

# Organisms

## 2. Cells

### CONCEPT 3

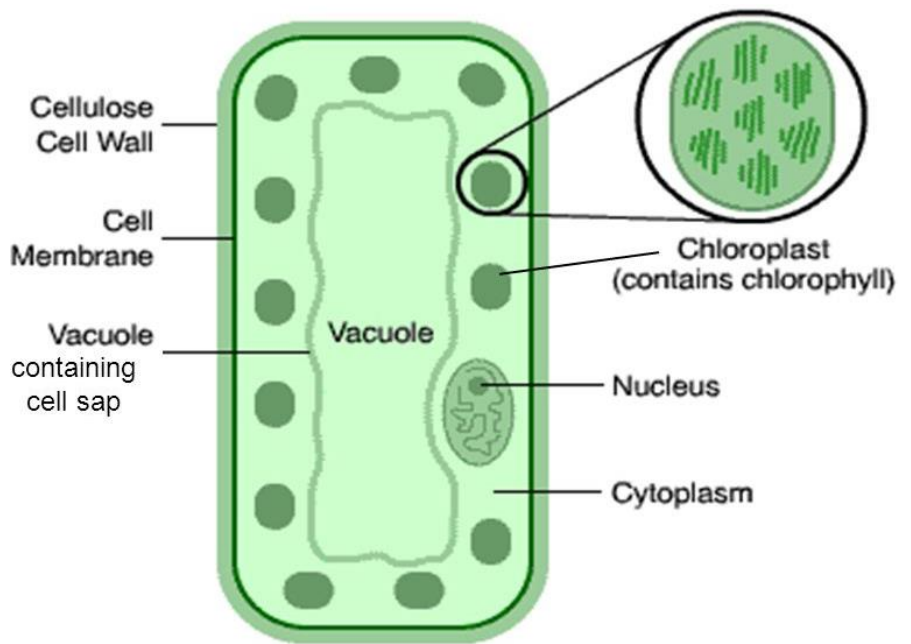
### LESSON GUIDE

## SPECIALISED PLANT CELLS

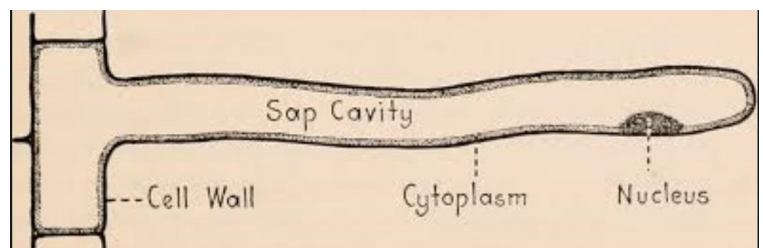
### NOTES

Plant cells are also highly specialised to carry out specific functions.

**Palisade cells** are specialised to help plants to carry out photosynthesis. For glucose (sugar) to be produced, plants need to collect light and water, as well as taken in carbon dioxide. Palisade cells have a large surface area to catch as much sunlight as possible and are packed with chloroplasts to absorb sunlight.



**Root hair cells** are specialised to absorb water and minerals from the soil using their long, thin extension. This root hair provides a large surface area and thin cell wall to allow water to be absorbed easily into the roots. Unlike palisade cells, these cells do not require chloroplasts.



**Guard cells** are specialised cells, which allow carbon dioxide into the leaf. These cells are able to change shape to open and close the stoma, the pore that allows gases to move into the leaf. This pore lets the oxygen made during photosynthesis to leave the leaf easily.

