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Southern Bluefin Tuna Dissection Exercise

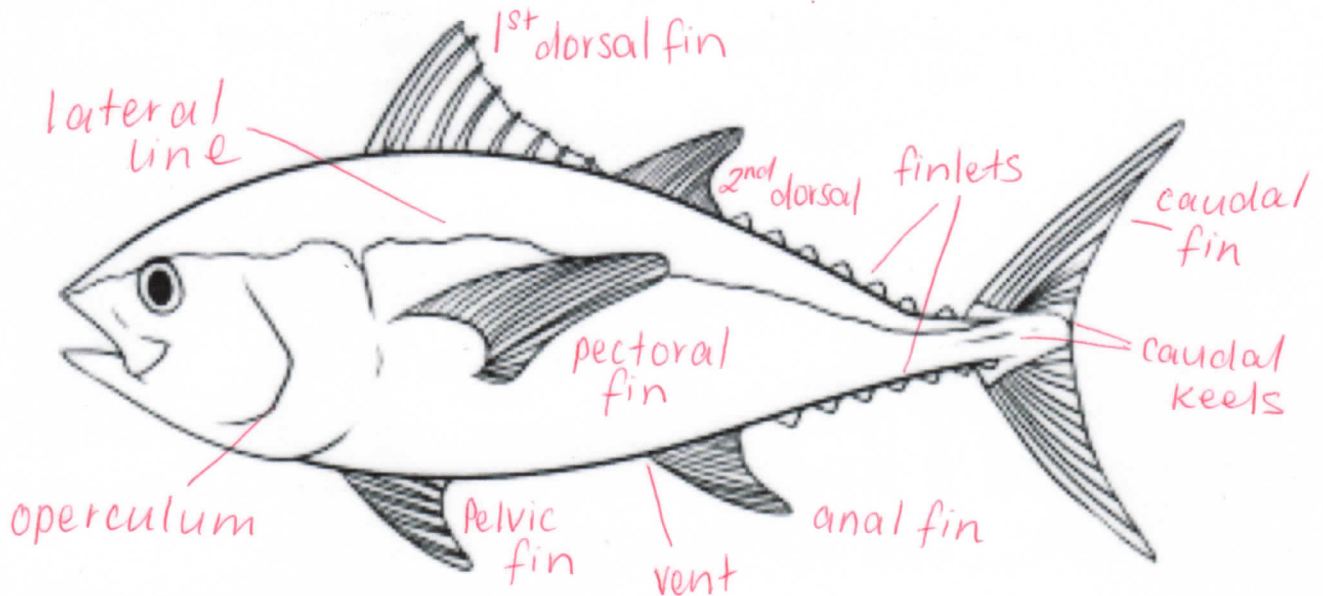
Date: 9 APRIL 2014.

Student:

ANSWER SHEET.

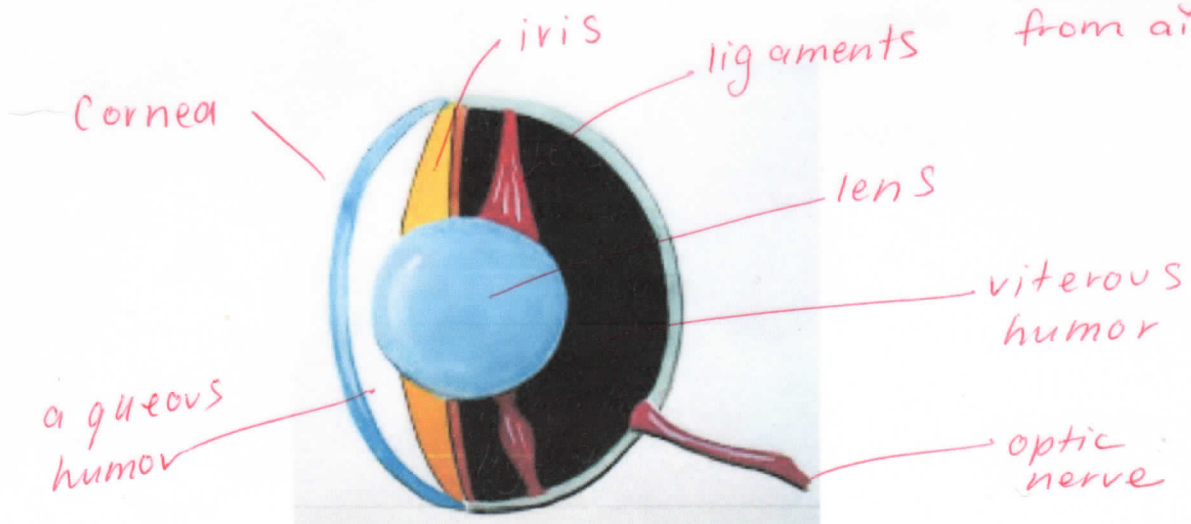
Scientific Name: *Thunnus maccoyii*

Family: Scombridae



1. Observe the external, look for scales, parasites, scarring, note any abnormalities. *small size of scales, any sea lice, possible causes of scarring and abnormalities*
2. Describe the morphology (shape), skin and fins of the fish, caudal keel, lateral line *Body shape fusiform and torpedo like. Fins retract to body for hydrodynamics, keel reduces drag & caudal fin is crescent shaped.*
3. Label the different fins on a tuna on the diagram above. *drag & caudal fin is crescent shaped.*

4. List some words that describe the way this fish moves in the water. *streamlined sleek Thunniform swimming = lateral movement occurs @ tail end of fish w very little bending in body. Tail creates powerful sweeping motion, perfect for distance.*
5. What is the name of the gill covering and how many gills are there? Why are gills red? What are gill rakers and what is their function? *(4) Gills each side. Operculum protects gills and controls water flow. Gills are more efficient @ extracting O₂ from water than lungs are from air.*
6. Examine the tuna's mouth, does it have teeth? If so describe them. *Large, small spikey teeth - villiform Taste buds.*
7. Label the different parts of the eye:



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8. Name 3 functions that may occur at the vent.

- release of (1) eggs (2) milt (3) waste .

9. Briefly explain the functions of each of the SBT internal organs:

a. Liver *Largest organ. maintains levels of chemicals and sugar in the body/blood.*

b. Gall bladder
contains green bile, used to digest fats.

c. Pyloric caeca
absorbs nutrients into the blood. Function similar to small intestine in humans.

d. Spleen
stores blood and recycles red blood cells.

e. Kidney
2 kinds (1) Head - produces blood (2) Tail - cleans blood.

f. Heart
very close to gills. made up of 3 sections (1) bulbous (2) ventricle (3) Atrium.

10. Name a function of the skeletal system.

Like all teleosts, have a flexible backbone, made of a series of inter locking discs. The system supports the (1) muscular system (2) protects the spinal cord (3) protects the internal organs

11. What are the functions of different parts of a fish's brain:

a. Forebrain
SMELL

b. Midbrain
VISION, LEARNING, RESPONSE TO STIMULI

c. Hindbrain
COORDINATES MOVEMENT, MUSCLES & BALANCE

12. Do fish have ears?

yes. inner ear under brain contains otolith.

13) Tuna are endothermic. They can thermoregulate independantly of water temperature.