



Expected prior learning

- Identify and name a variety of common plants including deciduous and evergreen trees.
- Identify and describe the basic structure of a variety of common flowering plants, including trees.
- Describe how seeds and bulbs grow and develop into mature plants.
- Describe how plants need water, light and a suitable temperature to grow and stay healthy.



Overview of progression

In this chapter children will learn about:

- the functions of different parts of plants, including the roots, stem/trunk, leaves and flowers
- the requirements of different plants for life and growth and how this varies from plant to plant
- how water is transported within plants
- the role of flowers in the life cycle of flowering plants.



Creative context

- This chapter provides opportunities for children to use different media to communicate their findings.



Background knowledge

Roots are vital to the well-being of a plant; they perform two very important functions in the plant. Roots supply water to the plant. If a plant becomes short of water it will eventually wilt and die. The roots of a plant draw up water and minerals from the ground. These are transported from the roots to the leaves, where photosynthesis happens. The plant also loses water as it evaporates into the air from the leaves and flowers. This water loss is called transpiration.

The root system also acts as an anchor to hold the plant in place. Without a well-established root system the plant would move about and become loose; it could even fall over and die. The root system often spreads out as far as the branches above ground. The roots of some larger plants and trees are very strong and can cause structural damage if allowed to develop near buildings.



Speaking scientifically

Children should be familiar with the terms: air, light, nutrient, water, starvation, anchor, root, evergreen, deciduous, leaf, soil, compost, fair test, plant, stem, trunk, flower, function, pollen, pollination, pollinator, transfer, nectar, stigma, petal, anther, seed dispersal, wind dispersal, animal dispersal, life cycle, compare, exploration, seedling, evaporation, investigation, observation and prediction.



Preparation

You will need to provide: art materials; flipchart; seeds; seedlings; various flowers, fruits, plants and plant parts; containers; shallow trays; beakers; cling film; plastic bags and ties; measuring cylinders; composts; soil samples; fruits; celery; food colouring; sticky labels; pictures of plants and overgrown gardens; art materials; secondary sources of information; clipboards; cardboard petals; woolly hats, socks and jumper; ping-pong balls; Velcro; bottles of juice; jar of honey; knives, bowls and spoons; sticky tape; pictures from the work of Maria Sibylla Merian; hoops; digital cameras and cameras; hand lenses; laptops; digital microscopes; wild flower identification charts; plan/map of the area around school; large diagram of parts of a plant

On the CD-ROM you will find: photocopiable pages 'Looking at climates' and 'Plant assessment'; interactive activities 'Plant parts'; 'Which parts do we eat?', 'Root, stem, and leaves' and 'Life cycles'