



Wild Kids

Arizona Raptors

STUDENT GUIDE

Raptors are also called birds of prey. Hawks, eagles, falcons, ospreys (fish-eating, hawk-like birds), and vultures are diurnal raptors, meaning they are active by day. Vultures are considered to be raptors even though they are scavengers - they eat dead animals. Owls are nocturnal raptors, meaning they are active at night. Raptors are well adapted to hunting for prey. They have excellent eyesight and hearing for locating prey, and powerful talons for capturing prey. Prey is swallowed whole or torn into pieces with their sharp, hooked beak. Raptors can be divided into several groups based on body size and silhouette of the body shape in flight.

ACCIPITERS



Accipiters are medium to small size hawks. They have short, rounded wings and a long tail that allows them to make sharp, quick turns while flying. Accipiters feed mostly on birds. When hunting, they often fly low, dart swiftly about, and snatch a bird out of the air or off the ground.

The sharp-shinned hawk, an accipiter, is the smallest hawk in Arizona. It is about the size of a pigeon and feeds mostly on sparrow-size birds. Its scientific name is "Accipiter striatus." In Latin, "accipiter" means hawk. "Striatus" means striped, referring to the rust colored stripes on its underside.

EAGLES



Eagles are actually hawks, but are called eagles due to their large size. They have broad wings and a short, broad tail. Adult bald eagles have white heads and feed mostly on fish they catch or take from ospreys, and on animals hit by cars. The bald eagle's scientific name is "Haliaeetus leucocephalus." "Haliaeetus" means sea eagle, "leukos" means white, "cephalus" means head.

The golden eagle eats mostly small mammals. Its scientific name is "Aquila chrysaetos." "Aquila" means eagle, "chrysea" means golden.

FALCONS



Falcons are medium to small birds of prey with pointed wings and long, thin tails. Falcons are fast-flyers and feed on mammals, birds, and insects. Adult peregrine falcons are about the size of a crow, and feed on doves and pigeons. Its scientific name is "Falco peregrinus." "Falco" is a Latin word that means "bird of prey." "Peregrinus" means wandering or alien.

The smallest falcon in Arizona is the American kestrel. It feeds mostly on insects and its scientific name is "Falco sparverius." "Sparverius" means sparrow hawk. But the kestrel is not a hawk and only a small part of its diet is sparrows!

HARRIERS



Harriers are medium size hawks with long wings and tails. Harriers fly low and feed on rodents. The Northern harrier is the only harrier in Arizona. Its scientific name is "Circus cyaneus." "Circus" means circle in the air, "cyaneus" means dark blue, referring to the grayish blue cast to its feathers.



BUTEOS

Buteos are medium to large size soaring hawks. They have broad wings and a short tail. Buteos circle high in the sky searching for rodents and other prey. The red-tailed hawk is a common buteo in Arizona. As you might guess, it has a red tail. Its scientific name is "Buteo jamaicensis." "Buteo" comes from a Latin word which means hawk. "Jamaicensis" refers to the island of Jamaica where the redtail hawk was first described.

The largest true hawk in Arizona, the ferruginous hawk, is a buteo. It has a wingspan of 4½ feet and a white rump patch. Its scientific name is "Buteo regalis." "Regalis" means king.



OWLS

Owls are mainly nocturnal birds of prey. The great horned owl is a large, low flying owl that preys on rodents, rabbits, snakes and skunks. Its feathers and nest often smell like skunk. The great horned owl's scientific name is "Bubo virginianus." "Bubo" comes from a Latin word that means owl. "Virginianus" refers to Virginia where the owl was first collected for study.

The barn owl is a slim owl with long, pointed wings and a white heart-shaped face. It preys mostly on rodents. Its scientific name is "Tyto alba pratincola." "Tyto" comes from a Greek word that means owl. "Alba" means white. "Prat" comes from a Latin word that means meadow, and "incola" means lives in.



VULTURES

Vultures are large, broad-winged, soaring scavengers with naked heads. The turkey vulture has a red head and a good sense of smell. Its scientific name is "Cathartes aura." "Cathartes" means cleanser or scavenger, "aura" means gold. The California Condor, a large vulture, was recently reintroduced into northern Arizona.

DESIGN A RAPTOR

Create and draw your own raptor using one of the following sets of adaptations below. For example, if you pick #1, you would draw a diurnal raptor with a body shape like an accipiter, that eats snakes, and is gray speckled with a red tail. Remember to include your raptor's habitat: food, water, and shelter. Give your raptor a common name and a scientific name. (You can choose Latin words from the text you just read or from the table to the right.) When finished, explain to your classmates how your raptor is adapted to its habitat.

Set #1

Active: Diurnal
Body: Accipiter
Food: Snakes
Color: Gray speckled; red tail

Set #2

Active: Nocturnal
Body: Buteo
Food: Insects
Color: Brownish yellow; black head

Set #3

Active: Diurnal
Body: Falcon
Food: Fish
Color: Black, with short tail

Set #4

Active: Nocturnal
Body: Eagle
Food: Doves
Color: Brown; long legs

LATIN AND GREEK WORDS AND ROOTS

acutus - sharp	nitidus - shining, bright
albus - white	nykteros - nocturnal
brachys - short	onux - talon
caput - head	oura - tail
caudatus - tailed	penna -wing
cilia- tail	pes - foot
columbarius - pertaining to doves	platys - broad
dichroma - 2-colored	poikilos - spotted
fuscus - brown	pteron - wing
grallitores - long legs	rostrum - beak
griseus - gray	ruber- red
gularis - throat	rusticolo - living in the country
lagopus - furry, like a rabbit's foot	sociabilis - sociable
lentiginosus - speckled	streperus - noisy
lineatus - striped	strix - owl
luteus - yellow	trichopsis - hairy faced
nebulosa - dark	tyrannus - ruler
nigricans - black	unicintus - hooked (beak)



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TEACHING GUIDE

Overview

In this activity, students will read about the different types of raptors and how to identify them. Then, they will be given a set of raptor characteristics and must draw a picture of that raptor in its habitat. They will also name their new raptor. Finally, they will answer some questions to assess their understanding.

Suggested Procedures

1. Print the worksheet above. If possible, print it double sided.
2. Have the students read the article (through the section on vultures).
3. Ask the following questions:
 - What is a raptor?
 - What are some things that all raptors have in common? What are some differences between raptors?
4. Have students design their own raptor based on the directions in the next part of the reading. You will need to assign them to a certain set of raptor characteristics. Then, they will draw their raptor. Their drawing must include the habitat as well as all of the characteristics in their assigned set.
5. Ask students to share their raptors.
6. Ask students to answer the following questions based on their raptor:
 - What adaptations did you give your raptor to help it hunt for its particular food source?
 - What might happen to your raptor if the food source started to disappear? Would it be able to adapt to a new food source easily? Why or why not?
 - Why is it important to have both a common name and a scientific name? How did you choose the scientific name for your raptor?

Grade

8th

AZ Science Standards

- 8.L4U1.11
- 8.L4U1.12

Science and Engineering Practices

- Develop and use models
- Engage in argument from evidence

Crosscutting Concepts

- Cause and Effect
- Energy and Matter