Pond Dipping

Objectives: Students will learn

- About the variety of plant and animal life found in a pond habitat.
- How and why animals are sorted or classified into groups based on their relatedness.
- The different adaptations in animals and plants which help them to breathe, move, feed and evade enemies in their watery world.
- About the lifecycles of amphibians and insects.
- About basic ecology. That animals and plants are connected by energy flow in food chains and webs

Background: Knowledge about local pond life and pond ecosystem.

Subject: Science

Approach: Observation and research

Material Required: Pond-dipping kit which should include fishing hand net used for fish tanks, 250ml beaker, white enamel tray, blunt forceps, inkdropper, magnifying glass, paper, pencil and a key for identification.

Method:

1. Select a water body that is to be studied.

2. Divide the class into groups of five and provide each group with a white tray and a net.

3. Ask the students to stand at the edge of the water body in such a way that water does not get disturbed. Let them bend and put the net inside the water until it touches the bottom.

4. Ask them to move the net inside the water from right to left once and immediately remove it out of water. The net will be filled with a number of small pebbles and stones along with the soil. Throw the stones and pebbles back in water and let them place the remaining matter on the white tray.

5. Ask them to repeat this process for two times.

6. Then let them keep the net aside, take some water, and put it in the tray which is holding the collected matter.

7. Give hem an empty, clean beaker half filled with clear water.

8. Using forceps let them separate the insects or whichever animal is seen from the tray and put them inside the beaker.

9. Once they are separate, using a magnifying glass ask them to observe the structure of the animal that is present inside the water, find out the different body parts and try to note it down on the piece of paper.

10. If possible, you can also ask them to sketch a rough drawing of the same.

11. Now let them take the identification key, which gives the details of the animal body parts and discover the name of the animal that they have found!

12. They can use a microscope to see the microscopic animals in the water.

13. Once the study is over, see to it that they do not kill the animals and release them back in to the water because that is where they belong.

Besides knowing the pond life, they can also study how polluted the water is. The reference table below gives the degree of pollution present in the water in relation to the animals found in it.

Name of animals	Level of pollution
Mayfly larva, stonefly larva	No pollution
Caddisfly larva, freshwater shrimp	Slight pollution
Water louse, bloodworm	Medium pollution
Sludge worm, rat-tailed maggot	High pollution
No life found	Very High pollution