

**Activity title .....**

**Work Sheet 1: Ecosystem**

**Name :** ..... **Date:** .....

**A. Useful Knowledge**

**Ecosystem:** it is a system that includes the biotic factors of the area that is the sum of the living things and the abiotic factors, which are the total of the non-living factors and their interrelation. The boundary limits of an ecosystem are determined by the researcher that studies it.

**Biotic factors:** **a) The producers** are the organisms that convert energy into food by photosynthesis (e.g. plants), **b) the consumers** that are fed with other organisms ( e.g. animals) and **c) the decomposers** that find their food by breaking down dead organical sources like leaves on the ground, branches, corpses of animals. Bacteria and fungi also belong to decomposers.

**Abiotic factors:** they determine the variety of the biotic factors and the function of the ecosystem. For instance, the availability of water sets both the range of the herbal species and thus the variety of the animal species in an ecosystem.

**Population:** the total of the individuals of a species that lives in the area.

**Species :** the amount of the individuals that can be reproduced and bear fertile offsprings.

**B. Define some biotic and abiotic factors during you walk through the path and fill them in under the correct category.**

No	Biotic	Abiotic	Don' t Know

table 1. biotic and abiotic factors of an ecosystem

**Г. Choose the biotic factors from the above table and fill them in under the correct category.**

No	producers	consumers	decomposers

table 2. biotic factors of an ecosystem

Activity title .....

## Work Sheet 2 : Plants

Name : ..... Date : .....

### A. Useful Knowledge

A kind of plants is the **TRACHEOPHYTA**, with the common characteristic of the presence of vessels for the transport of nutritional ingredients to the various parts of the plant. They consist of organs that fulfill certain functions.

**LEAVES** : organs on which photosynthesis takes place. They also contribute to the release of useless ingredients and the transpiration.

**ROOT**: absorbs the nutritional ingredients from the ground.

**SPROUT** : transfers nutritional ingredients from and to the leaves and roots and saves them.

### The Tracheophyta are seen in three big categories:

**A. Pteridophyta** : e.g. fern.

**B. Gymnosperma** : e.g. coniferous trees

**Γ. Angiosperma** : all the plants their germs of which are protected in ovary.

### The plants depending on the figure of the sprout are defined in :

**A. Trees** : have strong and long trunk and they are perennial plants.

**B. Bushes** : have strong and sort trunk and they can be annual or perennial plants.

**Γ. Herbs** : have soft sprout and are usually annual.

### Trees depending on whether they throw all their leaves or not set in:

**Φυλλοβόλα** : throw all their leaves throughout the year.

**Αειθαλή** : keep their leaves throughout the year.

**B. Follow the path, collect the leaves and the seeds of plants and complete the following table :**

No	Tracheophyta			FIGURE OF PLANT			Deciduous	Eternal
	PTERIDOPHITA	GYMNOSPERMA	ANGIOSPERMA	TREE	BUSH	HERB		

Table 3. Producers of an ecosystem





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Activity title .....

**Work Sheet 5 : Food relations of an ecosystem**

Name : ..... Date : .....

**A. Usefull Knowledge**

The food relations that are developed among the organism of an ecosystem are **qualitative and quantitative**. The qualitative ( who eats whom ) are depicted in the **food chains and the food weds**, while the quantitative are show in **food pyramids..**

The food webs consist a complicated wed that depicts a total of food relations among organism whereas the food chains are part of food web and show the exclusive relations between the consumer and the consumed.

Food pyramids consist of food levels and can be of Energy, Biomass, Population.

**B. Make a food web that shows the food relations among the organisms of an ecosystem by using the information from the tables 3,4,& 5. In the bottom line of the web write the producers of the ecosystem and display the flow of energy with arrows.**

Table 6. Food web

**C. In every ecosystem there are decomposers. Report a reason why they are considered to be essential for the preservation of an ecosystem and life on the planet.**

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