

## PLANTS (teacher's notes)

### STEMS

#### About stems:

- There are different stems such as:
  - Runners or stolons: They are long side shoots such as the ones we find in strawberry plants.
  - Bulbs: They are short and thick stems that grow underground and have swollen leaves around them such as the ones we find in tulips, garlic or onions. Every garlic clove is a swollen leaf and every onion layer is a leaf too.
  - Tubers: They are swollen stems that grow underground such as potatoes.
  - Rhizomes: They are thick stems that grow underground in a horizontal way.
  - Corms:
  - Water-storing stems: They are soft and thick stems that store water such as those in cacti.
- In the web page below you will find photographs and explanations.

<http://www.backyardnature.net/stemtype.htm>

#### Activity 4: How do stems carry water and food?

A) Use the picture in:

[http://www.usborne-quicklinks.com/uk/uk\\_entity\\_pages/uk\\_download\\_image.asp?lib=683&linkid=430164](http://www.usborne-quicklinks.com/uk/uk_entity_pages/uk_download_image.asp?lib=683&linkid=430164)

B) Ask questions to guide the pupils to learn that...

- The xylem (pink in the drawing) is the vascular tissue that carries water **up** the plant from the roots.
- The phloem (violet in the drawing) is the vascular tissue that carries the food dissolved in water to all parts of the plant. Help the pupils realize that they have sieve plates across the tubes with small holes.

Xylem tubes and phloem tubes are different.