

### Substantive Knowledge

Plants do not eat food so have to make their

This food provides them with energy and materi-

To make the food (sugar) plants need water from the ground, **carbon dioxide** from the air and light from the sun. The water is taken up through the **roots** from the **soil**. The carbon dioxide is taken in through the **leaves**.

As well as food, plants also make **oxygen** which

### Disciplinary Knowledge

Gathering, recording, classifying and presenting data in a variety of ways to help in answering



Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts



Setting up simple practical enquiries, comparative and fair tests.



### Significant Scientists

**Ahmed Mumin Warfa**  
(1948-2021)



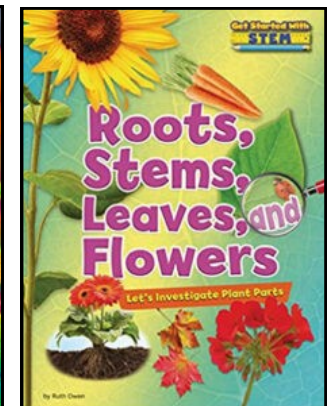
Ahmed Mumin Warfa was a Somali scientist who specialised in botany. He was an expert in plant science and taught biology and agriculture at the Somali Nations university. With colleagues, he discovered several species of plants.

**Maria Sibylla Merian**  
(1647-1717)



Maria Sibylla Merian was a German-born naturalist and nature artist known for her illustrations of insects and plants. While her chief interest lied in entomology (scientific study of insects), she also identified many of the plant species that were essential to insects as food and habitat.

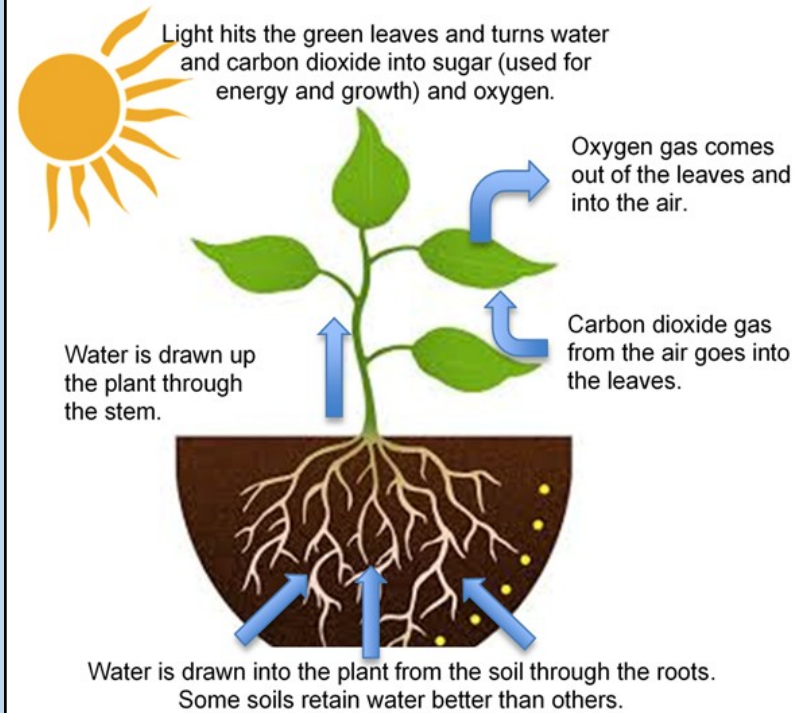
### Interesting Books



### Key Vocabulary

carbon dioxide	A colourless and odourless gas found in the air (0.04%) made up of carbon and oxygen.
oxygen	A colourless and odourless gas found in the air (21%).
roots	An organ of a plant that provides anchorage and absorbs water and nutrients from the soil.
soil	A mixture of minerals and organic matter.
leaves	An organ of a plant that are green in colour and absorb carbon dioxide from the air as well as sunlight.

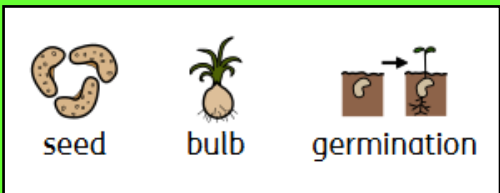
### Plant Food Production



### Prior Knowledge



To survive plants, need to get water, light, the right temperature and to avoid being eaten.



A seed contains a miniature plant that can develop into a full grown plant.

