

Fish Printing

16 Rubber fish molds

33 Brushes

50 Paint cups

Paper and tissue paper

Fish information sheets

Fish Printing

Adapted from the STEP curriculum

Guiding Questions

Fish use their physical characteristics to meet their basic needs for food, oxygen, shelter, protection, and reproduction. By looking at the different types of fish, what can you hypothesize about their adaptations? Do they swim near the top of the water, the middle of the water column, or sit on the bottom? What size food might they eat? Some of these fish have one younger and one older of the same species; can you tell which ones are the same?

Content

External Anatomy

Lateral Line A row of highly sensitive nerves aligned along the center of the body. These nerves help the fish detect water pressure changes and other environmental conditions.

Dorsal fins Can be single or in pairs, and are located on the top and toward the front of the body when seen from the side.

Pectoral fins Found on opposite sides of the fish behind the gill slit or close to them.

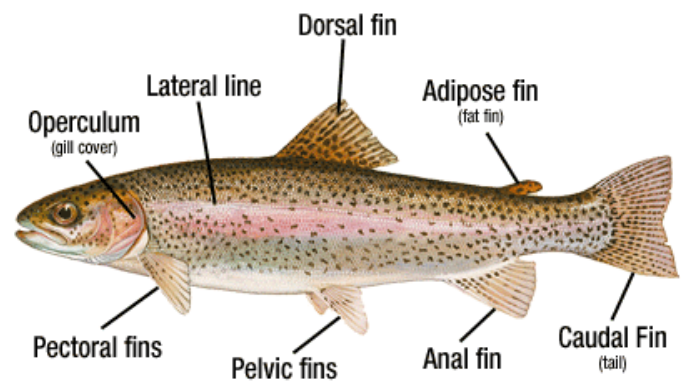
Pelvic fins One or more fins located on the bottom of the fish in between the pectoral and anal fins, when seen from the side.

Anal fin A fin that is positioned very closely to where the tail begins. Not all fish have this fin.

Adipose fin Located between the dorsal and caudal fins of many fish. Much like the appendix in humans, the purpose of the adipose fin is not clear.

Caudal fin The tail fin; located at the end of the fishes body.

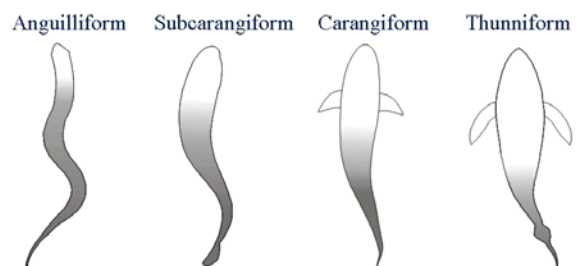
Operculum The flap of skin that covers the gills; it can usually tell you where the head ends and the body begins.



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Fish Locomotion

Different fish swim in different ways. Some swim by only using their fins and some by flexing their bodies and tail back and forth. Some of these fish use more of their tail than others.



Most of these rubber fish use their tails to swim, but there are some exceptions:

1. Skates swim mainly by moving their pectoral fins in a flapping motion.
2. Bluegill in addition to swimming with their tails, use their pectoral fins similarly to how humans use their arms in the breast stroke.
3. Flounders swim by moving their dorsal fin and anal fin in a wave pattern that goes through to the end of the tail. They use their pectoral fin to steer.

Fish Printing

Gyotaku- Pronounced *ghee-oh-tah-koo*, is the art of fish printing that originated in Japan in the 1800's. Gyo meaning 'fish' and Taku meaning 'impression', it was practiced by sportsmen to preserve the 'true' records of their catches. Fish printing became popular in the US in the 1960's.

Set Up

Painting Tables: Cover each table with newspaper or tablecloths and have brushes, paint, tissue paper, paper towels, and smocks on each table.

Printing Table: Cover with newspaper. Fish are moved here before pressing the paper onto them to prevent spilled paint from touching the paper.

1. At the Painting Tables, student paint the fish. The body should be evenly covered, but make sure there isn't too much excess paint because this won't allow the details to show up and might rip the paper. Experiment using different colors for the fins, eyes, and jaws.
2. Once the fish is painted, move it to the Printing Table. Do this by carefully sliding both hands, palms up, under the fish.
3. Choose a piece of paper and write the student's name in the corner.
4. Lower the paper onto the fish parallel to the table holding on to the corners to keep it from sagging. Once the paper makes contact with the fish, the corners should be gently lowered down onto the table. Lightly touch and smooth the paper on to the fish from the center outward to avoid wrinkling. Be careful not to tear the paper.
5. Take one corner near the head of the fish and peel the paper back slowly and steadily being careful not to let it sag or fold in the middle. Let dry.

Extension Activities

We have provided rubber models, but if you'd like to do it the traditional way with a real fish, go for it! You will have to de-slime your fish beforehand by rubbing it from head to tail, same direction as the scales, with lemon juice, and then pat dry.

Use fabric instead of paper to make t-shirts or bandanas with fabric paint.

Make a hanging fish print by folding the top inch of the paper over a clothes hanger and gluing it in place.

Label the prints the class makes with the external anatomy.