

Amphibians (p. 758 – 764)

I. Key Characteristics Of Modern Amphibians (4,000 species)

1. List the three orders of the Class Amphibia.

1. Order Anura - frogs & toads
 2. Order Urodela - salamanders & newts
 3. Order Apoda - caecilians

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Toad, Frog, Pellywig, Song

2. Circle the correct characteristics of amphibians. (Circle the one that applies.)

- | | | | |
|----------------------|-------------------------|--------------------|-------------|
| <u>Movement</u> : | Sessile | Fins | <u>Legs</u> |
| <u>Respiration</u> : | Gills <i>tail poles</i> | <u>Lungs</u> | |
| <u>Circulation</u> : | <u>Double-Loop</u> | Single-Loop | |
| <u>Heart</u> : | 2-Chambered | <u>3-Chambered</u> | 4-Chambered |

3. Define the term cutaneous respiration.

Cutaneous Respiration - supplement to respiration by taking in oxygen directly through moist skin

4. Besides water retention, what was another key challenge to evolving on land?

- Obtaining oxygen from air

5. Describe the lungs of amphibians.

- Sacs with folds on their inner membrane (↑ surface area)

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T.O.P

6. Respiratory efficiency of lungs is better than gills.

Circle One : True False - Not needed → (more oxygen in air)

7. How is the first loop in the circulatory system of an adult amphibian different from the second loop?

- 1st Loop : Carries blood between heart + lungs
 2nd Loop : Carries blood between heart + rest of body

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Bottom

8. Define the term pulmonary veins.

Pulmonary Veins - veins that carry oxygen-rich blood from lungs to heart

9. What type of blood is in each part of an adult amphibian heart? (Circle one for each.)

- | | | | |
|-----------------------|--------------------|--------------------|--------------------|
| <u>Right Atrium</u> : | <u>Oxygen-Poor</u> | Mixed Blood | Oxygen-Rich |
| <u>Ventricle</u> : | Oxygen-Poor | <u>Mixed Blood</u> | Oxygen-Rich |
| <u>Left Atrium</u> : | Oxygen-Poor | Mixed Blood | <u>Oxygen-Rich</u> |

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II. Frogs & Toads

1. Circle the letter of the sentence that is false concerning anurans.

- a. They live in diverse ecosystems.
- b. Adult frogs and toads are carnivores.
- c. They have a sticky tongue to catch prey and are adapted for jumping.
- d. Frog skins are covered in bumps. *(Toads → weedy regions)*

2. Frog egg fertilization is conducted externally. *(Frogs → ponds, lakes)*

Circle One : True False

3. Circle the letter of each characteristic of tadpoles.

- a. carnivore
- b. herbivore
- c. gills
- d. lungs

III. Leopard Frog (Up Close Section p. 762 – 763)

1. Match each frog anatomical term with the correct definitions.

- | | |
|--------------------------------|---|
| 1. <u>D.</u> Tympanic Membrane | A. Used to prevent prey from escaping. |
| 2. <u>G.</u> Cloaca | B. Muscle that stores urine. |
| 3. <u>B.</u> Urinary Bladder | C. Covered with a transparent membrane. <i>(nictitating membrane)</i> |
| 4. <u>H.</u> Ureter | D. Eardrum; Vibrates when encountering sounds. |
| 5. <u>A.</u> Teeth | E. Complex nervous organ (relative to fish). |
| 6. <u>E.</u> Brain | F. Appearance allows for camouflage. |
| 7. <u>I.</u> Liver | G. Chamber that releases urine and gametes. |
| 8. <u>C.</u> Eye | H. Tubes that connect kidneys to the urinary bladder. |
| 9. <u>F.</u> Skin | I. Large organ; Secretes bile & stabilizes sugar levels. |

IV. Salamanders & Caecilians

1. Circle the letter of the sentence that is false concerning salamanders.

- a. Salamanders need to live near moist areas to prevent dehydration.
- b. Fertilization of salamanders is usually external.
- c. Salamander larvae ^{do not} undergo metamorphosis, much like frogs and toads.
- d. Larval salamanders possess gills, while adults have lungs.

2. Circle the letter of each characteristic of caecilians.

- a. legless
- b. live in tropical regions
- c. ~~external~~ ^{internal} fertilization
- d. small, bony scales

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Poison Arrow Frog

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