



Create Your Own Fish

Morphology and Function

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Salt Dough Recipe

Yield: approximately 2 fish

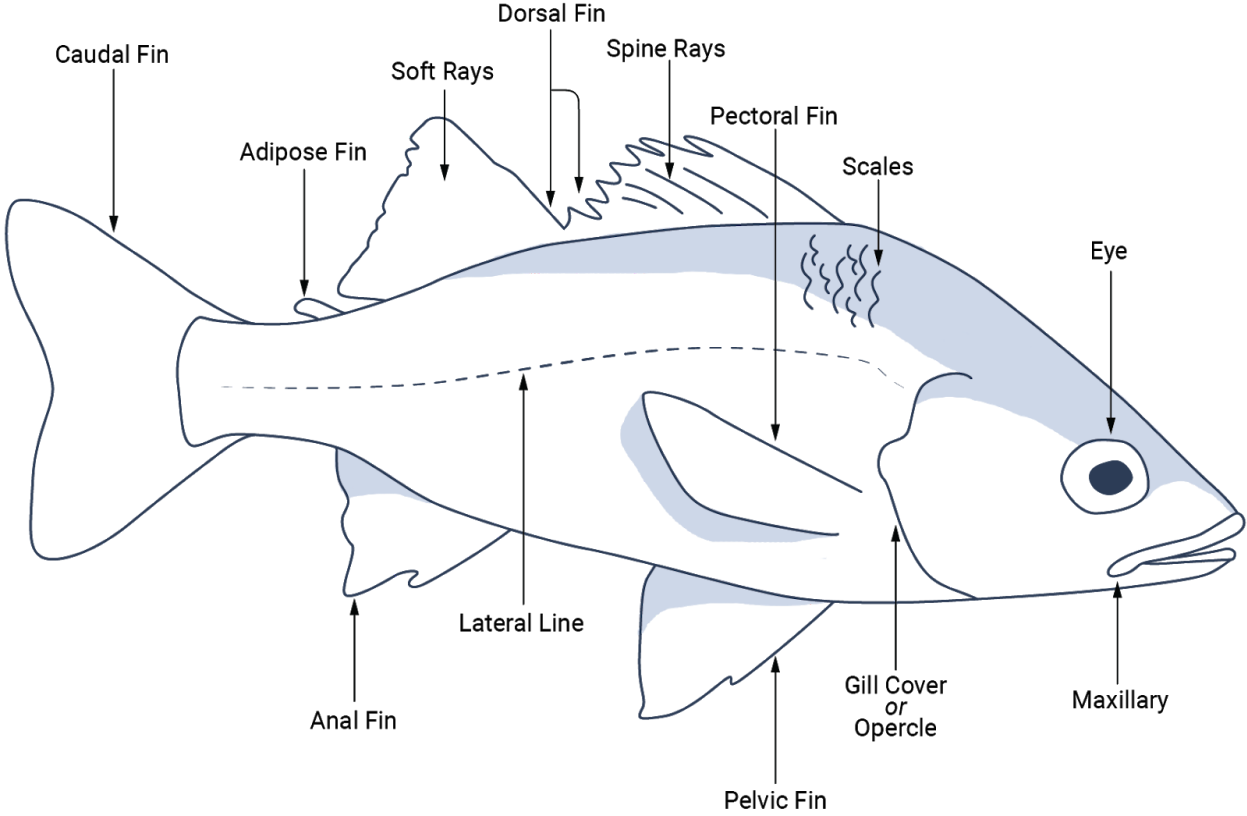
Materials

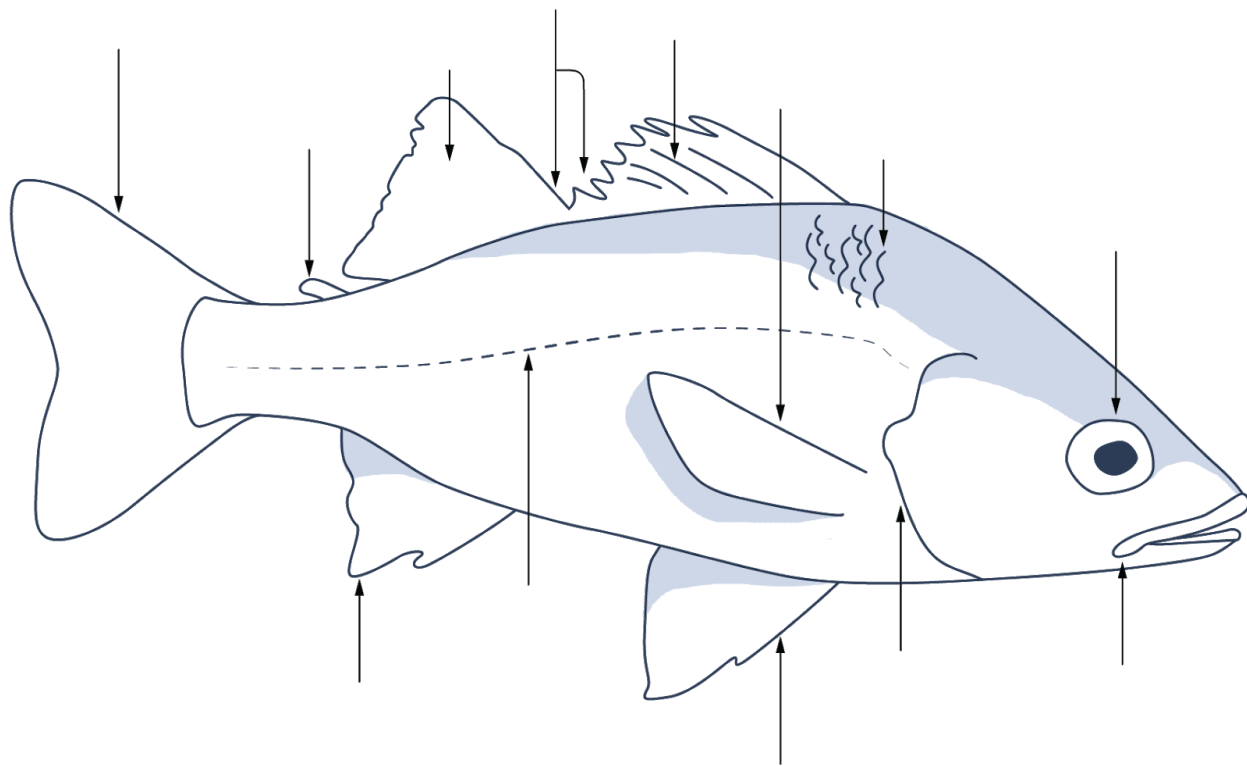
- 1 cup salt
- 2 ½ cups flour
- 1 cup water
- 2 tablespoons vegetable oil

Instructions

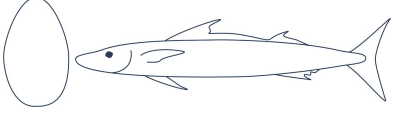

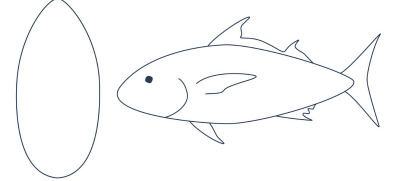

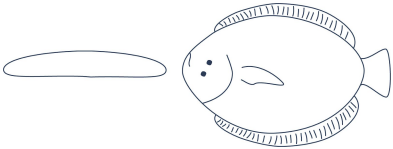

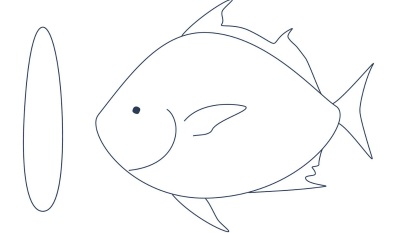

1. Measure out flour and salt into a large mixing bowl.
2. Add water while mixing flour and salt mixture. Feel free to use your hands if you do not have a wooden spoon.
3. When the dough looks crumbly or “shaggy”, add the oil.
4. Knead the dough until it becomes one smooth mass.
5. Wrap the dough in and store in the refrigerator for 30 minutes.

Basic Fish Anatomy

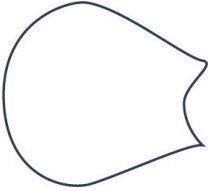

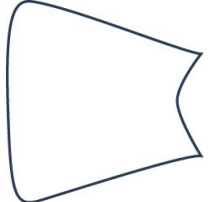

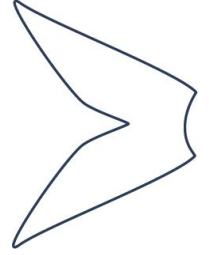







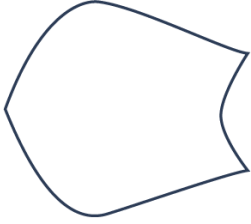
Fish Body Shapes

Description	Adapted Function	Examples
<p>Filiform (eel shape)</p> 	<p>Maneuvering crevasses for slow swimmers that live in soft mud, sand, or under rocks</p>	<p>Eel, Sand Lance</p> 
<p>Fusiform (bullet/torpedo shape)</p> 	<p>Lower resistant friction for fast open water swimmers</p>	<p>Tuna, Salmon, Striped Bass</p> 
<p>Depressiform (flat, top to bottom)</p> 	<p>Lying on or below surface of sediment; usually for predatorial or scavenging purposes</p>	<p>Flounder, stingray</p> 
<p>Compressiform (tall, thin shape and flat side-to-side)</p> 	<p>Entering narrow crevices, live among plants, quick bursts of speed over short distances</p>	<p>Moonfish, butterfly fish</p> 

Caudal (Tail) Fin Shapes

Description	Adapted Function	Example
<p>Rounded</p> 	<p>Large surface area allows sharp turns and quick starts to help fish avoid predators</p>	<p>Clownfish</p> 
<p>Truncate</p> 	<p>Allows short bursts of speed to escape predators or useful for constant slow swimming. Less drag than homocercal-rounded.</p>	<p>Killifish</p> 
<p>Forked</p> 	<p>Allows constant swimming over long distances, reduces drag.</p>	<p>Striped Bass</p> 
<p>Lunate</p> 	<p>Allows for fast speeds, less drag, reduced maneuverability, and great acceleration.</p>	<p>Tuna</p> 

Pointed

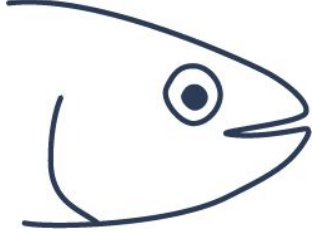

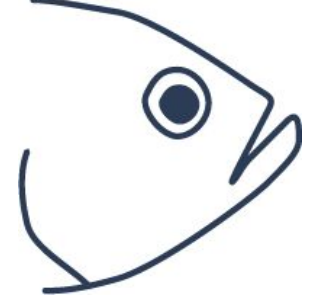

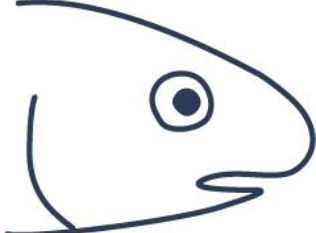

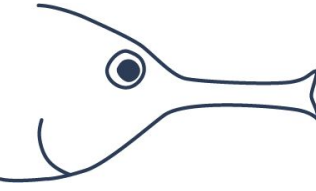



Allows for maneuvering through tight spaces and crevices.

Summer Flounder



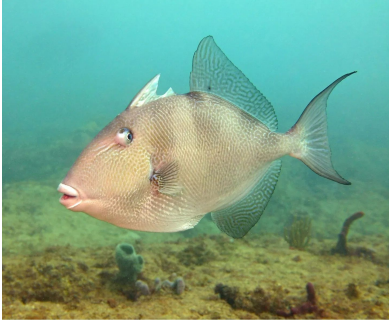




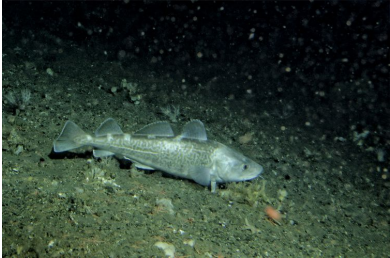
Mouth Shapes

Description	Adapted Function	Example
<p>Terminal</p> 	<p>Generally feed on other fish</p>	<p>Yellowfin Tuna</p> 
<p>Superior</p> 	<p>Generally for ambush predators (well hidden and wait for fish to come close before striking)</p>	<p>Tarpon</p> 
<p>Inferior</p> 	<p>Generally for bottom feeders that feed on crustaceans, shellfish, or detritus</p>	<p>Catfish</p> 
<p>Tubular</p> 	<p>Generally feed on small organisms such as other fish</p>	<p>Seahorse</p> 

Extra Fins: Dorsal Fins





Dorsal fins are on the top of the fish. The main purpose of the dorsal fin is to stabilize the fish against rolling and to assist in turns.



Description of Dorsal Fin	Adapted Function	Example
Spiny and Soft-Rayed	Flares to make fish look bigger and scare predators or attract mates	Yellow Perch 
Tucked	Reduces drag	Pompadour Fish 
Locking Spiny	Locks fish into coral crevices	Ocean Triggerfish 
Very Long	Snake-like locomotion	Moray Eel 




None	Snake-like locomotion	Frilled Shark  A photograph of a frilled shark swimming in clear, shallow water. The shark has a long, slender body with a prominent dorsal fin and a long, pointed snout. Its skin appears to have a wrinkled or frilled texture.
Three	Locomotion	Pacific Cod  A photograph of a Pacific cod resting on a dark, sandy seabed. The fish has a mottled pattern of dark spots on its light-colored body, a large head, and a prominent dorsal fin.

Extra Fins: Paired Fins

Fish can have two sets of paired fins: pectoral and pelvic. Pectoral fins are located on the sides of the fish (similar to human arms, near our own pectoral muscles).

Description	Adapted Function	Example
Fringe-Like	Probing sediment	Fringefin Trevally 
Spiny	Propping up on sediment	Eastern Spiny Gurnard 
Hands-Like	Crawling on sediment	Red handfish 
Wing-Like	Soaring and swimming	Flyingfish 

Normal-Size	Maneuvering	White Perch 
None	Snake-like swimming	Spotted Garden Eel 

Description	Adapted Function	Example
Disruptive Coloration	A type of camouflage that works by breaking up the outline of a fish	<p>Bluestripe Butterflyfish</p> 
Cryptic Coloration	Colors will match surroundings to make fish harder to spot by predators	<p>Southern Flounder</p> 
Countershade	Makes it hard for predators to spot fish based on darker coloring on top and lighter coloring on the bottom	<p>Norwegian Mackerel</p> 
Eyespot	Eyespots can confuse predators which way the fish is facing.	<p>Foureye Butterflyfish</p> 