



## Year 2 Science Knowledge Organiser: (Plants)



### Subject Specific Skills

- I can observe and describe how seeds and bulbs grow into mature plants
- I can find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.

### Prior Learning

- Identify and name a variety of common wild and garden plants, including deciduous and evergreen trees
- Identify and describe the basic structure of a variety of common flowering plants, including trees.

### Key Knowledge:

- The three most important things that plants need to stay healthy are **sunlight**, **water** and **carbon dioxide**. Sunlight provides the energy needed for photosynthesis, whereby the plant converts carbon dioxide and water into glucose.
- It is possible to grow plants without soil, as long as their roots are in water that is rich in minerals and nutrients. This is called **hydroponics**. Many industrial greenhouses use this method, and it has even been used to grow plants in space on the International Space Station!
- Seeds and bulbs need water to grow but most do not need light; seeds and bulbs have a store of food inside them.

### Key Vocabulary

**Root** – The part of the plant that keeps it in the ground. The roots absorb water and nutrients from the soil.

**Stem** – The part of the plant that can be seen above ground. The stem is responsible for moving water and minerals from the roots to the leaves and flowers.

**Flower** – The part of the plant that is responsible for reproduction. The main structures of a flower are the petals, stamens, carpels and sepals.

**Leaf** – The part of the plant that makes food.

### Key Individual: Peter Raven



### Key Knowledge:

- Many children think that plants get their food from the soil. This may stem from the fact that we often talk about fertiliser as “plant food”. It’s true that plants need chemicals and minerals from the soil in order to make proteins and chlorophyll, but these are not “food” in the scientific sense of the word. A food is something that supplies a living thing with energy; for plants, this is glucose, which they make through photosynthesis. However, the everyday use the word “food” can simply mean anything that a living thing takes in to give it nourishment. In this sense, it could be said that plants get some of their food from the soil.
- Young children often think that all plants have colourful flowers, green leaves and a stem. Some may also think of the flower as being the whole plant. There are many plants that children might not immediately think of as plants, such as mosses and ferns. A weed is simply any plant that is not wanted in a particular situation – for instance, a dandelion growing in the middle of a lawn.
- Children should be able to name a variety of different plants, starting with common trees and flowers found around the school and local area. Children might already know some by their common names (e.g. conker tree) so start with those names and then introduce proper names (e.g. horse chestnut).