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**Southern Bluefin Tuna Dissection Exercise**

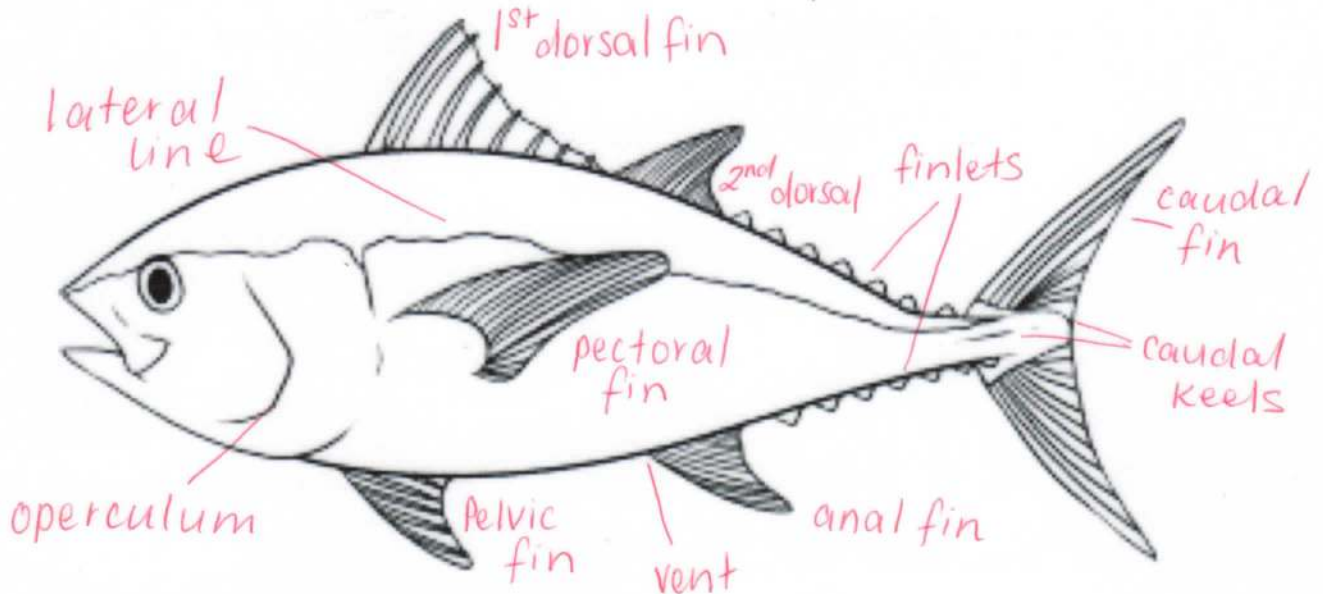
Date: 9 APRIL 2014.

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.

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.*

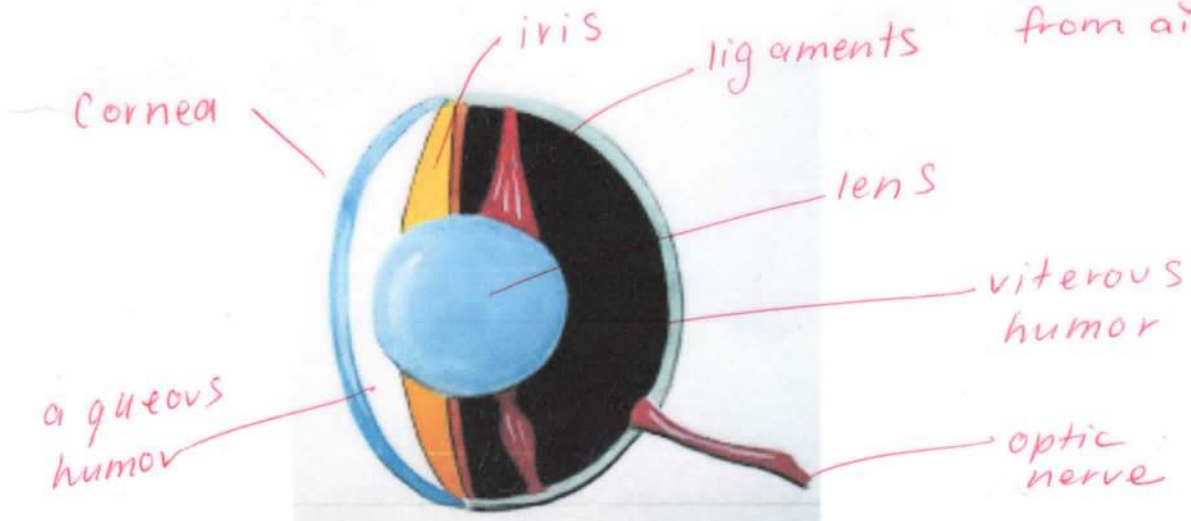
5. What is the name of the gill covering and how many gills are there? Why are gills red? What are gill rakers and what is their function?

*(4) Gills each side. Operculum protects gills and controls water flow. Gills are more efficient @ extracting O<sub>2</sub> 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) Ventrical (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.*