

## CONCEPTUALYZE

### Big Ideas Exercise Factsheet

#### What do Plants Need to Grow?

Like humans and animals, plants need both water and minerals to survive. Water is normally taken up through the roots from the soil through a process known as osmosis. This water also contains dissolved minerals that the plant absorbs at the same time. This is why it's important to water plants when the soil becomes dry.

What helps plants grow besides water and minerals? Plants need food to grow. Plants make their own food through a process called photosynthesis. For photosynthesis to occur, the plant must have sunlight, carbon dioxide and water. This is why plants that have too little light grow to be weak and leggy looking. They will also have fewer flowers and fruits. The process of photosynthesis produces oxygen.

Plants also need to breathe in order to live and grow. This process is called respiration. Just like you and me, plants need to breathe in oxygen and breathe out carbon dioxide. Oxygen and carbon dioxide move in and out of the plant through tiny holes in the leaves called stoma.

Healthy soil is extremely vital to plants. In addition to essential minerals found in soil (from organic matter and micro-organisms), soil provides an anchor for plant roots and helps support the plants.