



# SeaWorld/Busch Gardens Raptors

## 4-8 Classroom Activities

## True or False?

### OBJECTIVE

- The student will determine whether a statement about a raptor is true or false.  
The student will identify general biographical information about a raptor.

### ACTION

1. Explain that students will be researching information about raptors. Ask each student to draw a raptor statement from the bowl. This is the statement the student will prove is either true or false.
2. In addition to proving their statement true or false, ask students to identify the following information about their raptor: range, habitat, diet, incubation, social structure, four adaptations, and status. Each of the adaptations must be clearly defined with a picture of their animal attached. If the statement is false, the student must correct it to make it true.
3. Students will present their research to the class in the form of an oral presentation. The students will begin their presentation by stating their assigned raptor statement, and whether the statement was true or false before the other information is presented. If the statement was false, the student should announce how they corrected the statement to make it true.

### MATERIALS

#### per class:

- internet and/or library access
- one True or False Raptor Funsheet (or more as needed)
- one Raptor Answer Sheet
- one large plastic bowl

### PREPARATION

Cut each raptor statement apart from the True or False Raptor Funsheet. (If your class is larger than 25, you may need to copy two Funsheets.) Fold the papers and place in a large bowl for each students to draw from.

## True or False Raptor Funsheet

1. The great horned owl (*Bubo virginianus*) has 14 bones in its neck allowing the bird to rotate its head in a complete circle.
2. Barn owls' (*Tyto alba*) ear holes are located asymmetrically on their head to increase sound reception. During flight, the left ear captures sounds below while the right ear focuses on sounds from above. This helps them pinpoint prey.
3. The snowy owl (*Nyctea scandiaca*) has unique, comblike feathers that allow for silent flight. The leading edge is “fringed” so that the feathers, when moving, do not make noise when they rub together. Prey rarely hears the snowy owl swooping in.
4. Newborn bald eagles (*Haliaeetus leucocephalus*) have white heads that act as camouflage, matching the white glare from sun reflecting from the nest.
5. The bateleur eagle (*Terathopius ecaudatus*) received its name because bateleur is German for “strikes like a bat.”
6. Red-tailed hawks (*Buteo jamaicensis*) are social birds and do not aggressively defend their territories.
7. The American kestrel (*Falco sparverius*) is able to see in the ultraviolet light range.
8. The gyrfalcon (*Falco rusticolus*) has a small (tomial) tooth that helps it crack the egg shell and hatch out of its egg.

9. The Steller's sea eagle (*Haliaeetus pelagicus*) has a wide geographic range throughout South America.

10. The male sharp-shinned hawk (*Accipiter striatus*) is much larger than the female to aid in protection.

11. The Northern pygmy owl (*Glaucidium californicum*) may use its nictitating membrane (a semi-transparent membrane) to protect and clean its eye.

12. Female Northern harriers (*Circus cyaneus*) build their nests high in the trees to avoid predation of their young.

13. The black line running through an osprey's eye (*Pandion haliaetus*) is thought to reduce glare from the sun, similar to the black lines football players wipe under their eyes.

14. The spectacled owl (*Pulsatrix perspicillata*) received its name from the elaborate courtship dance the male makes to gain the attention of the female.

15. The burrowing owl (*Athene cunicularia*) will build its nest in underground tunnels formerly used by mammals such as badgers.

16. Contrary to its name, the screech owl (*Otus asio*) makes no known sound.

17. The golden eagle (*Aquila chrysaetos Canadensis*) is rare or uncommon in Eastern parts of the United States.

18. An adult Northern goshawk (*Accipiter gentiles*) has pronounced yellow irises.

19. The California condor (*Gymnogyps californianus*) has heat sensing pits on its beak to detect live, warm-blooded (endothermic) prey.

20. The barred owl (*Strix varia*) is one of the smallest owl species measuring about 7 to 10 cm (2.8-4 in.) in length.

21. Due to its tiny size of 7 to 8 in. (17.5-20 cm in length), the saw-whet owl's (*Aegolius acadicus*) talons are too small to hunt prey efficiently. Therefore these owls consume a large portion of leaves and vegetables for their diet.

22. The merlin (*Falco columbarius*) lays rust-colored eggs with brown spots on them.

23. The peregrine falcon (*Falco peregrinus*) can dive for prey at speeds of more than 300 km/h (180 mi/h).

24. Ferruginous hawks (*Buteo regalis*) do not appear to form monogamous relationships.

25. The red-shouldered hawk (*Buteo lineatus*) is unique from other raptors because its diet is composed entirely of small birds.

# Raptor Answer Sheet

1. The great horned owl (*Bubo virginianus*) has 14 bones in its neck allowing the bird to rotate its head in a complete circle.  
**False:** Many birds have 14 neck bones, which increase their neck's agility including the great horned owl. Great horned owls, like other owls, can rotate their head about 270 degrees in one direction. Owls cannot rotate their head in a complete circle (360 degrees).
2. Barn owls' (*Tyto alba*) ear holes are located asymmetrically on their head to increase sound reception. During flight, the left ear captures sounds below while the right ear focuses on sounds from above. This helps them pinpoint prey.  
**True**
3. The snowy owl (*Nyctea scandiaca*) has unique, comb-like feathers that allow for silent flight. The leading edge is “fringed” so that the feathers, when moving, do not make noise when they rub together. Prey rarely hears the snowy owl swooping in.  
**True:** Most owls are capable of silent flight.
4. Newborn bald eagles (*Haliaeetus leucocephalus*) utilize their white heads to help camouflage with the sun glaring on the nest.  
**False:** The distinguishing characteristics of the bald eagle (white head and tail) do not appear until the bird reaches adulthood (three to four years old).
5. The bateleur eagle (*Terathopius ecaudatus*) received its name because bateleur is German for “strikes like a bat.”  
**False:** Bateleur is French for “acrobat”
6. Red-tailed hawks (*Buteo jamaicensis*) are social birds and do not aggressively defend their territories.  
**False:** Red-tailed hawks can be aggressive birds. They will vigorously defend their territory, especially during the winter months when hunting is difficult.
7. The American kestrel (*Falco sparverius*) is able to see in the ultraviolet light range.  
**True:** Kestrels are able to track their prey by seeing in ultraviolet light because prey such as mice mark their trails with urine and feces which absorb ultraviolet light.
8. The gyrfalcon (*Falco rusticolus*) has a small (tomial) tooth that helps it crack the egg shell and hatch out of its egg.  
**False:** Each member of the falcon family has a tomial tooth that allows it to sever the spinal column of prey. Many water birds have an egg tooth which allows them to hatch from the egg.
9. The Steller's sea eagle (*Haliaeetus pelagicus*) has a wide geographic range throughout South America.  
**False:** The Steller's sea eagle's distribution is mainly in Eastern Asia.
10. The male sharp-shinned hawk (*Accipiter striatus*) is much larger than the female to aid in protection.  
**False:** The female sharp-shinned hawk can be almost twice the size of the male. Some theories suggest the size difference between male and female raptors is due to egg laying. The females have to pass eggs through the pelvic girdle and therefore are larger in size.

## Raptor Answer Sheet cont.

11. The Northern pygmy owl (*Glaucidium californicum*) may use its nictitating membrane (a semi-transparent membrane) to protect and clean its eye.  
**True:** All raptors have nictitating membranes they use to lubricate and protect their eyes against thrashing prey.
12. Female Northern harriers (*Circus cyaneus*) build their nests high in the trees to avoid predation of their young.  
**False:** Northern harriers usually always construct their nests on or near the ground.
13. The black line running through an osprey's eye (*Pandion haliaetus*) is thought to reduce glare from the sun, similar to the black lines football players wipe under their eyes.  
**True**
14. The spectacled owl (*Pulsatrix perspicillata*) received its name from the elaborate courtship dance the male makes to gain the attention of the female.  
**False:** The narrow white "spectacles" around their eyes give them their name.
15. The burrowing owl (*Athene cunicularia*) will build its nest in underground tunnels formerly used by mammals such as badgers.  
**True**
16. Contrary to its name, the screech owl (*Otus asio*) makes no known sound.  
**False:** The screech owl actually has two calls it can make, one is a wailing sound and the other is similar to a whistle.
17. The golden eagle (*Aquila chrysaetos Canadensis*) is rare or uncommon in Eastern parts of the United States.  
**True**
18. An adult Northern goshawk (*Accipiter gentiles*) has pronounced yellow irises.  
**False:** The red eye color of adults is one of the Northern goshawk's most prominent characteristics. Immature Northern goshawks have yellow irises.
19. The California condor (*Gymnogyps californianus*) has heat sensing pits on its beak to detect warm blooded (endothermic) prey.  
**False:** Some species of snakes have heat sensing pits to detect warm blooded prey, however, there are no known bird species to have them.
20. The barred owl (*Strix varia*) is one of the smallest species of owl measuring about 7 to 10 cm (2.8-4 in.) in length.  
**False:** The barred owl is a fairly large owl with a wingspan of around 44 in. (110 cm) and a body length of about 17 in. (42.5 cm).
21. Due to its tiny size (7-8 in.) (17.5- 20 cm) in length the saw-whet owl's (*Aegolius acadicus*) talons are too small to hunt prey efficiently. Therefore these owls consume a large portion of leaves and vegetables for their diet.  
**False:** Despite the saw-whet owl's tiny size, these birds still have razor sharp talons for gripping and seizing prey.

## Raptor Answer Sheet cont.

22. The merlin (*Falco columbarius*) lays rust-colored eggs with brown spots on them.

**True**

23. The peregrine falcon (*Falco peregrinus*) can dive for prey at speeds of more than 300 km/h (180 mi/h).

**True**

24. Ferruginous hawks (*Buteo regalis*) do not appear to form monogamous relationships.

**False:** Ferruginous hawks appear to form monogamous relationships throughout their life.

25. The red-shouldered hawk (*Buteo lineatus*) is unique from other raptors because its diet is composed entirely of small birds.

**False:** The red-shouldered hawk's diet like other raptors, is composed of a variety of animals such as small mammals, amphibians, reptiles, and small birds.