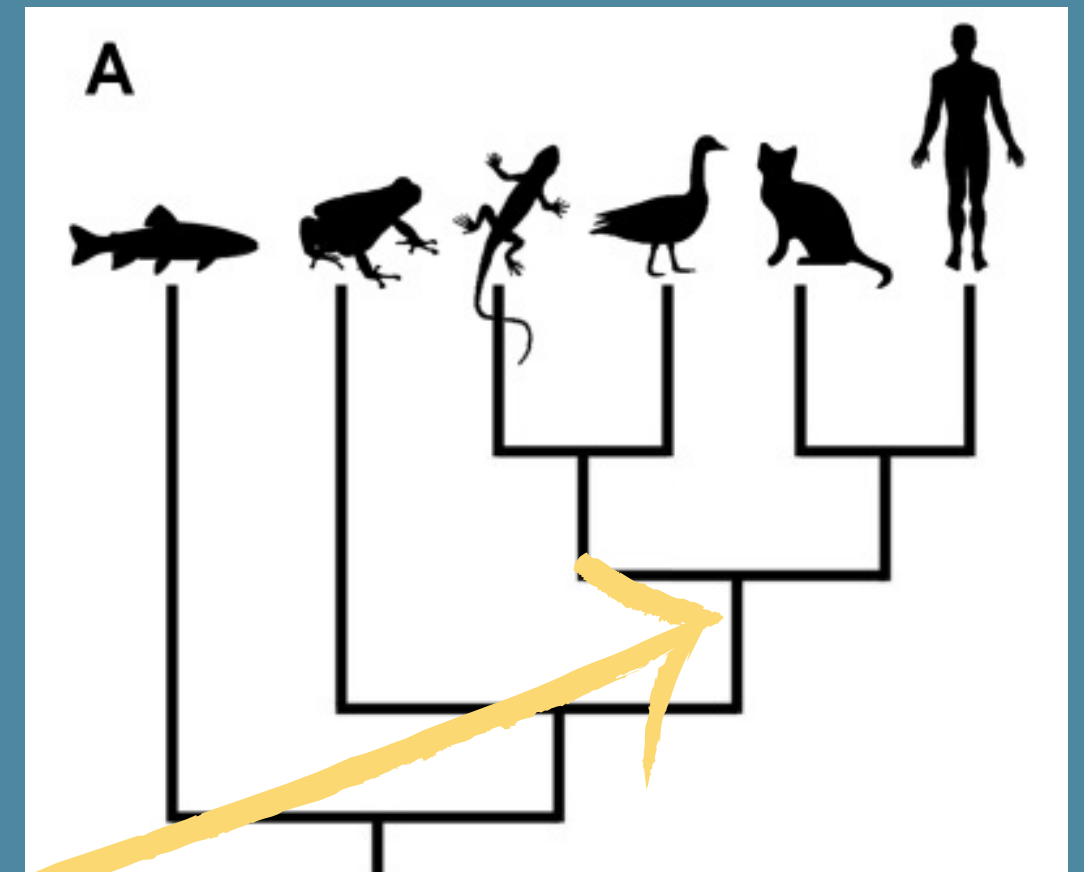
(use this as a guide to label & color in the "structure" section of your worksheet)

# WHY ARE THEY SO SIMILAR?

Humans and birds evolved from  
a common ancestor a loooooong  
time ago.



Can you guess how long ago?





**300 MILLION  
YEARS AGO!**

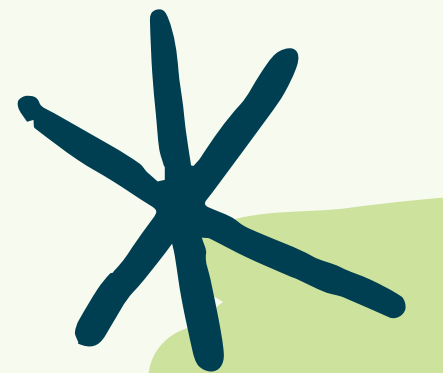




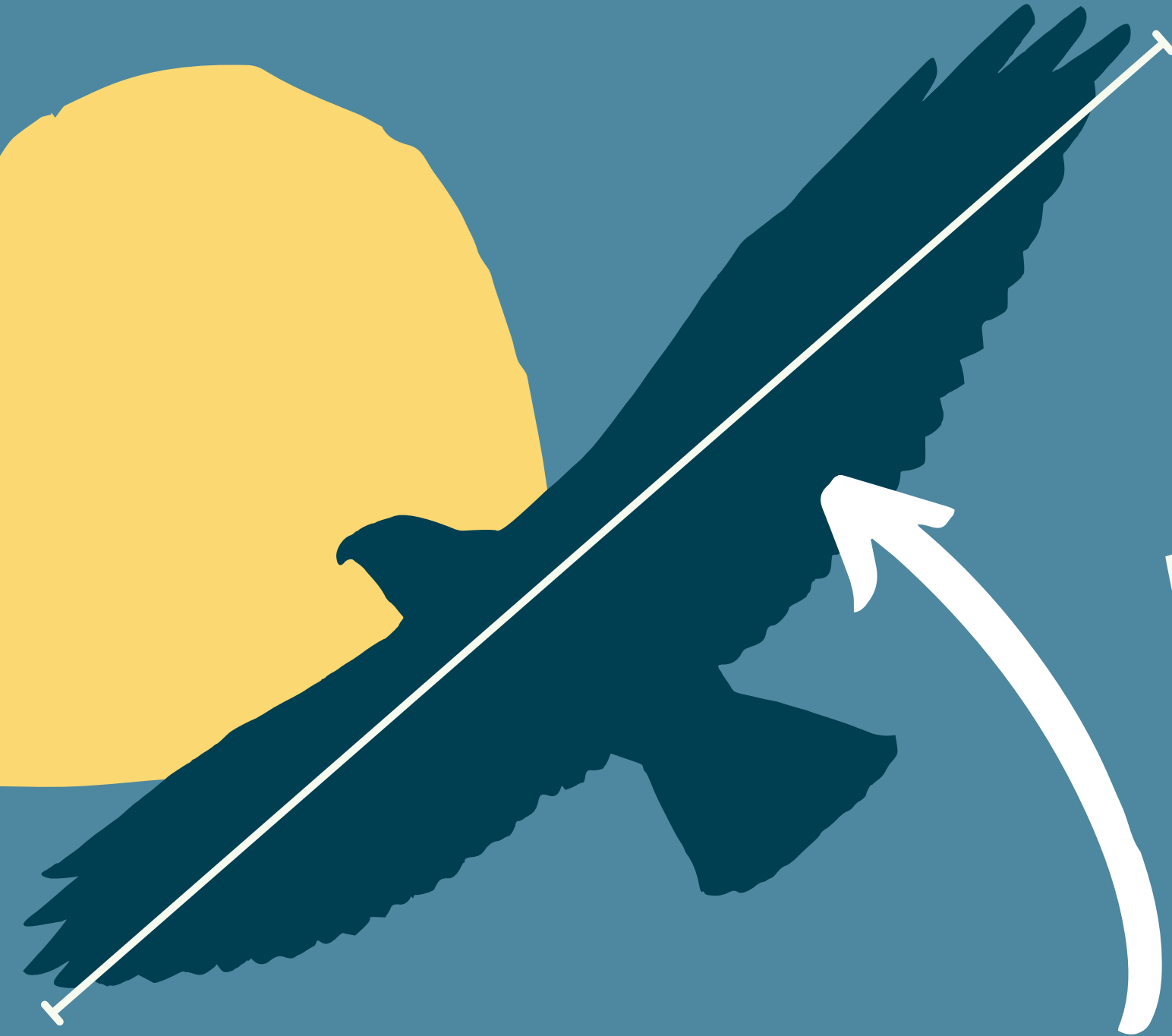
So, even though a lot of structures in birds and humans are different, we also have things in common because of this shared ancestry.



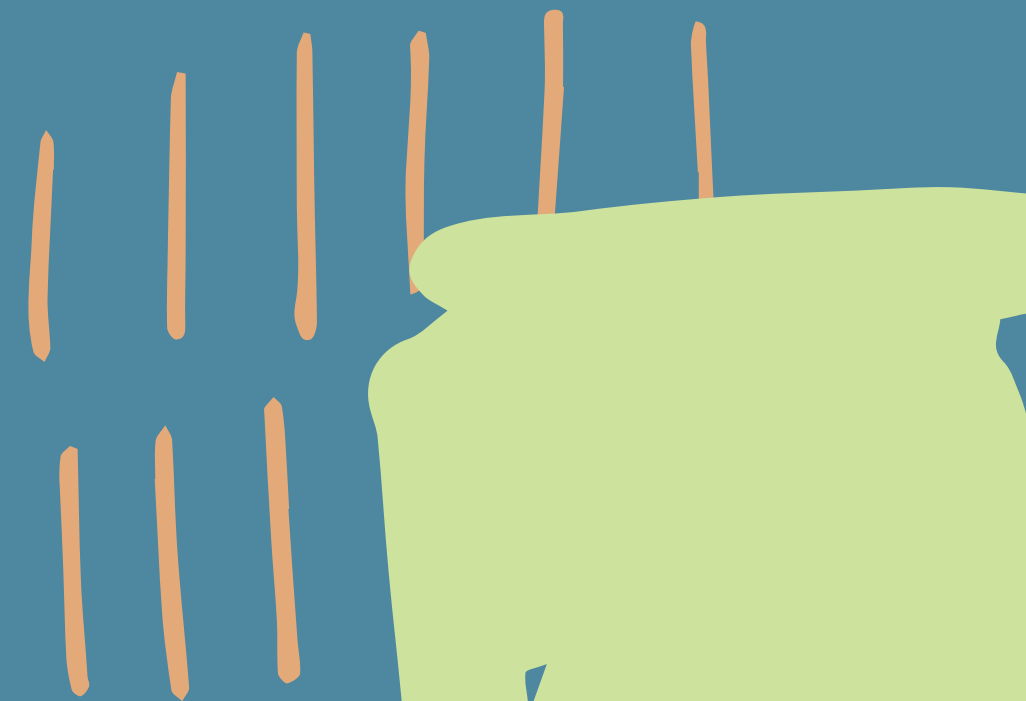
**now what about  
wingspan?**



# WHAT IS A WINGSPAN?



The distance between the tip of one wing and the tip of the other wing



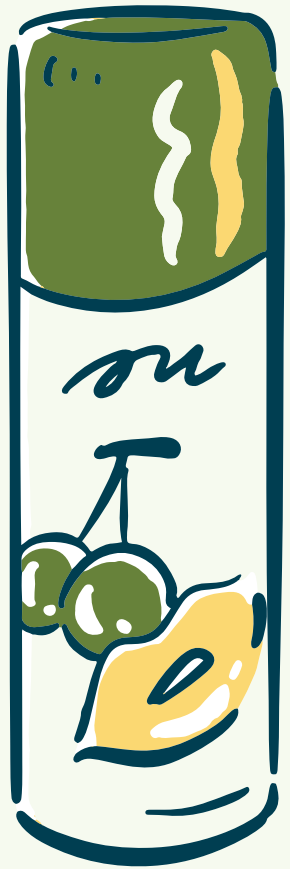
# FUN FACT!

**The Albatross has the largest wingspan of any living bird in the world at 11 feet!!**

**That's almost twice as long as two average people stacked on top of each other!**

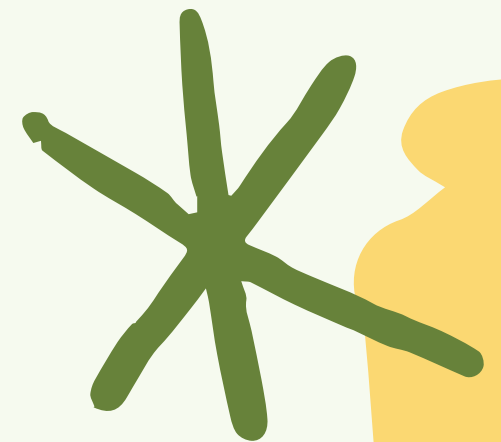


# AND THE SMALLEST....



**The Bee Hummingbird has the smallest wingspan  
of any living bird at just over 2 inches!**

**That's about the height of a tube of lip balm!**



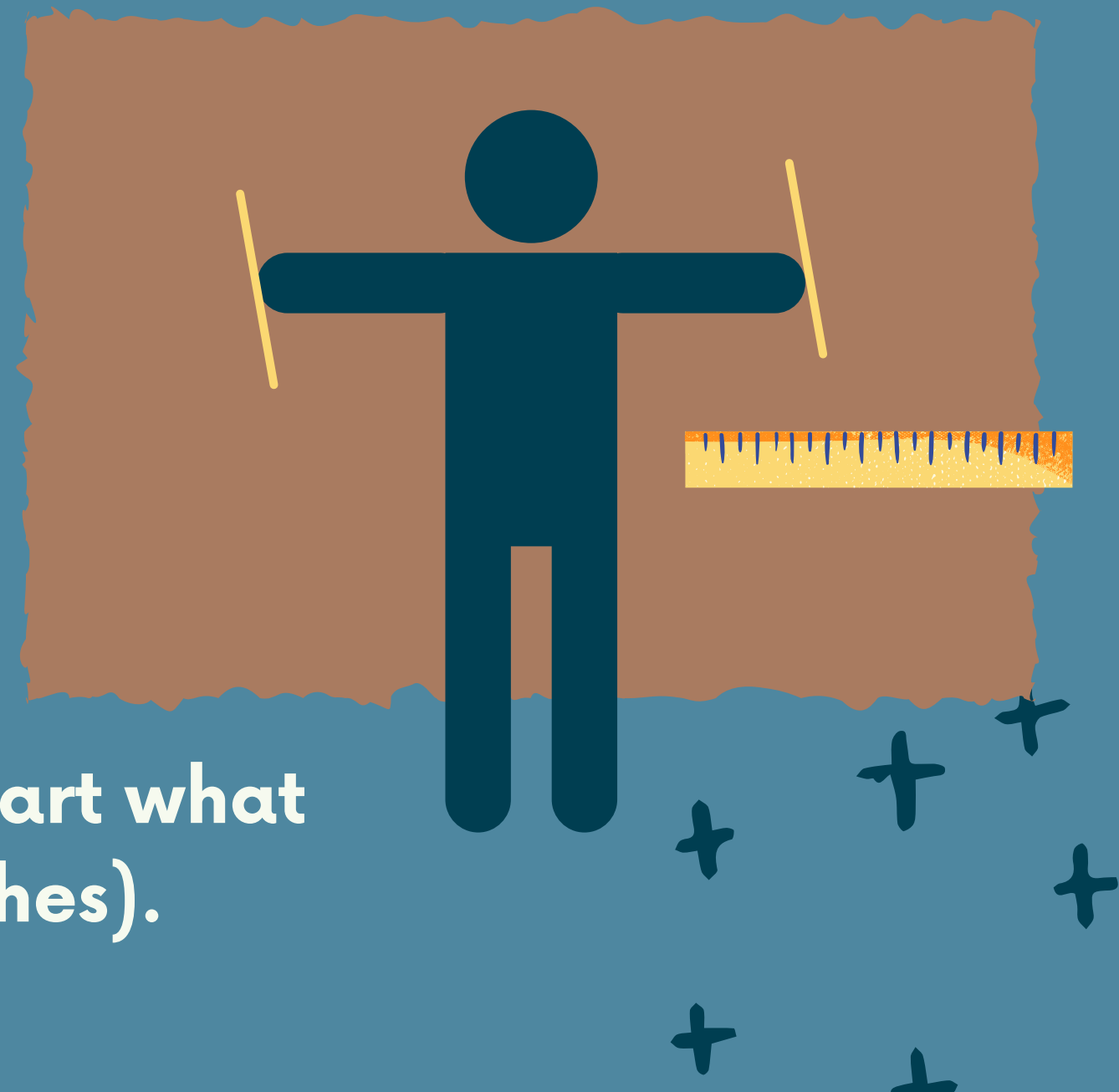


# NOW HOW ABOUT YOU?

First, everyone get into partners.

Taking turns, lay down with your arms out and have your partner measure your "wingspan" (from one hand's fingertips to the other) - You can also do this standing, but it can be a lot harder!

Write down on your comparison chart what your wingspan is (write it in inches).







# Record your findings



Also write down your weight  
and your height in inches.

Remember, there are 12 inches  
in a foot. So if you are 3 feet  
tall that would be  $3 \times 12 = 36$ .  
Ask an adult if you need help  
with the multiplication.



It's okay if you don't know your exact height  
& weight! Just do your best.

# Using the internet, find a bird that matches your wingspan (within a few inches)

Find and write the following on your comparison chart:

- The name of the bird
- The wingspan of the bird
- The height & weight of the bird



# WHAT ARE YOU STARTING TO NOTICE?

Discuss your findings as a class



## HOW TALL?

- Is your height taller than your bird's, even though your wingspan is about the same?

## HOW MUCH TALLER (OR SHORTER) THAN YOUR BIRD?

Presentations are communication tools that can be used.

## HOW ABOUT WEIGHT?

- Is everyone in class heavier than their bird? By just a little or by a lot?

**Based on your  
findings what  
do you think:**

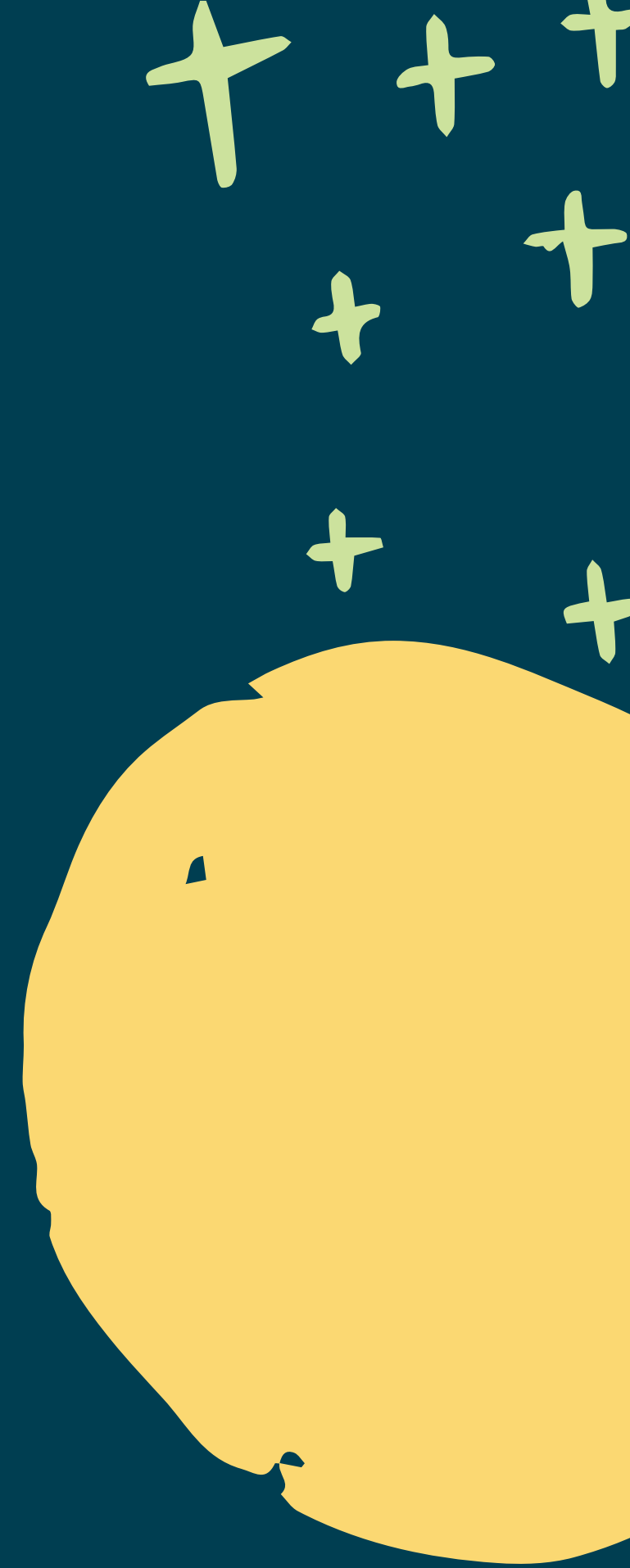


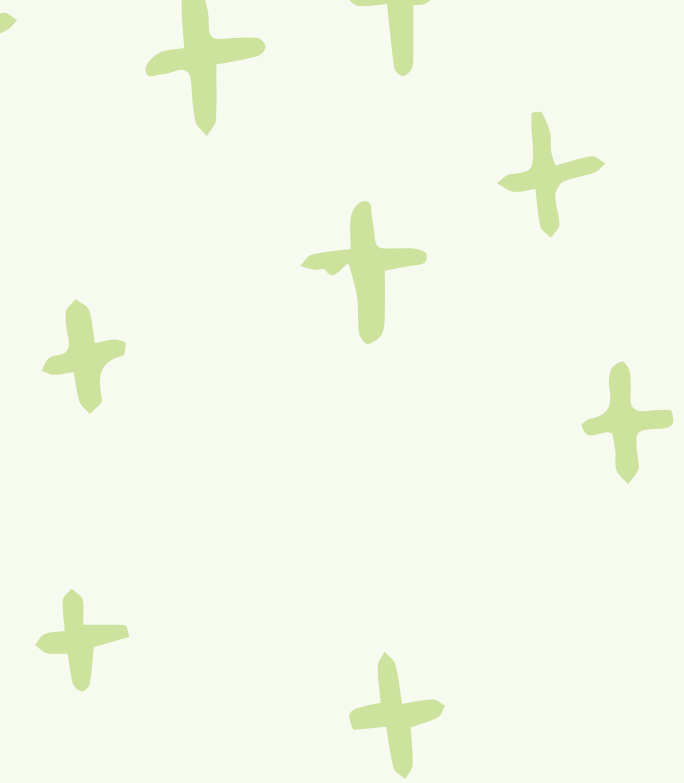
**If humans had wings,  
could we fly??  
Why or why not?**

(Don't fill out your sheet quite yet)

**WATCH THE VIDEO ON  
THE NEXT SLIDE**   
**FOR SOME MORE  
INFORMATION TO HELP  
WITH YOUR DECISION**

Fill out the "Human vs. Bird" section of your worksheet while watching this video.







# Now what do you think?

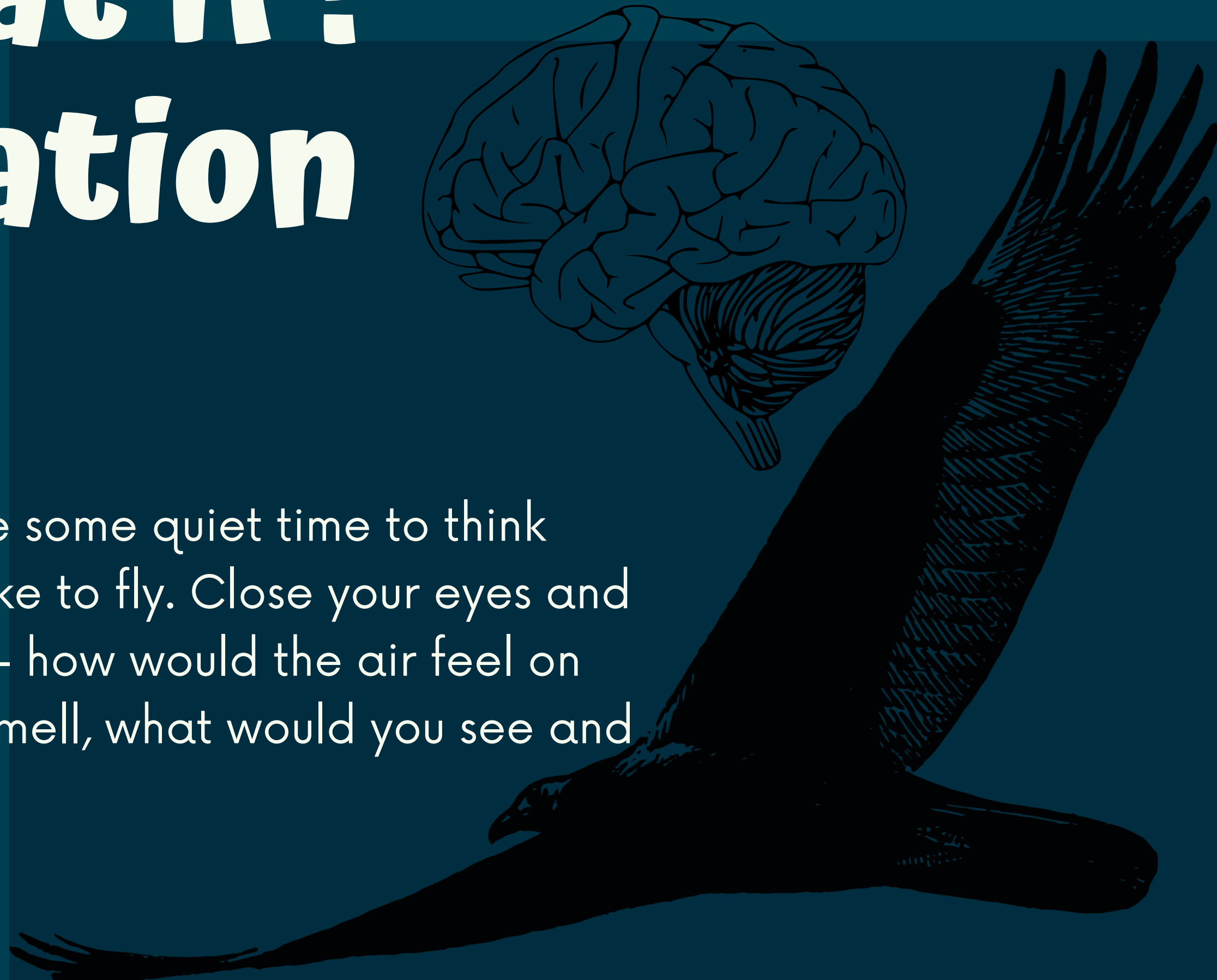
Taking into consideration the strength, bone density and lung structure of humans vs. birds – could we fly if we had wings instead of arms?





# \* \* \* But what if? Imagination time!

What if you could fly? Take some quiet time to think about what it would feel like to fly. Close your eyes and imagine all of your senses – how would the air feel on your skin, what might you smell, what would you see and hear?







**Thank you for all  
your hard work  
on this project!**

