



Upham Woods Grab and Go:

Radical Raptors

Concept:

Understand what a raptor is and what type of raptors there are along with their specialized adaptations.

Age level: 1st- Adult

Education Standards:

Next Generation Science Standards
4-LS1-1 4-LS1-2 5-PS3-1 5-LS2-1
MS-PS4-2 MS-LS1-1 MS-LS1-4
MS-LS1-8 MS-LS2-2 MS-LS2-3
MS-LS2-4 MS-LS4-4 MS-ESS3-3
MS-ESS3-4

Common Core State Standards:

RI.5.7 SL.4.5 SL.5.5 SL.8.1 SL.8.5

Success Indicator:

Youth will be able to list the different types of raptors, their different adaptations, and their role in an ecosystem.

Preparation

Time: 30 minutes

Space: Classroom

Materials:

Program supplies:

- Pellets
- Pictures of the 5 raptors types
- Rope (with one frayed end)
- Owl skull
- Softball (example of owl eye)
- Feathers
- Owl wing

Raptor dress-up supplies:

- Wings (cloth feathers)
- feet (slippers)
- beak
- ears
- "eyes" (binoculars)

Power Point (Optional)

- Contact Upham Woods

Background Information

The state of Wisconsin is home to several avian species. All of which have specialized adaptations, or traits, which helps them to survive in their specific environments. Birds of prey, or raptors, are a group of avian species that share common traits such as having keen eyesight and powerful beaks and talons.

Originally in the United States, raptors were viewed as murderers and thieves. They were often accused of stealing and killing livestock such as chickens and calves. The red-tailed hawk, the most commonly found hawk in North America, gained a nickname based on these accusations the "chicken hawk." This moniker was based on a common behavior seen by farmers. Red tail hawks would on phone poles near farms which caused the farmers to believe they were stealing chickens. In reality, raptors seldom prey upon live domestic livestock.

The government even offered bounties in some states for killed raptors because of these negative perceptions. That meant that for every dead raptor a person brought to the proper officials, they would receive a set amount of money. This drastically reduced the number of raptors and brought some raptor populations to the brink of extinction. Eventually, the United States recognized the importance of raptors and today, the Federal Migratory Bird Protection Act and the Endangered Species Act protect raptors. These acts make it illegal to possess a raptor, dead or alive, including any part of a raptor. Radical Raptors aim is to help youth and adults understand the role of a top predator, their importance in an ecosystem and the overall value of raptors

Types of Raptors

1. Owls
2. Hawks
3. Eagles
4. Falcons
5. Osprey



Wisconsin Species:

Owls

- Barred owl
- Boreal owl
- Eastern screech owl
- Great gray owl
- Great-horned owl
- Long-eared owl
- Northern saw-whet
- Northern hawk owl
- Short-eared owl
- Snowy owl
- Barn owl

Hawks

- Broad-winged hawk
- Red-shouldered
- Red-tailed hawk
- Rough-legged hawk
- Sharp-shinned hawk
- Cooper's hawk
- Northern goshawk
- Northern harrier

Falcons

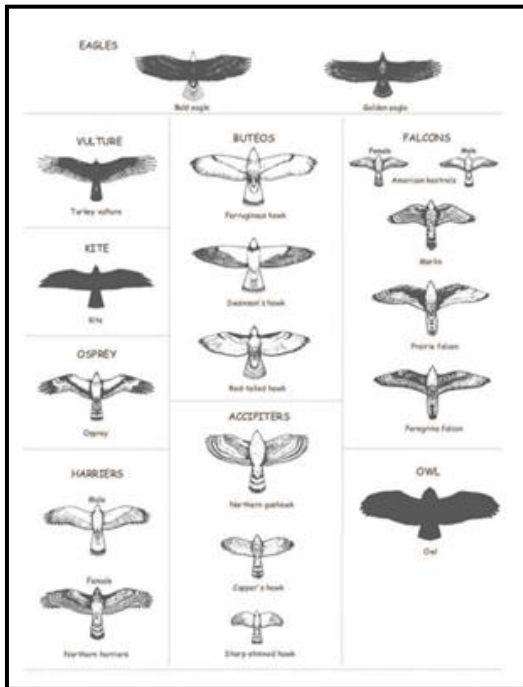
- American kestrel
- Peregrine falcon
- Merlin falcon
- Gyrfalcon

Eagles

- Golden eagle
- Bald eagle

Ospreys

- Only 1 species



An **Adaptation** is something an animal has or does to help it survive in its environment. Another way to describe an adaptation is an internal or external structure that functions to support survival, growth, behavior, or reproduction.

Instructions: Adaption Dress Up (Optional)

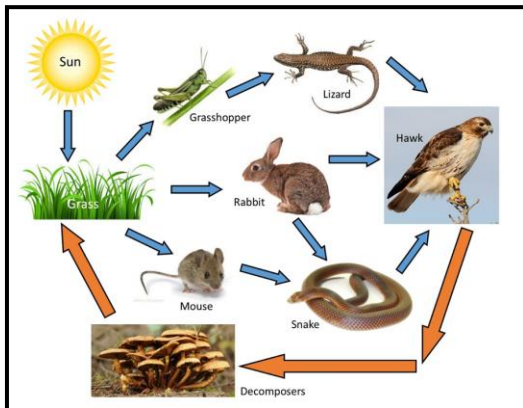
1. Ask for a brave volunteer to dress up like a raptor
2. Be sure to tell them that students may laugh
3. Ask students to raise their hands to tell the class one adaption
4. After a student states a specific adaption, grab the appropriate garment and ask the child or adult if you can place it on them.
5. Continue to do this until all 6 adaptations have been listed
6. Ask students to give the volunteer a round of applause, pictures may be taken
7. Thank the Volunteer and ask them to take their seat

Raptors

1. Long Sharp Talons
2. Curved Hook Beak
3. Powerful Flight
4. Keen eyesight
5. Excellent Hearing
6. Carnivore

Owls Only

1. Large Eyes
2. Night Vision
3. Nictitating Membranes
4. Asymmetrical Ear Openings
5. Facial Disk
6. Silent Flight/Feathers



Deeper Thinking Questions

1. Why do you think animals develop adaptations?
2. What do you think of when you hear the word “raptor”?
3. How are raptors different from other birds?
4. What are some similarities and differences between the raptor species?
5. How do raptors use each of the adaptations to hunt?
6. How do raptors effect other animals and plants in a food web?
7. If you removed raptors from the food web, how would that effect other organism?
8. How can we help protect raptors?

Radical Raptor Fun Facts

1. It has been estimated that the eyesight of raptors can be up to eight times better than that of humans.
2. Their visual acuity is a result of high concentrations of both visual cells (rods and cones) and nerve fibers in their eyes.
3. It is said that they can see a mouse from a mile above.
4. To conserve energy raptors will find thermals (up drafts of warm air) that help them to soar in circles without even needing to flap their wings.
5. Red-tail Hawks gets their name from her red tail that can be seen when she soaring up in the sky.
6. The red-tailed hawk call is a beautiful sound. Many times their call is used for a “voice over” for bald eagles in commercials because the bald eagle call isn’t as majestic.
7. Owls are quite unique in the Raptor Family because they are the only birds that are nocturnal.
8. If our eyes were as big as an owl’s in relation to our head, they would be the size of softballs.
9. Owls also have a third eyelid called a nictitating membrane that helps to keep the eye moist and protected from dirt, especially when the owl is flying.
10. All raptors eject pellets, not just owls. Raptors’ digestive systems can process the meat, fat, and other soft tissues of their prey, but fur, feathers, or bones usually cannot be digested, and so they are regurgitated out of the mouth in the form of a pellet.