

Section 31–2 Birds (pages 806–814)

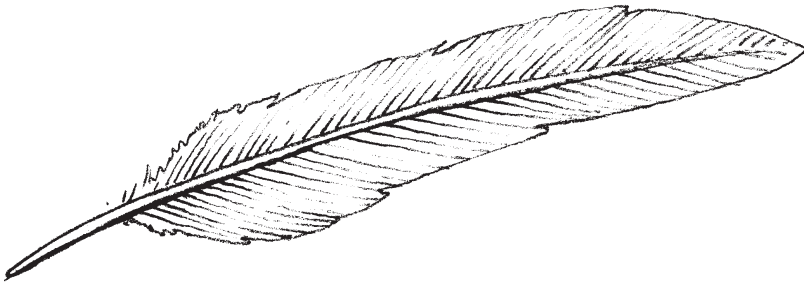


TEKS FOCUS: 7A Anatomical, physiological, and embryological similarities; 7B Adaptation; 10A Body systems

This section describes the characteristics of birds and how birds are adapted for flight.

What Is a Bird? (page 806)

- Circle the letter of each characteristic of birds.
 - feathers
 - four legs
 - wings
 - scales
- The single most important characteristic that separates birds from all other living animals is _____.
- List two functions of feathers.
 - _____
 - _____
- Identify each type of feather diagrammed below.



Evolution of Birds (page 807)

- In what ways is the early bird *Archaeopteryx* different from modern birds?

- Is the following sentence true or false? Scientists know for certain that birds evolved directly from dinosaurs. _____

Form, Function, and Flight (pages 808–812)

- What adaptations do birds have that enable them to fly? _____

8. For what two things do birds require energy?
a. _____
b. _____
9. Is the following sentence true or false? Birds have a low metabolic rate compared to reptiles. _____

Match the type of bird bill with the type of food it is adapted to eat.

Bird Bill

Food

- | | |
|-----------------------------|------------------|
| _____ 10. Short and fine | a. Flower nectar |
| _____ 11. Short and thick | b. Seeds |
| _____ 12. Strong and hooked | c. Insects |
| _____ 13. Long and thin | d. Animal prey |

14. Circle the letter of each sentence that is true about bird adaptations.
a. Birds break down food by chewing it with their teeth.
b. Insect-eating birds have an expandable stomach in which large amounts of soft foods can be stored.
c. Birds have a constant, one-way flow of oxygen-rich air in their respiratory system.
d. In the bird's heart, oxygen-rich blood is completely separated from oxygen-poor blood.
15. Circle the letter of the form of nitrogenous waste excreted by birds.
a. ammonia b. urea c. uric acid d. nitrate
16. Circle the letter of each sentence that is true about response in birds.
a. Birds have brains that quickly interpret and respond to signals.
b. The cerebrum controls behaviors, such as nest building.
c. The cerebellum in birds is much like that in reptiles.
d. Birds can sense tastes and smells quite well.
17. What are two ways in which the skeleton of a flying bird is strengthened for flight?
a. _____
b. _____
18. How are the amniotic eggs of birds different from the eggs of reptiles? _____

19. Is the following sentence true or false? Bird parents do not ever care for their offspring.

Groups of Birds (pages 812–813)

Match the bird group with its characteristics. Use Figure 31–19 as a guide.

Bird Groups	Characteristics
_____ 20. Birds of prey	a. Largest order of birds, which includes songbirds
_____ 21. Ostriches and their relatives	b. Fierce predators with hooked bills, large wingspans, and sharp talons
_____ 22. Parrots	c. Flightless birds that move by running
_____ 23. Perching birds	d. Adapted to wading in aquatic habitats
_____ 24. Herons and their relatives	e. Colorful, noisy birds that use their feet to hold up food

Ecology of Birds (page 814)

25. Circle the letter of each way in which birds interact with natural ecosystems.
- a. pollinate flowers
 - b. disperse seeds
 - c. control insects
 - d. produce toxic wastes
26. Is the following sentence true or false? Some species of migrating birds use stars and other celestial bodies as guides. _____
27. Is the following sentence true or false? Birds are not affected by changes in the environment. _____