

Oxbow Phenomena: Fish of the Chattahoochee Observation

The Chattahoochee River is home to many species of fish, including the Large Mouth Bass, Black Crappie, Yellow Perch, Rainbow Trout, and Longnose Gar among many others. All of these fish share a habitat, and also some anatomical similarities such as gills to breathe dissolved oxygen underwater, fins for movement, swim bladders to position themselves in the water, live in an aqueous habitat, and are ectothermic or “cold-blooded.” These fish, however, are quite different when it comes to body shape, size, pattern, diet preference, and so on. Observe some of these similar and different traits, habitat, and interaction between fish of the Chattahoochee River.

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?	-What is living and non-living in the River? <ul style="list-style-type: none"> • Draw a picture of the animal and the living things in its habitat. What non-living things are in the river? (sand, rocks, boats)
1st	S1L1. Students will investigate the characteristics and basic needs of plants and animals.	What does a fish need to survive? Why or why can't all animals breathe underwater? How does a fish breathe air underwater?	-Use to discuss what a fish may eat <ul style="list-style-type: none"> • Go “fishing” with a magnet attached to a string on a stick with paper clips attached to fish with letters, numbers, or shapes on them to “fish” (S1P2) • Draw a picture of the fishes’ needs (food, water, air, cover/shelter). -Fish are great swimmers. Talk about their adaptations. <ul style="list-style-type: none"> • Can you think of other animals that are good at swimming? What part of a fishes’ body helps it swim? • Why do you think fish do not sink or float? (SKP1)
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	What types of reptiles reside in the Chattahoochee River? How would the diversity or species change as you get closer to the Gulf of Mexico and Atlantic Ocean?	-Discuss the variety of biodiversity that lives below the river’s surface. <ul style="list-style-type: none"> • There are over two dozen fish species in the Chattahoochee River. How do you think they are different? What is similar? • Pay close attention to the pattern on the scales.

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	Appalachian Plateau) of Georgia.	(continued)	Create a detailed scientific drawing.
	S3L2 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 do the adaptations of these fish help with survival? How would you describe the locomotion or movement of the fish? How can a fish 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"> • Draw at least two different fish and make a list of a few things you notice them doing. • What part(s) of the fishes' bodies (anatomy) or what actions (behaviors) protect a fish from danger? <p>-Can use to analyze how the structure of a fish's body helps it to survive.</p> <ul style="list-style-type: none"> • Do all fins look the same? How could different shapes, sizes, or characteristics of fins affect movement or use?
4th	S4L1. Obtain, evaluate, and communicate information about the roles of organisms and the flow of energy within an ecosystem.	Where do these fish fit into the food chain? What do you think they eat? Do they eat the same things?	<p>-Discuss the food chain within the Chattahoochee River.</p> <ul style="list-style-type: none"> • What do these fish eat? • What predators might eat these fish? • Who would be the "top" of the Chattahoochee River food chain? • Create your own artistic representation!
5th	S5L1. Obtain, evaluate, and communicate information to group organisms using scientific classification procedures.	How are these animals classified? What characteristics do they have in common?	<p>-Discuss how fish belong to their own group and are classified as having fins to move and swim, breathing dissolved oxygen through gills, and have a vertebrate, among other characteristics</p> <ul style="list-style-type: none"> • Draw a fish's skeleton or bones. If possible, dissect a fish from the grocery store or show its bones.

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	<p>S5L2. Obtain, evaluate, and communicate information showing that some characteristics of organisms are inherited and other characteristics are acquired.</p>	<p>How is swimming an inherited or acquired behavior? (continued)</p>	<p>-Use to differentiate between anatomically and behaviorally different traits.</p> <ul style="list-style-type: none">• Draw a fish 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). How do you think the fish keeps from floating to the top or sinking to the bottom? What is a swim bladder? What does it look like? What is its function? Draw a second specimen and compare. <p>-Use to discuss different types of traits including reproductive, feeding, survival, locomotion, etc</p>
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