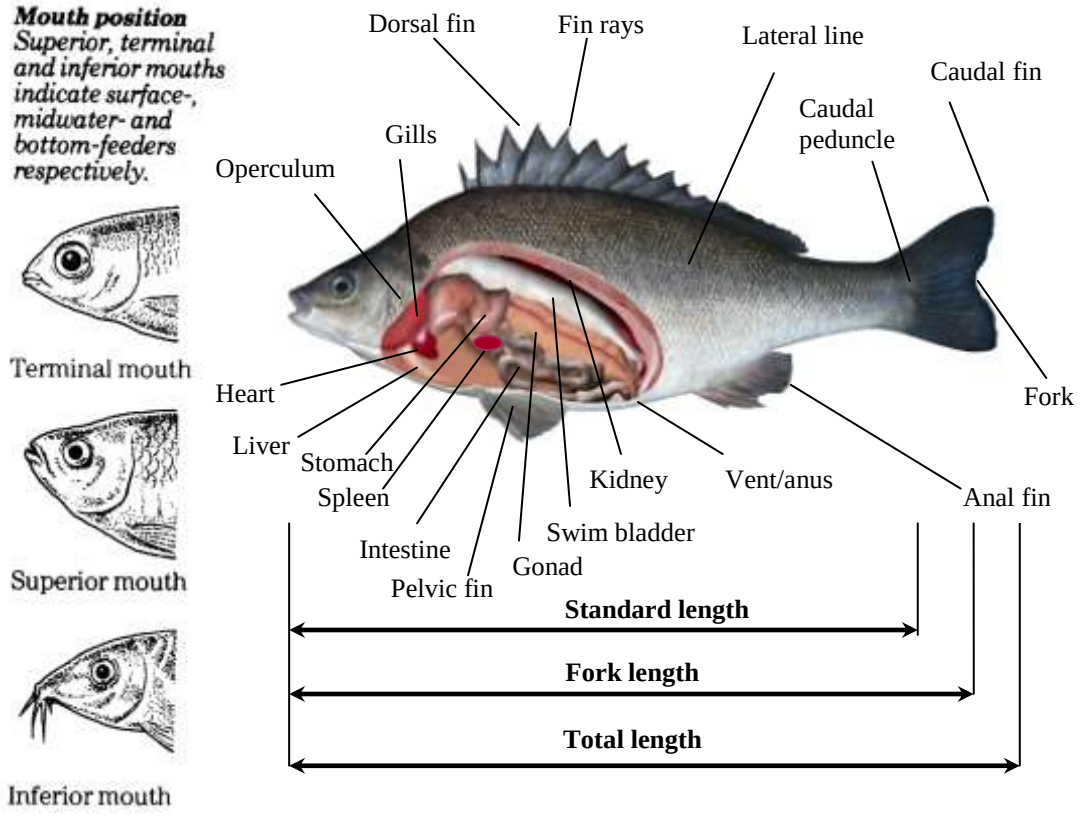
ANATOMY AND FUNCTION

Below is a diagram of various important anatomical features of a fish, using a silver perch as the model. Note the 3 different measurements commonly used for fish. The 'standard length' is from the tip of the snout to the end of the last vertebrae. The 'fork length' is from the tip of the snout to the distal end of the middle, caudal fin ray. The 'total length' is from the tip of the snout to the tip of the tail. 'Standard length' tends to be used with most bony fishes, 'total length' for eel-type fishes and 'fork length' for species where it is difficult to tell where the vertebral column ends. The reason why we do not use 'total length' at all times is because the 'tail length' can vary dramatically within the same species. Take for example the following species – Siamese fighting fish, guppy and swordtails. Moreover, fin damage can also reduce the apparent 'total length' giving the researcher an inconsistent result.



Fishes vary in size (from a few millimetres to a few meters), shape, dietary preferences, water quality parameters and more. To appreciate these differences, we will be taking a dive into the watery wonders of fish folk. This section aims to explore just how much you can tell about a fish by merely looking at it.

Skin & scales

The mucus, skin and scales serve to protect fish from its external environment, function as a sensory organ (tactile and lateral line) and have excretory, respiratory, osmoregulatory and immune functions.