

# Characteristics & Diversity Of Birds (p. 784 – 792)

## I. Key Characteristics Of Birds

1. Birds belong to the vertebrate class of Aves.

2. Circle the correct characteristics of birds. (Circle all that apply.)

Teeth :	Present	<u>Not present</u>	
Tail :	Large	<u>Reduced In Size</u>	
Eggs :	<u>Amniotic</u>	Unshelled	
Scales :	<u>Present</u> -legs	<u>Modified</u>	Not present
Flight :	All capable	None capable	<u>Some capable</u>

3. What are bird feathers? (Compared to reptilian scales.)

- Modified scales that develop from follicles

4. Differentiate between contour feathers and down feathers.

Contour Feathers : Provide lift for flight (Wings/Tail)

Down Feathers : Provides insulation (Soft + fluffy)

5. Define the term preen gland.

Preen Gland - oil secreting gland of birds  
(cleans + waterproofs)

6. List two other functions of feathers, besides flight, waterproofing, and insulation.

1. Camouflage      2. Mate Selection

7. List two adaptations that birds possess that enable them to fly successfully.

1. Thin, hollow bones      2. Large Breast Muscles

8. Which type of metabolism do birds exhibit?

Circle One :      Endothermic      Ectothermic      (Maintains 41°C)

9. What type of heart do birds have?

- 4-chambered (Complete blood separation)

10. What type of blood circulation do birds possess?

Circle One :      Single-Loop Circulation      Double-Loop Circulation

11. Circle the letter of the sentence that is false concerning bird respiration.

- a. Birds possess one-way air flow in their lungs (similar to fish gills).
- b. Air sacs are connected to bird lungs to enable one-way air flow.
- c. Oxygen and carbon dioxide are exchanged in bird air sacs. (Holding tanks only)
- d. Bird lungs are exposed to air that is almost fully oxygenated.

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- 1. Milwaukee Zoo
- 2. Lek Behavior
- 3.

(Molting)  
↓  
shedding of feathers (like skin)

p. 785

Singing Battle For Mates

p. 786

p. 787

**II. Bald Eagle** (Up Close Section p. 788 – 789)

**1. Match each eagle anatomical term with the correct definitions.**

3-4 x better than humans

- |                      |                                                                         |
|----------------------|-------------------------------------------------------------------------|
| 1. <u>F.</u> Talon   | A. 1 <sup>st</sup> chamber that breaks down foods with acids.           |
| 2. <u>G.</u> Eyes    | B. 2 <sup>nd</sup> of all vertebrates when comparing size to body size. |
| 3. <u>H.</u> Beak    | C. Excretory organ that converts wastes to uric acid.                   |
| 4. <u>B.</u> Brain   | D. 2 <sup>nd</sup> chamber that grinds up and crushes food.             |
| 5. <u>F.</u> Crop    | E. Used to snatch up fish and other prey.                               |
| 6. <u>A.</u> Stomach | F. Food storage site at the lower end of the esophagus.                 |
| 7. <u>D.</u> Gizzard | G. Identifies prey from great distances.                                |
| 8. <u>C.</u> Cloaca  | H. Used to tear apart prey; then swallowed whole.                       |

**III. Adaptations Of Birds**

**1. Bird diets can be determined by examining bird beaks, legs, and feet.**

Circle One : True False

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**2. Match each bird with the correct beak adaptations.**

- |                                 |                                                                      |
|---------------------------------|----------------------------------------------------------------------|
| 1. <u>F.</u> Birds Of Prey      | A. Strong, chisel-like ( <i>drilling</i> )                           |
| 2. <u>C.</u> Ducks              | B. Short, thick ( <i>seeds</i> ) or Long, slender ( <i>insects</i> ) |
| 3. <u>D.</u> Hummingbirds       | C. Long, flattened ( <i>sieving</i> )                                |
| 4. <u>G.</u> Long-legged waders | D. Thin, slightly curved ( <i>probing</i> )                          |
| 5. <u>E.</u> Parrots            | E. Short, stout, hooked ( <i>cracking, tearing</i> )                 |
| 6. <u>B.</u> Songbirds          | F. Curved, pointed ( <i>tearing</i> )                                |
| 7. <u>A.</u> Woodpeckers        | G. Long, slender, spear-shaped ( <i>fishing</i> )                    |

**3. Match each bird with the correct foot adaptations.**

- |                                 |                                                                 |
|---------------------------------|-----------------------------------------------------------------|
| 1. <u>E.</u> Birds Of Prey      | A. Strong toes; 2 forward, 2 back ( <i>climbing, grasping</i> ) |
| 2. <u>F.</u> Ducks              | B. One toe points backward ( <i>perching</i> )                  |
| 3. <u>D.</u> Hummingbirds       | C. Long legs, toes spread out ( <i>wading</i> )                 |
| 4. <u>C.</u> Long-legged waders | D. Very small; cannot walk on ground ( <i>hovering</i> )        |
| 5. <u>A.</u> Parrots            | E. Powerful with curved talons ( <i>grasping, seizing</i> )     |
| 6. <u>B.</u> Songbirds          | F. 3 toes linked by webbing ( <i>swimming</i> )                 |
| 7. <u>G.</u> Woodpeckers        | G. 2 toes pointed forward, 2 back ( <i>grasping only</i> )      |