



**Science Grade 8
Scoring Guide for
Released Item #12
Great Horned Owl
Fall 2005**



Prompt

The great horned owl is a powerful bird of prey. These owls have large ear tufts, have an average body mass of 900–1800 g, and have a wingspan of 91–152 cm. Their eyes face forward, and they are able to turn their heads in almost a full circle. They range in color from dark brown and gray to nearly white in the far north. Great horned owls have adapted to survive in forests, grasslands, swamps, and deserts. They often use abandoned nests left by other birds. They are night hunters, and they eat rodents, squirrels, rabbits, skunks, raccoons, ducks, chickens (and other birds), snakes, toads, fish, and occasionally road-killed animals. They have even been known to eat cats and small dogs.



Great Horned Owl

ANSWER THE FOLLOWING CONSTRUCTED-RESPONSE ITEM IN YOUR ANSWER FOLDER.

**Constructed-Response
(3 points)**

Overpumping of well water causes water levels in a great horned owl's swamp habitat to become very low, and the population of small animals decreases.

- Identify two characteristics that increase the great horned owl's ability to survive this habitat change.
- Choose one of these characteristics and describe how it aids the great horned owl in surviving a habitat change.

NOTHING WRITTEN IN THIS TEST BOOKLET WILL BE SCORED.

Science Rubric for the Great Horned Owl

Acceptable Responses:

Adaptations/Characteristics

- Ability to fly
- Large variety of different prey animals
- Other acceptable adaptations (ability to see at night/night hunters; silent flight; turning head in almost full circle; live in many different types of habitats; range in color; use of abandoned nests; large size; speed; wingspan of 91-152 cm; eat road-killed animals)

Descriptions

- Ability to fly—makes it easier for an owl to relocate to another acceptable habitat
- Variety of prey—decreases the chance that all of an owl's food sources will be depleted

Scoring guide:

- 3 points** The student correctly identifies two characteristics that would give the owl a survival advantage in the changing habitat and describes one of them in terms of its benefit to the owl.
- 2 points** The student correctly identifies two characteristics that would give the owl a survival advantage in the changing habitat but fails to provide a correct description.
OR
The student correctly identifies one characteristic that would give the owl a survival advantage in the changing habitat and describes it in terms of its benefit to the owl.
- 1 point** The student correctly identifies one characteristic that would give the owl a survival advantage but fails to provide a correct description.
- 0 points** The student fails to provide any correct information.

Condition codes for unratable papers (zeroes):

- A – Off Topic
- B – Written in a Language other than English or Illegible
- C – Blank or Refusal to Respond

Anchor Paper 1 – Score Point 3

A1

③

3 points The great horned owl is a very adaptable creature. Two of the owl's greatest qualities that assist in adaptation are its abilities to eat so many different foods, and its ability to survive in 4 different habitats. These qualities would help the owl if the population of small animals decreased while living in a swamp land. If these conditions occurred the owl's ability to eat a large selection of animals would help because if many raccoons became scarce the owl could eat duck or eat a little of each type of animal. If the population still dwindled he could move to a new habitat besides swamps such as forest, grassland or deserts.

Anchor Paper 1
Score Point 3

The student correctly identifies two characteristics that would give the owl a survival advantage in the changing habitat (*its abilities to eat so many different foods, and its ability to survive in 4 different habitats*). The owl's variety of food choices is described (*the owl's ability to eat a large selection of animals would help because if many raccoons became scarce the owl could eat duck or eat a little of each type of animal*). The ability to survive in different habitats is described (*If the population still dwindled he could move to a new habitat besides swamps such as forest, grassland or deserts*).

Anchor Paper 2 – Score Point 3

A2

3

3 points

In these cases owls are lucky to be able to live in other areas like forests, grassland, and deserts. They also eat road-kill sometimes, so it won't matter whether the animal is dead or alive. The main point is the habitat change where in this case varies very much so the owl can survive in other places besides swamps.

Anchor Paper 2 Score Point 3

The student correctly identifies two characteristics that would give the owl a survival advantage in the changing habitat (*owls are lucky to be able to live in other areas like forests, grassland, and deserts. They also eat road-kill*). The ability to survive in various habitats is described (*the owl can survive in other places besides swamps*). The benefit of eating road-kill is described (*it won't matter whether the animal is dead or alive*).

Anchor Paper 3 – Score Point 3

A3

3

3 points One of the owl's characteristics that can help it survive this change is that it lives in other birds' nests. Another characteristic is its adaption to diff. environments so they must be able to find some source of water. The first characteristic I think would work also because the owl could leave his nest + swamp, then take another bird's nest closer to a swamp or water source.

Anchor Paper 3 Score Point 3

The student correctly identifies two characteristics that would give the owl a survival advantage in the changing habitat (*it lives in other birds' nests....its adaption to diff. environments*). The benefit of living in other bird's nests is described (*the owl could leave his nest & swamp, then take another bird's nest closer to a swamp or water source*).

Anchor Paper 4 – Score Point 3

A4

3

3 points They have a large amount of food & can live in many places. Because they have so many food types, if a certain animal died off, the owls can just eat another animal they like.

Anchor Paper 4 Score Point 3

The student correctly identifies two characteristics that would give the owl a survival advantage in the changing habitat (*They have a large amount of food & can live in many places*). The owl's variety of food choices is described (*Because they have so many food types, if a certain animal died off, the owls can just eat another animal they like*).

Anchor Paper 5 – Score Point 2

A5

2

^{3 points} The owl has many different types of prey that it likes to feed on. So if a few die out then it will not affect the owl. Also the owl is not a water animal so it will not be affected by the water level change.

The fact that the owl does not need water to live is very helpful. Unlike water animals, if a lake, pond etc dries up then the owl will not be affected.

Anchor Paper 5 Score Point 2

The student correctly identifies and describes a characteristic that would give the owl a survival advantage in the changing habitat (The owl has many different types of prey that it likes to feed on. So if a few die out then it will not affect the owl). The fact that “the owl is not a water animal” is not an accepted characteristic.

Anchor Paper 6 – Score Point 2

A6

②

3 points The owl can live in many different places: forests, grasslands, swamps and deserts. So if the swamp water lowers, they can move to a different land. Also, when the swamp water lowers, it's easier for the owl to track small preys to eat for food. With moving places, the change shouldn't affect the owl that much because it can adapt in many different environments.

Anchor Paper 6 Score Point 2

The student correctly identifies a characteristic that would give the owl a survival advantage in the changing habitat (*The owl can live in many different places: forests, grasslands, swamps and deserts*). The benefit of this characteristic is described (*if the swamp water lowers, they can move to a different land....the change shouldn't affect the owl that much because it can adapt in many different environments*). No credit is given for describing the possible effect of the low water level (*when the swamp water lowers, it's easier for the owl to track small preys to eat for food*) because it describes the benefit of low water levels rather than how an owl's characteristic helps it survive the habitat change.

Anchor Paper 7 – Score Point 2

A7

②

3 points

this owls have large ears and weigh 900-1800 g, and have a wingspan of 91-152.

Anchor Paper 7 Score Point 2

The student correctly identifies three characteristics that would give the owl a survival advantage in the changing habitat (*large ear, weigh 900-1800g, a wingspan of 91-152*). A description of the benefits of these characteristics is not provided.

Anchor Paper 8 – Score Point 1

A8

①

3 points

This characteristic wingspan 91-152 cm
is beneficial for this bird of
prey because not all owls
are the same.

Anchor Paper 8 Score Point 1

The student correctly identifies a single characteristic that would give the owl a survival advantage in the changing habitat (*Wingspan 91-152 cm*). The statement “not all owls are the same” does not show how the wingspan aids the owl in surviving a habitat change.

Anchor Paper 9 – Score Point 1

A9

①

3 points

Well as page 22 states great horn owls have adapted to survive in forests, grasslands, swamps, and deserts. I think grasslands are beneficial for this bird of prey, because at night there are a lot of rodents and raccoons that come out at night.

Anchor Paper 9 Score Point 1

The student correctly identifies a single characteristic that would give the owl a survival advantage in the changing habitat (*great horn owls have adapted to survive in forests, grasslands, swamps, and deserts*). The description of the benefit of adapting to various habitats is unclear (*I think grasslands are beneficial for this bird of prey, because at night there are a lot of rodents and raccoons that come out at night*). This does not state that the owl should move to grasslands to find more prey.

Anchor Paper 10 – Score Point 0

A10



3 points Two characteristics that increase the owl's ability to survive are that they would need to hunt better and that they would need to be able hunt more animals. Being able to hunt better would aid the owls in a habitat change, because then they'd be already experienced, and better hunters, so that would aid them, when they have another habitat change.

Anchor Paper 10
Score Point 0

The student fails to provide any correct information. An attempt is made to provide two characteristics (*need to hunt better, hunt more animals*). These refer to the owl's hunting skills but are not characteristics of the owl.

Anchor Paper 11 – Score Point 0

All

0

3 points

There can be many ways that an owl can survive. Since there is less water in the swamp many creatures that compete with the owl may have left so the owl could have more prey to chomp on. Since the swamp is less crowded the owl could have some room to build nests and put his preys corpses somewhere.

-Once many of the owls competitors die or leave the owl may have a better chance of surviving because many creatures may have wanted to come to the swamp because of it's vacancy.

Anchor Paper 11
Score Point 0

The student fails to provide any correct information. No characteristics are provided. "Since the swamp is less crowded the owl could...build nests is not accepted because use of abandoned nests is the characteristic provided in the prompt. Death of the owl's "competetors" is not a characteristic, nor is it a benefit of a described characteristic.

Anchor Paper 12 – Score Point 0

A12

0

3 points 1. it gets better at finding water in its habitat, and needs less of it. 2. if the less water effects its prey it could get better at finding food.
the finding food one, helps it because if it can get food better and more efficiently it can live with less food available in its habitat.

Anchor Paper 12 Score Point 0

The student fails to provide any correct information. Neither “finding water” nor “finding food” is an accepted characteristic. Stating “if it can get food better and more efficiently it can live with less food available in its habitat” is an explanation of an unacceptable characteristic and is not credited. Describing the benefits of lower water levels “if the less water effects its prey it could get better at finding food” is not accepted.