# Survival of the Fishes

You will make a fish that is adapted to living in salt water. Your fish will have variations on 8 characteristics, listed below. Your job is to design a fish for each environment that has the best chance of surviving.

**Characteristics to control:**
Mouth/teeth – Big, medium, or small mouth and teeth (could have big mouth/small teeth)
Length: Overall size of your fish in cm
Girth: How big around is your fish in cm
Shape: The overall shape (round, oblong, cylindrical)
Color scheme: What color(s) and color pattern is your fish?
Fins: More fins make fish more maneuverable, but also create more drag and visibility to
      predators.
Habitat: Surface, bottom, or middle of the water. Perhaps it moves between all three
Feeding: What does it eat? Smaller fish, carrion, plankton, seaweed, bugs, crustaceans
      or something else?  This should be reflected in its mouth and teeth. Food size
      needs to match mouth size.
Special features: You can choose **one** special feature for your fish, such as glow fish,
      electric eels, puffer fish (poison), ability to jump out of water, able to live in fresh
      or salt water (salmon), vibration detection, or something else.

**Possible hazards:**
Being eaten (predation) by other fish, mammals, birds, or people
Not eating (starvation) from not finding or capturing food, change in food available, out
competed by other fish for available food,
Pollution
Change in water currents
Change in ecology/food chain of area
Change in habitat
Natural disasters, floods, tidal waves, drought
Anything could happen, really. It's life. Survival of the fittest.

**Grading:**
**See Attached Rubric**
Each day one hazard will affect the ocean.  Some fish will live, and some fish will die.
The more days your fish lasts, the more points you get.  There are 20 points possible for
each fish you make.  See the attached rubric.
Fish survives 1 day = 1 point → to get these points you must make a quality fish
Fish survives 2 days= 2 points
Fish survives 3 days = 3 points
Fish survives 4 days = 4 points
One point for every day your fish survives, after the first 4 days.

**Wait, What if my fish doesn't survive!?!**
Natural selection and random chance can seem unfair at times, but that's just how the
cosmic dice roll. You can make up for an early demise in a couple of ways. There will be
bonus points for creative fish designs, and attention to detail. You can also earn points by
making up a realistic scenario that presents a survival challenge for fish in the future.

**Directions:**
Make a fish using **regular sized paper**. Make sure your name and period is on the back. Describe your fish for each of the 8 required characteristics, e.g. Length: 28 cm. Mouth: medium with small teeth. Feeding: Eats plankton and bugs. Get a stamp on this sheet before constructing your fish. You can make changes, but I want to see a plan before work begins. Attach this sheet with a paperclip and put your fish in the ocean. Good Luck!

## Survival of the Fishes Rubric

| Ocean Fish (20 pts Total) | | Descriptions |
|---|---|---|
| **Features (9 pts)** | **Points** | Length / Girth (cm) _____ / _____ |
| Mouth (1pt) | __/1 | Shape _____ |
| Length- must be in cm (1pt) | __/1 | |
| Girth- must be in cm (1pt) | __/1 | Color Scheme _____ |
| Color Scheme (1pt) | __/1 | |
| Fins (1pt) | __/1 | _____ |
| Habitat (1pt) | __/1 | |
| Feeding (1pt) | __/1 | Mouth _____ |
| Special features (2pt) | __/2 | |
| | | _____ |
| **On Time (7pt)** | | |
| On Time (7 pts) | __/7 | Fins _____ |
| 1 Day Late (4pts) | __/7 | |
| More than 1 day late (0pts) | __/7 | _____ |
| | | Habitat _____ |
| **Survival (4pts)** | | |
| Survives 1 Days (1pt) | __/1 | _____ |
| Survives 2 Days (1pt) | __/1 | |
| Survives 3 Days (1pt) | __/1 | Feeding _____ |
| Survives 4 Days (1pt) | __/1 | |
| +1pt for each day past 4 days | +___ | _____ |
| Other Bonus | +___ | |
| | | Special feature _____ |
| Total 20pts | ___/20 | |
| | | _____ |
| | | _____ |

## Get a Stamp When Complete ⬭