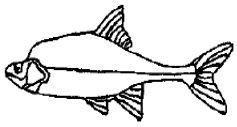
Wild Kids

Which Fish Lives Where?

STUDENT GUIDE

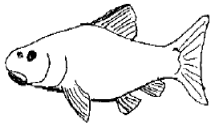
Fish are adapted to living in aquatic (water) environments. They have fins and breathe through gills. All fish have a backbone and most have scales. These are adaptations that help fish survive in the habitat where they live. But fish have other adaptations that help them find food and avoid predators. Arizona's native fish have some special adaptations. Why does the Humpback chub have a "hump"? Where would you find the Mexican stoneroller? To find the answers to these questions, continue reading!

Body Shape



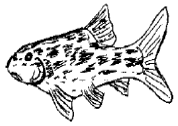
The Humpback chub's hump helps it stay upright in fast-moving water

The Mexican stoneroller is a flat-bellied fish that is a bottom feeder

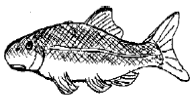


The Apache trout is a fast-moving fish with a torpedo-shaped body

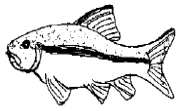
Coloration



The speckled dace's mottled color helps it blend in with rocks

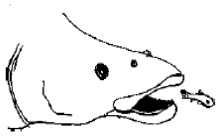


The Little Colorado River sucker's dark upper side makes it difficult for predators to see from above

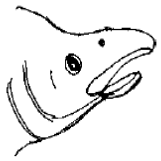


The horizontal stripe on the longfin dace helps it hide in vegetation

Mouth Shape



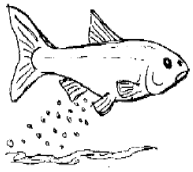
Large jaws allow the Colorado pikeminnow to eat large fish



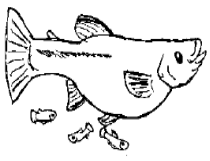
With a long upper jaw the bonytail chub feeds on fish below it

The sucker-shaped mouth of the razorback sucker is used to filter out small plants and insects

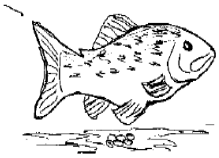
Reproductive Strategy



The spikedace's eggs are spread out to increase the the number that survive



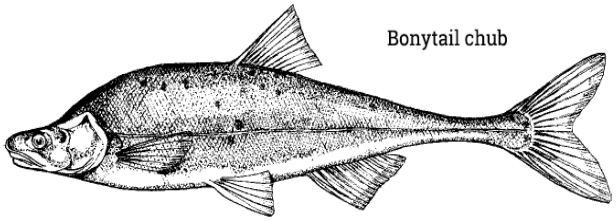
The Gila topminnow's live born young can swim just after birth to escape predators



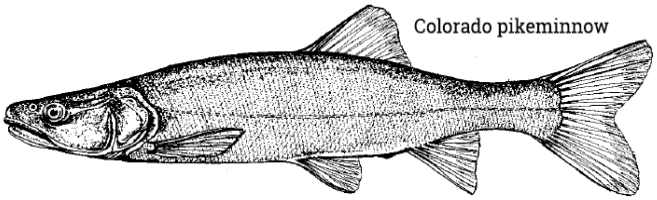
The Apache trout's eggs are hidden from predators in a nest in the gravel

KNOW YOUR NATIVES

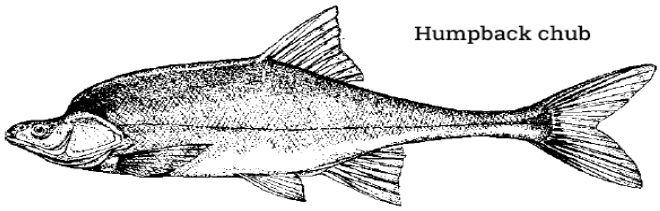
Arizona is home to more than 30 surviving species of native fish. For thousands of years, Arizona's native fish have adapted to life in habitats ranging from small springs to the raging floods of the Colorado River. Their ability to adjust to periods of drought and flash floods has been the key to their survival. But, today many of our native fish are endangered or threatened due to habitat loss and introduction of nonnative fish. Biologists and researchers are working hard to help native fish by reintroducing them, building barriers to control movement of nonnative species, and improving habitat for Arizona's native fish.



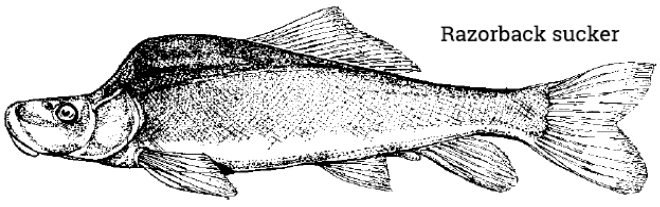
Extremely rare. Federally listed as endangered. Body highly streamlined, greenish to gray above, with irregular black spots, white belly. Head short, concave on top, adults have a small hump. Length: up to 24 inches. Weight: over 2 pounds. Historically occurred throughout the Colorado River and its main tributaries. Currently found in Lake Mohave and Lake Havasu and in the Colorado River from Lake Powell upstream to the Green River in Utah. Prefers pools and eddies of warm, swift moving rivers.



Federally listed as endangered. Formerly known as the Colorado River Squawfish, the body is long and slender, gray-green back with silver sides. Long, conical shaped head, flattened between the eyes. Large, horizontal mouth. Tail fin, large and deeply forked. Length: 1 to 6 feet. Weight: 1 to 100 pounds. Originally found in the Colorado River and Gila River basin, now stocked in the Verde River. Prior to dams, pikeminnows moved upstream in "spawning runs," sometimes up to 100 miles.



Very rare. Federally listed as endangered. Body streamlined, light olive-gray above, silver sides, white belly. Small head with snout overhanging mouth. Large hump behind head. The hump forces the fish's body down against the river bottom where currents are less. Length: up to 19 inches. Weight: over 2 pounds. Now found only in the Little Colorado River and adjacent parts of the Colorado River.



Federally listed as endangered. Back is olive to brown-black, sides brown or pinkish; Belly, white to yellow. Adults have a sharp-edged keel or "humpback". Mouth facing downward. Length: Up to 36 inches; Weight: 1 to 13 pounds. Prefers rivers with strong, uniform currents over sandy bottoms. Razorbacks are stocked in the Verde River and there is a small population in Lake Mohave.

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TEACHING GUIDE

Overview

In this activity, students will read an article that looks at different adaptations that fish have to survive in the specific aquatic habitat. These will include body and mouth shape, reproductive strategies and color patterns. Then, the teacher will guide them through an activity that allows them to create their own fish and incorporate the adaptations they just learned about.

Grade
3rd

AZ Science Standards
- 3.L1U1.5

Science and Engineering Practices
- Develop and use models

Crosscutting Concepts
- Structure and Function

Suggested Procedures

1. Print the worksheet above. If possible, print it double sided.
2. Ask students to read the first page of the article.
3. Ask some questions to assess student comprehension:
    - What is the role of a hump? Would those fish be more likely to be found in rivers or lakes? Why?
    - What is the purpose of a mottled or speckled color pattern? Would those fish be more likely to be found near the bottom, near the surface or in open water? Why?
    - What is the purpose of a sucker-shaped jaw? Where would you find these fish? Why?
4. Ask students to read the second page of the article.
5. Ask the following question to assess student comprehension:
    - What are some characteristics from the first page that you identified in the native fish discussed on the second page? What does that tell you about the habitat of those fish?
6. Have the students pretend they just discovered a brand new fish. They should draw their fish in its habitat. Their fish must have at least one adaptation from each of the categories on the first page.
7. Students should share their fish and explain how the adaptations they chose help it survive in its particular habitat.