

APPENDIX 1 THE READING PASSAGE

THE ECOLOGY OF A POND ¹⁾

Ecology helps us understand how each form of life affects and is affected by other living things and how all, in turn, are affected by their environment. This is an important subject. Thus if we talk about the ecology of a pond, essentially we talk about the inter-relationships of living things found in the pond. In other words, we talk about the pond as an eco-system.

There are various living things in a man-made fish pond or a natural one. All of them can be grouped into three main types: plants, bacteria, and animals. Water lilies and pondweed are often found in ponds, together with numerous algae. Animals include fish, frogs, snails and various insects.

One inter-relationship between the plants and the animals in the pond concerns the supply of oxygen and carbon-dioxide. Animals need the oxygen, which plants help to provide. Thus the animals in the pond

¹ Alex H. Rambadeta dan Istiati Sutomo, "Ecology of A Pond," Bahasa Inggris 3 a Untuk SMA: Program Ilmu-ilmu Sosial dan Ilmu-ilmu Budaya, Departemen Pendidikan dan Kebudayaan, 1988, pp. 35-37.

use the oxygen provided by the water lilies and pondweed. In return the fish and other animals in the pond give off carbon-dioxide, which is then taken by the water lilies and pondweed.

Another inter-relationship of these living things concerns the food supply: what eats what. Let us begin with the plants. Plants are unique among living things in that they manufacture their own food, which they do with the help of sunlight. Some small insects, or their larvae, eat algae. Mosquito larvae, for example feed on algae. In turn, bigger insects eat the mosquito larvae or other smaller insects, and in turn, too, the bigger insects are eaten by fish or frogs. Some fish also feed directly on larvae.

How about the water lilies and the pondweed? Certain insects eat the leaves of the water lilies, but by and large the leaves serve as a 'grazing' place for small water insects. These small water insects are either eaten by bigger insects or directly by fish. Fish also eat snails which in turn feed on water-pond leaves. Fish also eat other fish; the bigger ones eat the smaller ones.

Where do bacteria fit to the system? Bacteria do not eat plants or animals directly. They decay dead plants and dead animals, so that the dead plants and

animals decompose into, among other things, nitrogen compounds. The nitrogen compounds enter the pond soil, where the roots of the water lilies and pondweed take them as the material for food. Incidentally, the animals in the pond also directly provide the plants with nitrogen compounds in the form of waste which the animals excrete.

APPENDIX 2 THE TASK SHEET

TASK 2.

Answer the following questions:

1. Why are plants considered unique?
2. Insects which feed on mosquito larvae and smaller insects are themselves eaten by two animals. The two animals are: _____
3. The leaves of the water lilies serve as a 'grazing' place for small water insects.
What do you think the small water insects look for there?
4. What is the function of the bacteria in the pond?
5. What is the other source of nitrogen compound?

TASK 3

Read the text carefully and fill in/label this diagram

