Teacher Pre-Visit Packet
Eagle Eyes on the Environment

Sponsored by:
Dear teacher,

Thank you for booking a program with the Audubon Center for Birds of Prey! We are very excited to be able to meet you and teach your students.

This packet was designed to help you be able to prepare your students for their Eagle Eyes on the Environment program at the Audubon Center. The following pages include vocabulary your students should be familiar with, a reading list, lesson ideas and more. I hope these ideas help you and your students better connect to birds of prey and extend their learning around their field trip to the Audubon Center.

If you have any questions or concerns, please don’t hesitate to contact me. See you soon!

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The Audubon Center for Birds of Prey has about 40 permanent resident birds that your group will be able to see when they visit.

You should let your students know that none of the birds they see are pets, they are all wild birds that are too injured to be returned to the wild. Because of this, students will not be able to touch any of the birds; in fact, we don’t even touch them!

Most of the Center is outside so sunscreen, bug spray, jackets and/or umbrellas are all suggested depending on weather. In case of the prediction of severe inclement weather teacher should call the Center and the tour can be rescheduled.

There is a gazebo on Center property over Lake Sybelia as well as a historic house. Both of these locations are places we do not include on the tour, but you’re welcome to take your group there and stay as long as you like after your tour.

The gazebo is also a great place to stop and have a snack or lunch if you choose. Please let us know and you’re welcome to bring your food with you and eat on the gazebo.

The Audubon Center for Birds of Prey does not allow pets at the Center, but following ADA standards, trained service animals are permitted.
Before you visit the Center, familiarize your students with some important words that we might use.

1. **Habitat**: the natural home and environment of an animal or plant.

2. **Wetland**: land consisting of marshes or swamps.

3. **Ecosystem**: a biological community of plants and animals interacting with each other and their physical environment.

4. **Bird of prey**: a predatory bird with a hooked beak and sharp talons; also called a raptor.

5. **Water**: a liquid that forms lakes, seas, rivers and rain.

6. **Energy**: strength or power that provides the ability to perform work.

7. **Conservation**: the preservation, protection or restoration of the natural environment and its wildlife and resources.

8. **Endangered Species**: an animal species that has a declining population and is approaching extinction.

9. **Steward**: a person who looks after and takes responsibility for something.
Far Side of the Mountain Trilogy by Jean Craighead George - Ages 9 and up
A coming of age story about a boy and his falcon.

Audubon On the Wings of the World Graphic Novel - Ages 12 and up
Follow John James Audubon’s quest across North America to gather information about native avian species.

The Talking Earth by Jean Craighead George - Ages 11 and up
Billie Wind follows her tribe’s customs, but the dangers of pollution and nuclear war she’s learned about in school seem much more real to her. How can she believe the Seminole legends about talking animals and earth spirits? She wants answers, not legends.

When the wolves returned: restoring nature’s balance in Yellowstone
by Dorothy Hinshaw Patent - Ages 6-10
After being hunted to extinction in Yellowstone, the wolves returned to the park. Why were the wolves killed, what happened to the natural environment, and why it was so important that they return to the park?

Frightful’s Mountain by Jean Craighead George - Ages 10-13
As she grows through the first years of her life in the Catskill Mountains, a peregrine falcon called Frightful interacts with various humans and animals throughout her journey.

Pass the energy, please! By Barbara Shaw McKinney - Ages 9-12
Each of nature’s creatures “passes the energy” in its own unique way. In this upbeat rhyming story, the food chain connects herbivores, carnivores, insects and plants together in a fascinating circle of players.

The Eagles are Back by Jean Craighead George - Ages 6-8
This moving picture book tells the story of one boy who helped in the hatching of an eaglet. This inspiring text will motivate readers of all ages to care for the environment and its many creatures.
1. There are many different parts of an environment, including plants, animals, and even sunlight!
   a. Have students cut out and color the strips of paper on page 11 that have the parts of an environment. Ask them to create a chain with these strips where one element is attached as a link to what it affects.
      i. For example: Sun > Plants > Insects > Small Songbird > Snake > Great Horned Owl

2. Each link in the chain is important to the others. If one link were to break off, the chain would fall apart! Ecosystems in an environment are the same way.
   a. Ask students what they think happens if an environment changes or if it loses a certain plant or animal. How might an animal have to change, or adapt, when its environment changes?
      i. Some animals might move, some might compete for remaining food sources, some might not survive the change.
   b. Talk to students about some things they can do to help the environment around them. Such as learning more or recycling!
3. For an advanced food web activity—Print off the food web boxes on pages 12-15, laminate if you choose. Give students one of the plant or animal boxes (keep the sun for yourself) and let them research what that animal eats. Then gather the class and stand in a circle with a ball of yarn. As the sun, start the game and ask what animal eats the sun (or gets energy making food from the sun). A student that has a producer card (with the green border) should speak up. Hold the end of the yarn and toss the ball to that student. They repeat the question with “Who eats me?” and the game continues until you reach an apex predator (red border). Then you can start over again with the sun, continuing until all the students are connected to the food web.

   i. Point out that some of the animals can eat each other. The snake may eat a baby hawk, but an adult hawk would eat a snake!

   ii. Also, bring up decomposers; where does the bacteria, vulture or a mushroom best fit into the food web?
1. When an injured or sick bird of prey is brought in to the Raptor Trauma Clinic, our veterinary technicians use a laboratory to find out what’s wrong with the bird and how we can help.

   a. Distribute the syringe worksheet to students; have students follow the directions to color in the syringes. (See pages 9 and 10)

      i. Syringes measure fluids in units of cc’s, or cubic centimeters. Scientists in our clinic can use syringes to help give medicine to our birds. Have students cut out (optional) and color each syringe by the directed cc amount. Analyze the syringes with other classmates, which cc unit would give our sick bird the most volume of medicine? Have the students put their syringes in order from least amount of medicine to the most.

2. Scientists use many tools in the rehab process. These tools are different depending on where our scientists are working and what task they are performing!

   a. Ask students what tools a scientist who works with birds might use.

      i. When might a scientist use a pencil and paper, calculator, ruler, or microscope?

     ii. Optional game: Have students go outside for 10 minutes and use a pencil and paper to record observations about birds they see. Ask them to think like scientists and write down what they think might be interesting or important!

3. Organization is very important for scientists. At our center, we need to know when something happened to a bird patient or the details of any event or observation and then be able to get to that information when we need it!

   a. Have students work together to figure out when actions take place during the rehab process: rescue, medical treatment, rehabilitate, release. Why might having things occur in order be important? For example what would come first: taking an x-ray of an injured bird’s wing or putting a cast on the wing?
Using Tools to Care for Injured Birds of Prey

Figure out the amount of how much medicine is needed in each syringe, then color the syringe to match the amount needed. Then, circle the syringe that has the most medicine in it and put a star next to the syringe with the least amount of medicine. Compare it to your other classmates. Who has the most medicine in their syringe? Who has the least?  

Older grades - hard
Read the amount of how much medicine is needed in each syringe, then color the syringe to match the amount needed.

Young grades - easiest

- 4 mL of blue medicine
- 2 mL of green medicine
- 9 mL of purple medicine
- 8 mL of red medicine
- 5 mL of orange medicine

Then, circle the syringe that has the most medicine in it – it’s for a big Bald Eagle.

Last, put a star next to the syringe with the least amount of medicine – it’s for an Eastern Screech Owl, a tiny owl species.

Using Tools to Care for Injured Birds of Prey
Bald Eagle
Barred Owl
Great Horned Owl
Black Vulture