

# Eagles for Students and Home Educators

## Educational Resource Packet K-5



Are you curious about bald eagles? What makes them so important and unique? Complete as many of the activities as you can, practicing your reading, math, art, Spanish, history, and science skills! Pay extra attention to bolded vocabulary words and check out the “extensions” for more fun activities about bald eagles! This packet is best geared towards kinder-5th grade.

## Flight of Fantasy

What would it be like to soar among the clouds or ride high on a thermal? In this activity you will get a chance to imagine what it feels like to fly by listening to a very special story. Take a deep breath, close your eyes, and listen. As you listen, imagine yourself as the eagle, gliding through the air.

**Objectives:** Describe the characteristics that help a bird fly and the differences between humans and birds. Then draw your own comic strip about an eagle that soars over your house.

**Materials:** Notebook, pen

**Story:** You are going to travel to places you've never been before, moving high above the earth. But first your body must change, for now, it is too heavy and would never get off the ground.

Think of your feet and notice how they feel. Wiggle your toes and bend your ankles. Your feet begin to warm. Each ankle is getting squeezed and keeps growing until it is very skinny and long. One of your toes disappears! With only four toes left, you notice how one twists to rest along your heel while three remain in the front. At the end of each toe there is a very sharp, long, curved toenail. You see your skin change from smooth skin color to bumpy scales. There's a tree branch nearby and you hop to it, your new talons clutching the branch.

Your legs become shorter and you feel your body tip forward as your body becomes much shorter. All the sudden, your hands disappear, replaced by long wings, covered in long brown feathers. Flap them a few times and feel how they move.

In a flash, your whole head feels warm and your teeth disappear! Your mouth and nose grow together, becoming very long and hard. Finally, they form a sharp, curved beak.

Your chin is gone now too and your ears fall off one by one. Your eyes slide to the top of your head and you realize you cannot move them side to side in their sockets, you must move your whole head to look around. Your ear holes move closer to your eyes, beneath and behind them.

You're changing very quickly now! Each lung changes and air sacs appear in many places in your body. They are like thin balloons connected to your lungs. Take a deep breath and feel the air move through your dense bones, making them lighter and hollow. After you let your breath out, you can feel tiny explosions all over your body as feathers grow to cover you everywhere but your beak and feet. Closest to your body, your feathers are very soft but the outside feathers are very stiff and tough. Suddenly, you wiggle your feathered tail.

You excitedly try to call out but only a loud hoarse call comes out of your beak. A great urge to explore overcomes you and you hop off your tree branch and stretch out your wings, flapping a few times, and soon you're soaring over forests and lakes, flying higher into the sky, as free as can be. A great warm wind pushes up under your wings and lifts you even higher.

A mouse runs across a field far far below you and you can see it so clearly even though you are a mile up in the sky. All the colors of the earth look beautiful down below, green leaves, brown earth, and blue water. Buildings and cars of all colors are connected with roads that look like thin lines from so high up in the sky.

As you circle on the rising winds, you spy a nearby cloud and head into it. It is cool and damp and you feel peacefully lost for a moment. Then you come out on the other side and see a great range of mountains on the horizon. As you breathe in the cool air, you realize the sky is now your home. As you fly high above the earth, you let out a long, loud cry. You are now called Eagle.

You are now back in your seat where you began your journey. Open your eyes slowly, take a breath, and stretch.

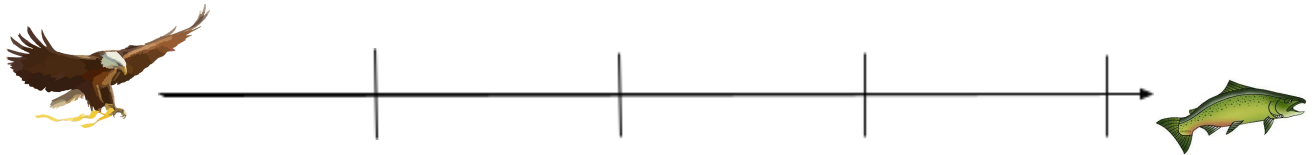
**Discussion and Activity:**

- 1) Discuss some of the changes you underwent. What are some differences between humans and eagles?
- 2) What was your favorite part of the journey?
- 3) If you could actually be an eagle, what would be your favorite part?
- 4) On the piece of paper below, draw a creative comic strip about an eagle that soars over your house. What would they see? How would they feel? Then share it with a buddy.

Bald Eagles Homeschool Resource Packet


## Eagle Eyes

Bald eagles' eyes are fantastic at seeing things very far away that we humans cannot see. In fact, a bald eagle can see four times farther than a human! The top line represents what a human can see. The bottom line represents how much farther an eagle can see.



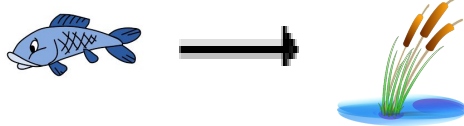
Why would having amazing eyesight be a good thing for an eagle?

### Extension:

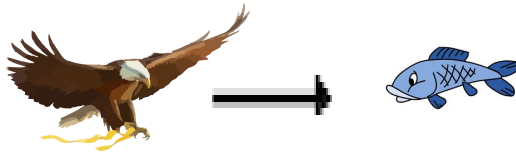
1. Choose a small object from your house and bring it outside into your yard ( a quarter, a pencil, etc) and put it in your yard or on your driveway.
2. Begin backing away from it, counting your steps, until you can't see it anymore. This is how far, you, a human, can see!
3. Remember how many steps it took until you couldn't see the object anymore? Multiply this number by 4. Then, walk back to the object and walk that number of steps away from the object once again.
4. If you were an eagle, you could see the object from all the way back here!

## What do bald eagles eat?

Bald eagles are part of a very important structure in nature: the **food web**. A food web is a tool that shows how living things are connected through what they eat. For example, a fish may eat a pond plant

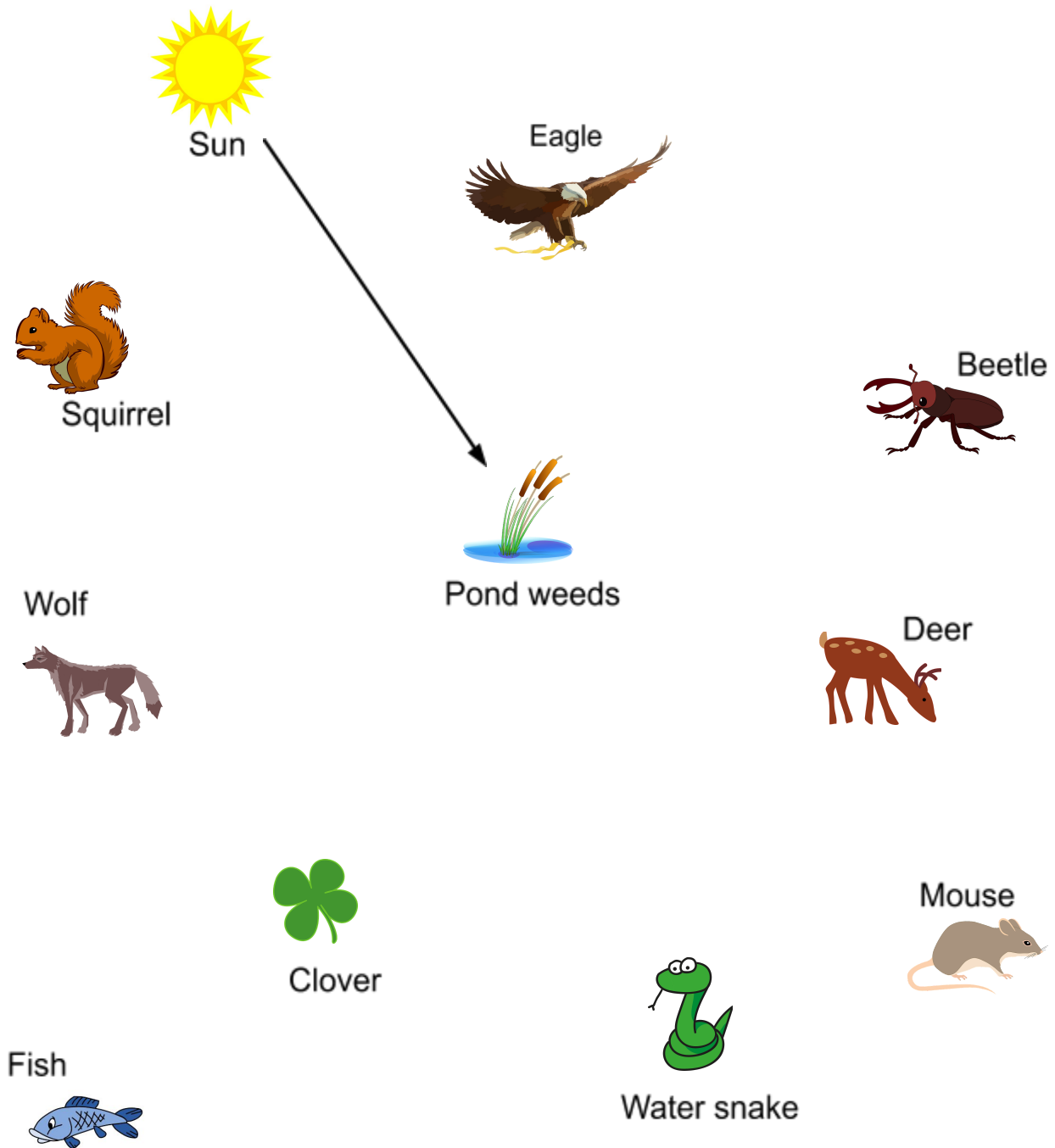


and an eagle might eat a fish!



So the pond plant and the eagle are connected! Bald eagles eat many different types of animals, but they are mostly known as a sea bird or sea eagle, so they love eating things from the sea, lakes, or large rivers. Their favorite food? Fish!

The next page has many different plants and animals in it. Your job is to make a food web out of the pictures! Start with the sun and draw an arrow between the plants and animals that are connected on the food web. When your food web is complete it should have arrows criss-crossing many times.



**Extension:** Choose another top predator, just like the eagle! Some ideas could be a bobcat or a wolf. Create a food web for the animal, connecting it to its prey and the food its prey eat. If you get stuck, have a parent help you research what each animal eats on the internet.

## Is it lunchtime yet?

**Objective:** Learn how much an eagle eats and practice measuring food weight on a scale using tools of addition, subtraction, and critical thinking.

**Materials:** Household items such as books, weights, or items of food, step scale

**Activity:** The average bald eagle weighs 10 pounds and eats about **1 pound of food a day!** That's **1/10th of its body weight**. As we talked about earlier, that could be fish, small mammals, or any number of delicious goodies.



Now, go through your house. What do you think weighs one pound? A bottle of mustard? A picture book? Bring your predictions to the step on scale. Do some or all of the activities below depending on grade level.

### Subtraction

1. Weigh yourself without anything in your hands and write down your weight.
2. Now, weigh yourself holding your predictions of what one pound would be.
3. Subtract your first weight from your second weight (the one where you're holding the item).
4. Show your work and record your data in the chart below.

My work:



Remember: An eagle eats 1 pound.

Household Item	My weight while holding the item(s)	My weight empty handed	Weight of item	Is this greater than, less than, or equal to 1 pound?
<i>Example: A box of crackers</i>	<i>87 pounds</i>	<i>85 pounds</i>	<i>2 pounds</i>	<i>It is more than 1 pound</i>

## Division

If you have already done the subtraction, nice job! Now that we know what one pound of food is, let's find out, if we were eagles and we needed to eat  $\frac{1}{10}$ th of our body weight every day, how much would we have to eat?

1. Calculate what  $\frac{1}{10}$ th of your body weight is by weighing yourself and dividing that number by 10. Show your work below! This is how much food you would need to eat everyday if you were an eagle! *Example: I weigh 90 pounds. 90 divided by 10 is 9. I would need to eat 9 pounds of food a day if I were an eagle!*

My work:

2. Write the number of pounds you would need to eat every day as an eagle in the blank space above the chart and in the blank space in the chart.
3. Now, figure out how much that weight is and how heavy it feels! Repeat the process we used in the subtraction section and find out what foods or combination of foods weighs the correct weight.
4. Show your work and record your data in the chart below.

My work:

If I were an eagle, I would have to eat \_\_\_ pounds a day.

Household item	My weight while holding the item(s)	My weight empty handed	Weight of item	Is this greater than, less than, or equal to the ___ pounds I would have to eat?
<i>Example: A book and a candle</i>	<i>110 pounds</i>	<i>100 pounds</i>	<i>10 pounds</i>	<i>Equal to the 10 pounds I would have to eat as an eagle</i>

**Extension:** Try using a parent’s weight! Go through the calculations to figure out how much your parent weighs and how much food they would need to eat if they were an eagle. Then weigh out the food! You may need to get creative and use heavier objects!

## Homes for Bald Eagles - What makes a habitat?

All living things have a **habitat** they live in. A habitat is a space where a species lives, raises a family, hunts, gathers, or grows food, and overall feels safe in. Most living things need a habitat that includes these four things: **food, water, air, and space**.

**Activity:** Look at the pictures below and decide what part of a habitat they represent. Then label them as food, water, shelter, or space underneath the picture!



## Game Time: Survival of the Fittest

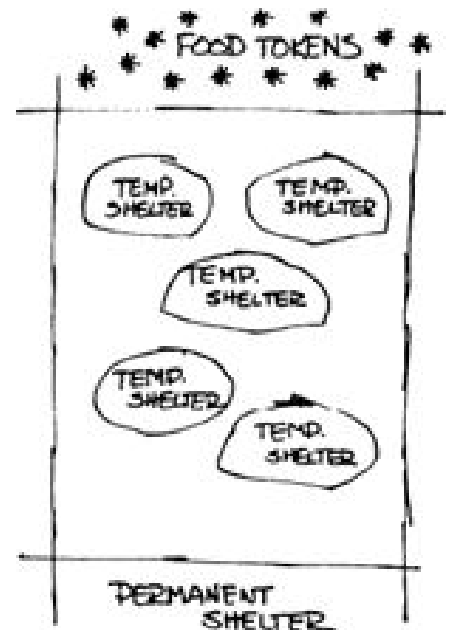
Who will survive: the predator or the prey? Both predators and prey have special **adaptations**, or characteristics, that enable them to survive. Prey animals have to avoid being eaten while predators have to work much harder to catch their food. As we've learned, bald eagles have to hunt animals like fish and small mammals to survive.

**Objectives and Method:** Students will play a freeze tag game to learn more about predator/prey relationships. After the game, the students should be able to describe these relationships and the importance of adaptations in these relationships.

**Materials:** Enough "food token" objects (balls, fake fruit, etc) so that there are three per participant; enough objects (hula hoops, string, chalk, etc) to create four or five "cover" areas; pencil and paper to record the number of captures (optional).

**Directions:** You will need at least 4 kids to play.

1. Assign one student to be the predator (the eagle) and the rest of the students to be prey (squirrels). You need approximately one predator per 4-6 prey.
2. In your play area, identify one end of the "field" as the "food source" and the other end as "shelter" (the safe zone). Scatter the food tokens in the food token zone. Scatter the food tokens in the food token zone.
3. Place four or five hula hoops (or string circles) in the area between the shelter and food zones. These represent additional cover for the prey.



4. Use a predetermined signal to start each round. When a round begins, prey start from their shelter. They must leave the cover of safety to move to the food source, collecting one food token per trip, returning to their primary shelter and dropping it off. To survive, the prey have to gather at least 3 food tokens before the game is over. However, traveling out of their shelter is dangerous! They must be alert to possible predators. If prey see a predator they can use various appropriate prey behaviors, including calling out the danger to warn other prey. Prey also have two ways to prevent being caught and eaten: one, they may freeze in place when the predator is within 5 feet of them, or two, they can run to a cover zone and hope they are faster than the predator.
  
5. Predators start the game anywhere in the open area. Predators must attempt to catch moving prey but can only catch moving prey. Predators must capture at least 2 prey in order to survive. When prey are captured, the predator can help them to the sideline.

**Game extension:** Play around with changing the number of prey and predators. What is the effect if there are too many prey and what would this mean in the natural world? What if there were too many predators?

## Eagles: The Largest Raptor

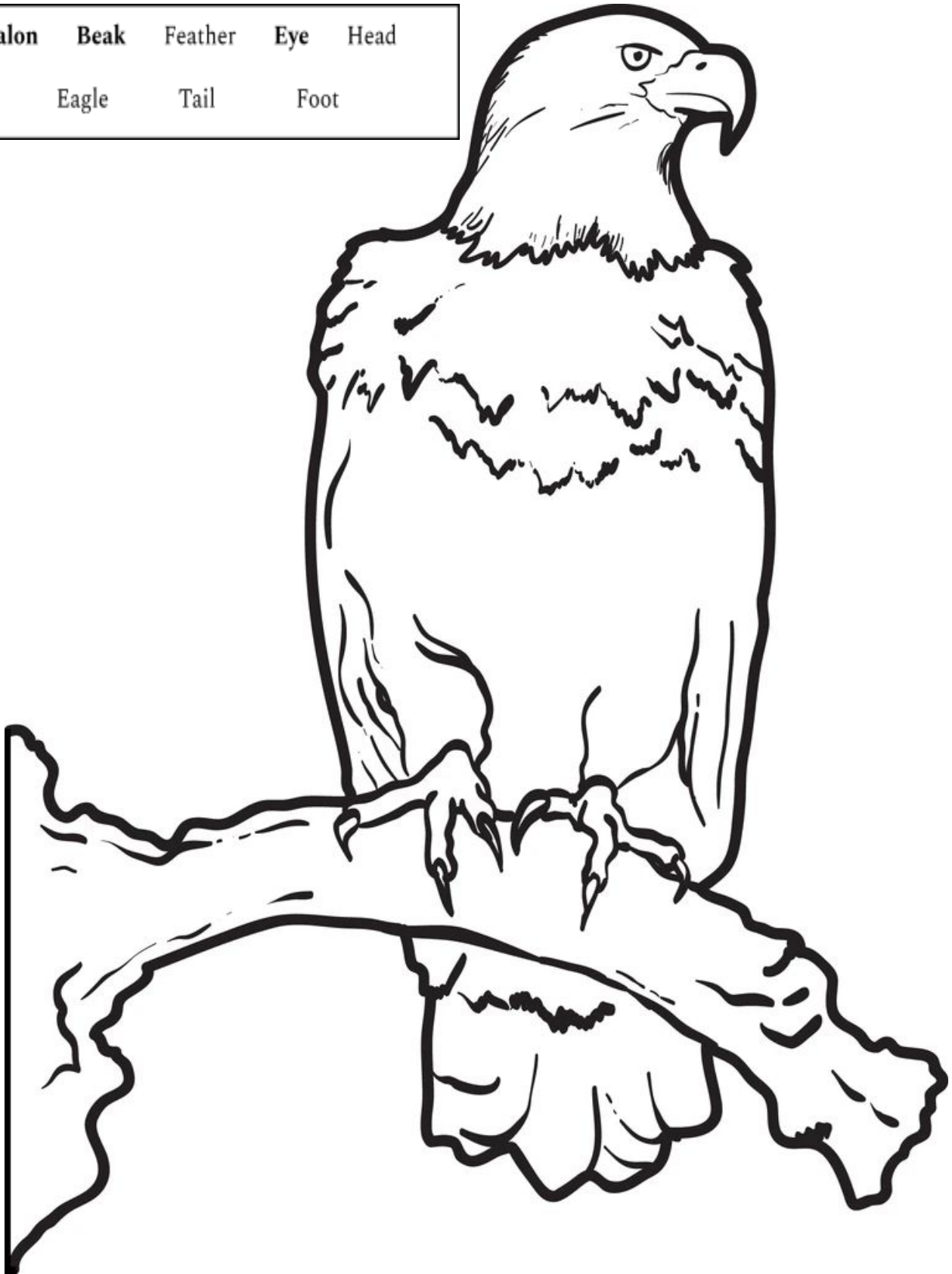
Bald eagles are a great example of a raptor. Raptors are sometimes called birds of prey, and they represent many bird species that have special adaptations that allow them to survive in the wild.

All raptors have three special **adaptations**, or special traits, that make them a raptor. They are: **keen eyesight**, **sharp hooked beaks**, and **talons** on their feet. All raptors catch their prey with their feet, not their beak like most birds.

**Activity:** Look at the picture on the next page and label the parts of the bird with options from the wordbox! Then, color the eagle!

**Extension:** Eagles are just one type of raptor! The other types of raptors are hawks, owls, and falcons! Research another type of raptor on the internet. Look up where they live and what they eat!

Talon	Beak	Feather	Eye	Head
Eagle	Tail	Foot		





## El Águila: ¡En Español!

**Objective:** Use critical thinking, previous knowledge, and the internet to complete the Spanish activity.

**Directions:** Label the picture below with the right term from the word box. If you need help, you can look up words you don't know on the internet. Then, color the page!

El pescado   El padre   Los bebés   El nido   El sol  
Las montañas   El águila   Las ramas   La madre



## Bald Eagle Nesting

**Objective:** Build a bald eagle nest for your family!

**Tools:** measuring tape, pillows, blankets, couch cushions


**Directions:** Build an eagle nest big enough for your whole family!

1. Grab a measuring tape and measure 5 feet across. Place a pillow at each end of the measuring tape. This is the average length of a bald eagle nest!
2. Place pillows along the outside of your nest, making a circle shape and padding it for the eaglets and eagles (your brothers, sisters, and parents).
3. Add what you think will make your nest comfortable and strong! This could be soft blankets, more pillows, or whatever you can think of!
4. Now, let's make your nest even bigger! The largest bald eagle nest was in Florida and was ten feet across! Change the size of your nest to ten feet, adding extra pillows, blankets, and other nest "materials!"
5. Nice job! You've made a great home for your family! If you're extra proud of your nest, ask your parents to take a picture to remember it by and share on Facebook, tagging us at Woodlands Nature Station :)



## Vocabulary Matching

**Activity:** Draw an arrow to connect the vocabulary word with its definition.

Food web		The adaptation of a bird of prey used to tear up food
Habitat		The thing animals drink that helps them survive and is part of a habitat
Water		The thing animals breathe to survive and is part of a habitat
Talons		The adaptation that helps birds of prey see their food
Adaptation		A special trait an animal has that helps it survive
Keen eyesight		A wide open area and part of a habitat
Food		The place an animal lives that has food, water, air, and space
Sharp hooked beak		The adaptation of a bird of prey that helps them catch their food
Space		A way to show what animals eat in an area with arrows
Air		The thing an animals eats that helps it survive and is part of a habitat