



Build your Own "Franken"fish

Materials

For each student:

- fish part templates
- glue
- crayons
- construction paper
- scissors
- wiggly eyes
- pencil and paper

Grade Levels

1st-6th

Louisiana GLEs

1st- SI 1, 2, 3, 4, 8; LS 27, 32

2nd- SI 1, 2, 3, 4, 6, 10; LS 27, 30, 35

3rd- SI 1, 2, 3, 4, 6, 11; LS 35, 38

4th- SI 1, 2, 3, 4, 7, 12; LS 41, 48, 50, 51, 52, 53

5th- SI 1, 2; LS 29

6th- SI 1, 2

Adapted from

New Jersey Marine Science Consortium, Fish Morphology and Anatomy Lesson Plan, NJMSC, 2001.

References

Fish anatomy print-out-
<http://www.enchantedlearning.com/subjects/fish/label/labelfish.shtml>

Basin information-
<http://www.flmnh.ufl.edu/FISH/Education/Diagrams.htm>

Students will learn about fish anatomy and morphology by discovering how the shapes of a fish's part is related to its function.

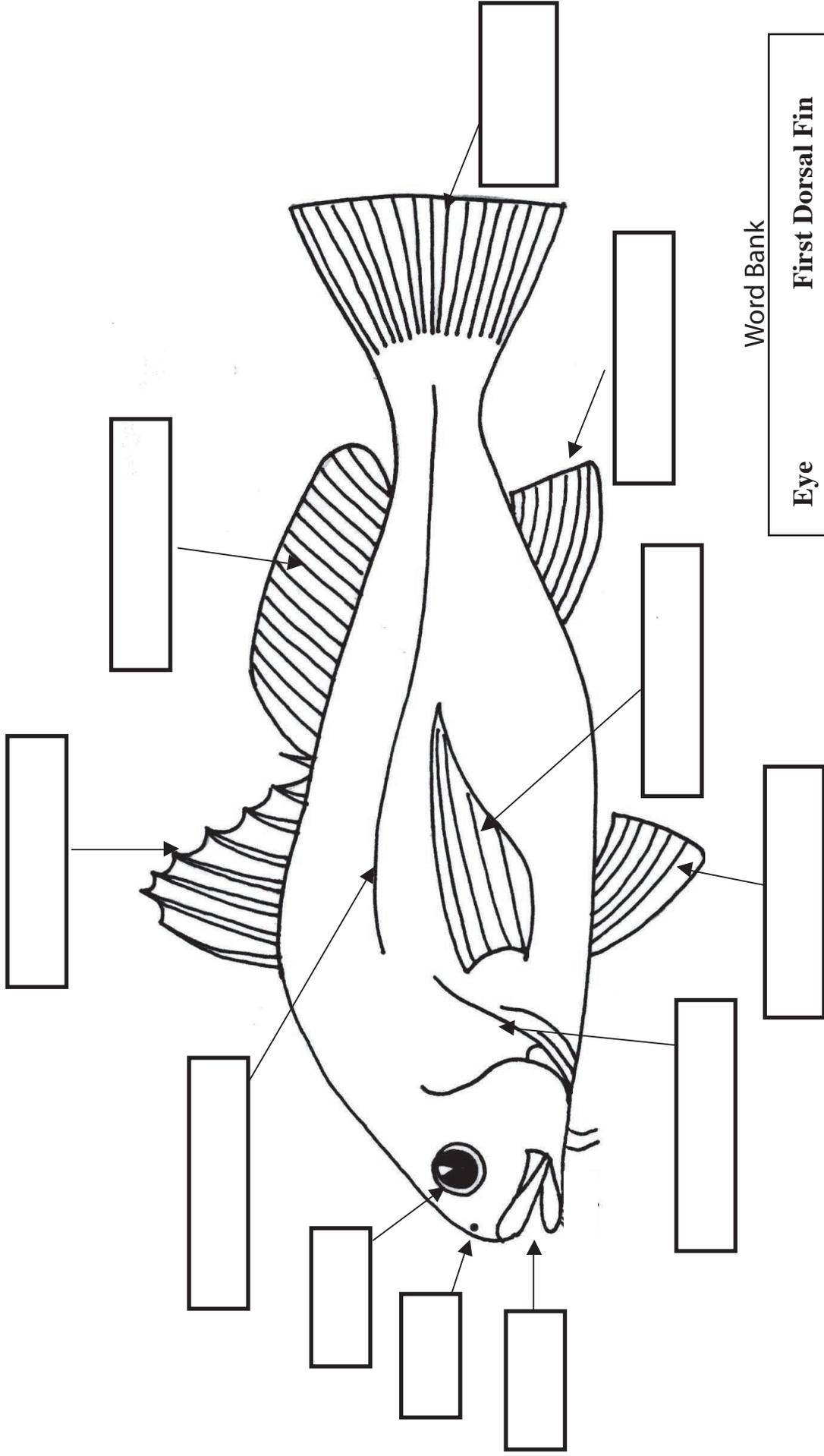
Background

There is tremendous diversity of fish in the world, with over 20,000 species. They are found in a range of environments from lakes to streams to oceans. Understanding the anatomy of a fish, helps understand how they are adapted to live in water. The study of the shape of a fish's body parts, including their fins and mouth type, and how these help the fish function is called morphology. A fish's fins play a role in helping a fish swim through water. The top fin, or **dorsal fin**, keeps the fish upright and is used for sudden direction changes. The **pectoral fins** are the pair of side fins help the fish move in different directions and aids in the ability to swim and steer. The bottom fins are called **pelvic fins** and they are most often used as "brakes". These are close to the back bottom fin, **anal fin**, which gives the fish balance. Finally, the **caudal fin** is used to propel the fish through water, pick up speed, and make turns. The location and shape of the mouth may tell us where they are found in the water column, how they eat, and also the size of their prey. For instance, a mouth located on the bottom of their body, like a flounder, indicates that they are bottom feeders. Body shape is one of the best indicator in determining the fish's environment. The attached chart gives more detailed information concerning the body shape and function.

Procedure

1. First, introduce a fish model to review and identify the body parts of a fish. Identify for the students the dorsal fin, caudal fin, pectoral fin, anal fin, mouth, and eyes. (For older students go into more detail introducing the lateral line, gills, operculum, etc.).
2. Explain to students that they will pick out a collection of fish body parts in order to assemble their own fish.
3. The students will cut out their fish parts and glue them onto a piece of construction paper.
4. They will then label the fish parts. They can then color the fish and draw the background to represent the environment in which their fish would live.
5. Finally, have the students name and describe their fish. They should include information on how the fish moves, how it eats, where it lives, etc.

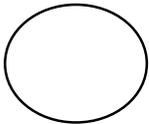
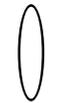
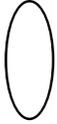
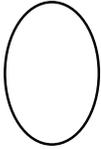
Anatomy of a Bony Fish



Word Bank

- | | |
|--------------|-------------------|
| Eye | First Dorsal Fin |
| Pelvic fin | Operculum |
| Anal fin | Mouth |
| Pectoral fin | Nostril |
| Lateral Line | Second Dorsal Fin |

Cross-section body shape



	Type	Fish	Characteristics
	Fusiform	Tuna Salmon Trout	Fast swimmer, streamlined, open water fishes
	Compressed	Angelfish Filefish	Not always moving, uses burst of speeds, relatively large eyes
	Depressed	Skates, Rays Flounder	Lives near or on the bottom, appears to glide or “fly”
	Eel-like (anguilliform)	American Eel	Lack pelvic fins, scaleless
	Thread-like (filiform)	Snipe Eel	Long, thin body, moves like a wavy ribbon
	Ribbon-like (taeniform)	Gunnels	Small, elongate, dorsal fin has spines
	Arrow-like (sagittiform)	Gars Pikes	Elongated beak, surface dwellers
	Combination of shapes (globiform)	Frogfish Lumpsuckers	Smooth or warty skin, deep water dwellers, pelvic fins united to make suckers