



Conservation

MODULE 2

Plants grow

TIME

2 hours

MATERIAL

Science notebook
Pens
Photocopies of sheet C4

SKILLS

Observation
Discussion
Critical reasoning

KEYWORDS

Habitat
Environmental factors

CROSS-CURRICULAR

ACTIVITY

Literacy
Scientific literacy
Report writing (science notebook)

Overview

This module encourages children to observe the environment and factors that affect the growth and survival of plants.

Children will revise their understanding of basic environmental factors that plants need to grow and survive.

They need to understand this module before they go to the Botanic Garden to look at the process of extinction. This module is designed to be carried out outdoors, possibly close to the school or where children live so they will be stimulated to focus on local species.

This module provides a basis for subsequent modules.

Aims

To raise awareness of the many factors that influence plant survival.

To promote understanding of the key environmental factors that influence plant survival (cause-effect relationship).

Teaching sequence

1. Children observe 3 different habitats e.g. woodland, grassland and wetland. They then observe whether the plants growing in different habitats are the same or not, and write their observations in their science notebooks. They also make a note of the availability of different resources, e.g. light, water, soil.
2. Discuss with the children what they have seen in each habitat and how they will describe the conditions they have observed.
3. In groups of 3-4 the children investigate a specific factor e.g. light, water, soil, and analyse the differences in each of the habitats under investigation.
4. They share their conclusions with the class. The teacher chooses a plant from each habitat and starts a discussion about the factors that influence plant growth. Ask the children why they think a plant grows in a particular habitat. Ask them to discuss how they would cultivate the same plant in their own garden i.e. what specific conditions would they provide? Children then discuss and decide on the conditions that would best suit the survival of each of these plants.
5. Class plenary; recap on the basic environmental factors that plants need to grow and survive. Hand out sheet C4 (2 pages) to the groups. Children need to discuss what is in the drawing and write down their observations.
6. Some reference to photosynthesis might be made here (see modules in Experiments about plant growth).

Teachers' notes

The following is a list of the most common species that children might investigate in 3 possible habitats. Pictures of the following plants can be seen in Media Gallery Conservation M2 Woodland, Grassland and Wetland plants:



- Woodland: *Anemone nemorosa*, *Crataegus monogyna*, *Rubus fruticosus*, *Clematis vitalba*
- Grassland: *Bellis perennis*, *Ajuga reptans*, *Plantago lanceolata*, *Trifolium pratense*
- Wetland: *Iris pseudoacorus*, *Carex* sp., *Caltha palustris*, *Typha latifolia*

During this activity encourage children to write down everything that they observe outdoors, or that they think is important, in their science notebooks.

Extention activity

Try the experiments as pictured on sheet C4, where you take 3 similar plants and remove the parts shown. Ask the children to observe what happens after 1 and 2 weeks. Consider and discuss the ethics of killing plants.

Growing factories

1. Look at the 2 pictures and answer the following questions:



Before



After

2. What has happened to the plant?

3. Why do you think this might have happened? List some ideas:

4. Picture 1 shows the whole plant, the other pictures show experiments in which some part of the plant is removed



1



2



3



4

Picture 2: What happens if the leaves are removed? Tick the box you think is correct.

- The plant dies
 - The plant continues to live
 - The plant flowers
 - Any other ideas
-

Picture 3: What happens if the roots are removed? Tick the box you think is correct

- The plant dies
 - The plant continues to live
 - The plant flowers
 - Any other ideas
-

Picture 4: What happens if the flowers are removed? Tick the box you think is correct

- The plant dies
 - The plant continues to live
 - The plant flowers
 - Any other ideas
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 Today I learned
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