

# FISH LAB

*The objective of this lab is to familiarize yourselves with some local fish, and use a key to identify them. In addition, you will become familiar with the external and internal anatomy and features of your fish, and use your observations to suggest its lifestyle: how and where it lives, what it eats, and how it swims.*

You will be working in pairs, and will need both the **dissecting** and **compound** microscopes.

In addition to answering the questions in your handout, complete the following exercises or questions:

I. Write the 'Formula' for your fish. To do this, you will need to count dorsal spines, soft rays etc. as well as the gill rakers. Use the dissecting microscope for details.

II. Draw your fish and label it's external features.

III. Using the classification examples given to you, answer the following:

What kind of body form does it have?

What kind of tail (caudal fin) does it have?

What kind of mouth does it have?

IV. Internal anatomy: Identify the major internal organs in your fish. Use the drawing provided to help.

Is your fish a male or female? Is it spawning? Is it immature?

What does your fish eat (answer this by attempting to identify the stomach contents, and describe them)? Has it been eating well (lots of fat?)

Does it have a swim bladder? By its shape and presence/lack of a swim bladder, can you guess what kind of lifestyle it might lead (bottom fish, pelagic etc.?)

V. Muscles: Cut into the musculature midway along the body. Are all muscles white or are some red? What is the significance of red or white muscle? What is the ratio of red to white in your fish? What does that tell you about its lifestyle?

VI. Gills: Remove the operculum (gill cover) of your fish and inspect the gills, sketch them, along with the gill raker. Count the gill rakers (use the dissecting scope). Remove a gill filament, make a cross section, and inspect it under the compound microscope. Locate the major vessels carrying blood to and away from the gills.

VII. Using the information you have gathered in lab, suggest your fishes lifestyle: how and where it lives (bottom, open ocean etc., does it hide?), what it eats (herbivore, carnivore, slurper, biter, picker etc.), and how it swims (fast, slow). Use additional paper if needed.

VIII. Now, go to [www.fishbase.org](http://www.fishbase.org) and find out what fish you were looking at.

- Find its common and scientific name
- Description
- Where and how it lives (were you right in your answer to VII above?)
- Is important in fisheries? Is it aquacultured?
- What is its population recovery time/status?
- Method of reproduction
- Other natural history information