

Activity-21: Animals in a Pond (Fauna of a Pond)

Special note to Instructor:

Study of a fresh water pond cannot be accomplished excluding the plant life in it. The flora & Fauna in a freshwater pond are deeply integrated with each other. To fully appreciate the science involved in this activity, repeat this activity after the study of Plant life.

Tasks/Procedure:

Fresh water Ecosystems are a delight to every Biologist. To study a pond a guide is necessary. This guide articulated the various aspects to be involved in the study in the form of a questionnaire and instructions. The questions should be discussed with the students prior to the study.

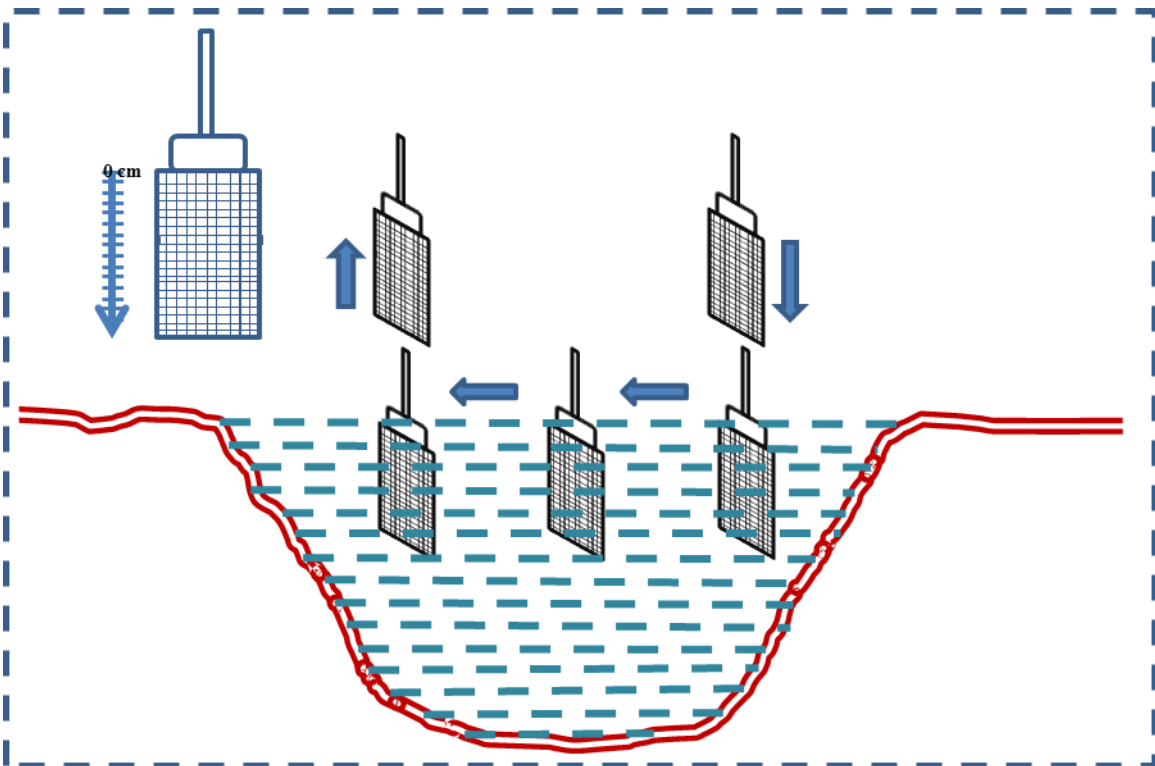
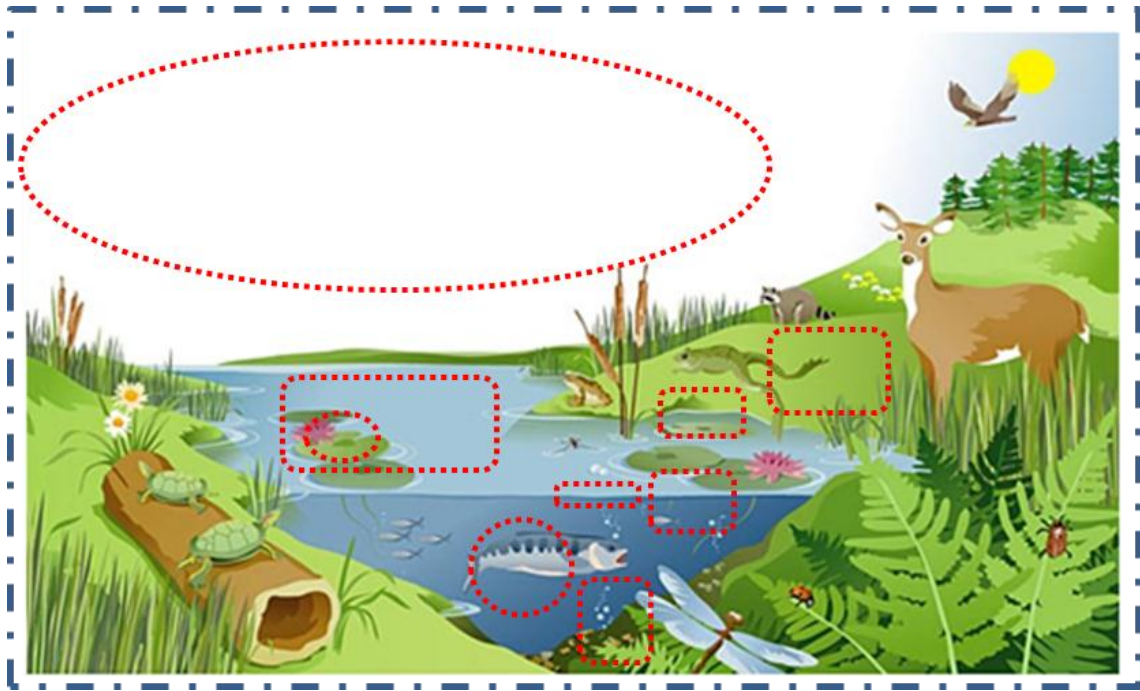
The following instruction-set is useful for studying the fauna of a lake:

1. Choosing a pond/lake for study. The most important factor is that it should be free of domestic wastes contamination.
2. It should be easily accessible.
3. On site work should be carried out with protective wearing like gloves and lab coats.
4. How large is the pond/lake? Estimate or try to measure.
5. Does it smell pungently near the water body?
6. Describe the state of water? Is it clear or murky or greenish or brownish?
7. How deep is the water body? Is the bed visible to the unaided-eye?
8. Is the surface plain or covered with plants?
9. Are there plants growing and floating on the surface?
10. Are there plants growing from the bed to the surface?
11. Are there plants growing from the bed to up above the surface?
12. How does the water body slope to the centre?
13. What is the climate at that place?
14. Do you observe any change in the water body when the climate changes?
15. How many different types of animals do you find on the surface of the water body?
16. How many different types of animals do you find on the surface of the boundary of the water body?
17. How many different types of animals do you find on the plants that are floating on the surface of the water body?
18. How many different types of animals do you find on the plants that

- are growing up above the surface of the water body?
19. How many different types of animals do you find near around the water body and how frequently do they go into the water body or onto the surface of it?
 20. How many different types of animals do you find coming out of the deep waters onto the surface and going back in?
 21. Can group all these animals into categories and estimate a number present in each group?
 22. Do find any domestic animal swimming in the water body or drinking water from it?
 23. Take a large strainer or net. Now dip it very slowly (tip of rim to tip of rim) into the water. Mark the tip that that dips in first. Now very cautiously and very slowly move it/sweep it horizontally in the water body for couple of feet. And lift it off the water in the same way you dipped it.
 24. Place the strainer in a large, dry plastic cover and take back to you class room. Now place the strainer on a large white coloured chart sheet under a bright source of white light. Draw a line parallel to the longitudinal axis of the strainer and start marking in $1/2$ cm units on the line starting at 0 from the end that was dipped in first. With the aid of a magnifying glass (hand lens) observe the different kinds of organism trapped in the strainer. And try to draw the organism shape and try to describe it along with depth (in cm) at which it was trapped. Group these organisms and try to find which group dominates the most and least.

Repeating this whole experiment with strainers of different pore size is critical for meaningful results.

The following diagrams illustrate how a pond should be studied.



Concepts covered:

Early life began in water. A pond is a host to animals and plants of many kinds. Each organism (plant & animal) in a pond is interdependent on each other for their living. This is called an ecosystem.