

# Oxbow Phenomena: Toad Hopping & Camouflaged

There are several species of toad native to the Chattahoochee River, including the American Toad and Fowler's Toad. Toads generally have more leathery, bumpy, dry skin than some other frogs with shorter legs and usually a more terrestrial habitat. Toads belong to the same Order as frogs, but not all frogs are classified as toads. The American Toad and Fowler's Toad are both nocturnal, hunting at night for insects and small invertebrates. They produce a toxin in glands that can be harmful to animals if ingested or eaten, which can help evade predators and becoming a meal themselves.

Grade	Standard	Guiding Question(s)	How to include in lesson?
K	SKL1. Obtain, evaluate, and communicate information about how organisms (alive and not alive) and non-living objects are grouped.	What in the video is living or alive? What is non-living?	-Observe different items in the video and decide if they are living or non-living <ul style="list-style-type: none"> <li>• Draw a picture of what you see. If you draw in pencil, you may choose to color in the living things green and non-living things gray. (Is there anything that <i>was</i> living that is no longer alive?)</li> </ul>
1st	S1L1. Students will investigate the characteristics and basic needs of plants and animals.	What does a toad need to survive?	-Use to discuss what a toad may eat <ul style="list-style-type: none"> <li>• Count and sort insects</li> </ul> -Discuss how a toad may survive in the forest or wetland <ul style="list-style-type: none"> <li>• Draw a picture of the toad's needs (food, water, cover/space, air).</li> <li>• A toad is great at hopping to find food or avoid being eaten. How many times can you hop? How far can you hop? (incorporate math)</li> </ul>
2nd	S2L1. Obtain, evaluate, and communicate information about the life cycles of different living organisms.	How does a toad have its young?	-Introduce egg laying and live birth as possible ways animals develop <ul style="list-style-type: none"> <li>• Amphibians, including toads go through metamorphosis. Play Simon Says "life stages" (egg, tadpole, froglet, toad)</li> <li>• Explore Orbi or water gel beads to feel the texture of amphibians eggs, which are laid in water</li> </ul>

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3rd	S3L1. Obtain, evaluate, and communicate information about the similarities and differences between plants, animals, and habitats found within geographic regions (Blue Ridge Mountains, Piedmont, Coastal Plains, Valley and Ridge, and Appalachian Plateau) of Georgia.	What types of amphibians reside in the Chattahoochee Valley? What other species make up the Chattahoochee River Ecosystem?	<p>-Discuss the variety of biodiversity you may observe in or near the Chattahoochee River and Valley.</p> <ul style="list-style-type: none"> <li>• Go on a scavenger hunt to look for at least two different types of amphibians</li> <li>• Draw two different types of frogs or toads that interest you and write how they are the same and different.</li> </ul>
4th	S4L2 Students will identify factors that affect the survival or extinction of organisms such as adaptation, variation of behaviors (hibernation) and external features (camouflage and protection).	How does this toad's adaptations help with survival? How would you describe the locomotion or movement of the toad? How can an amphibian shelter, protect, or defend themselves?	<p>-Discuss behavioral adaptations that affect behaviors such as mating, evasion of predators, and alerting of weather conditions, etc.</p> <ul style="list-style-type: none"> <li>• Make a list of 10+ physical adaptations you observe on the toad.</li> </ul> <p>-Can use to analyze how the structure of the toad's body helps it to survive.</p> <ul style="list-style-type: none"> <li>• Draw a picture of a toad's adaptations and write how they help it survive. Create your own camouflage pattern, paying close attention to how this toad blends into its surrounding</li> </ul>
5th	S5L2. Obtain, evaluate, and communicate information showing that some characteristics of organisms are inherited and other characteristics are acquired.	How is this behavior an inherited or acquired behavior? How is camouflaging an inherited or acquired behavior?	<p>-Use to differentiate between anatomically and behaviorally different traits.</p> <ul style="list-style-type: none"> <li>• Draw the heron and label its anatomy and how it uses its body parts for certain behaviors (try to draw the internal structures of the animal and what processes they are responsible for).</li> </ul> <p>-Use to discuss different types of traits including reproductive, feeding, survival, locomotion, etc</p>