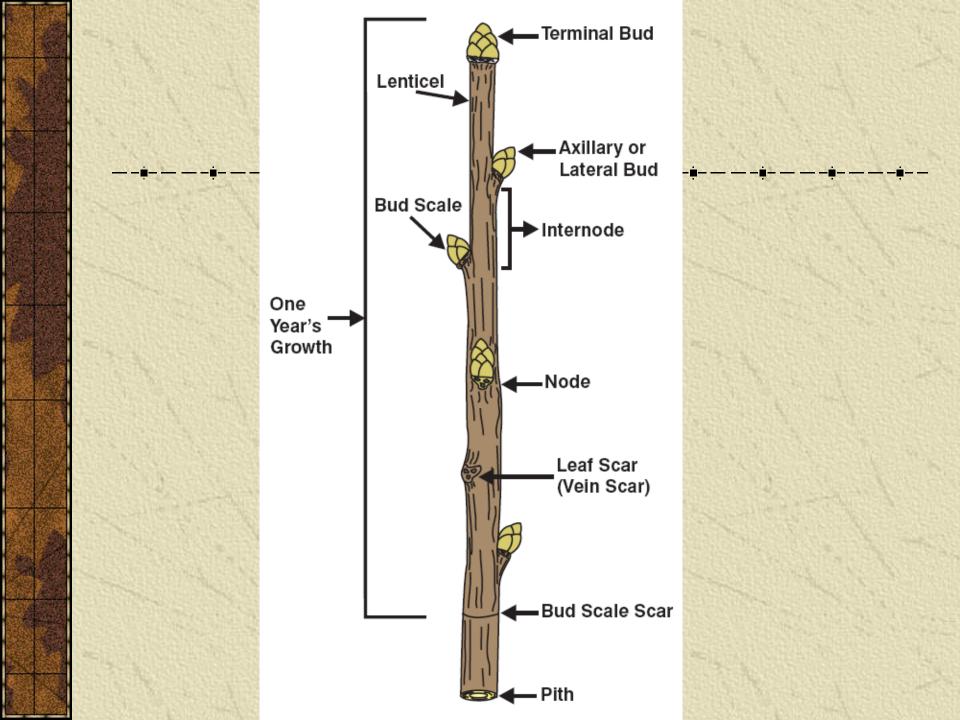
#### Stems

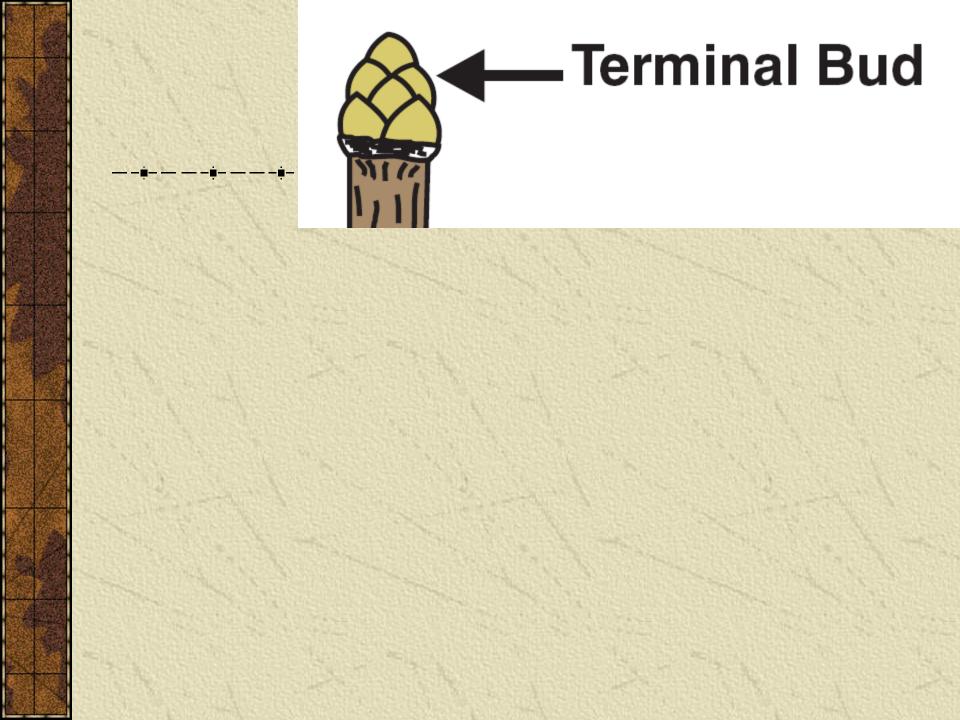
Introduction to Horticulture

# Stems Growth of stems increase plant AND

#### **Stem Functions**

- 1. Conducts water and minerals from soil to leaves
- 2. Conducts manufactured food from leaves to other plant parts
- 3. Produces leaves and displays them to light
- 4. Supports leaves, flowers and fruit
- 5. Stores food reserves in some plants—potato, asparagus, cabbage hearts, etc.

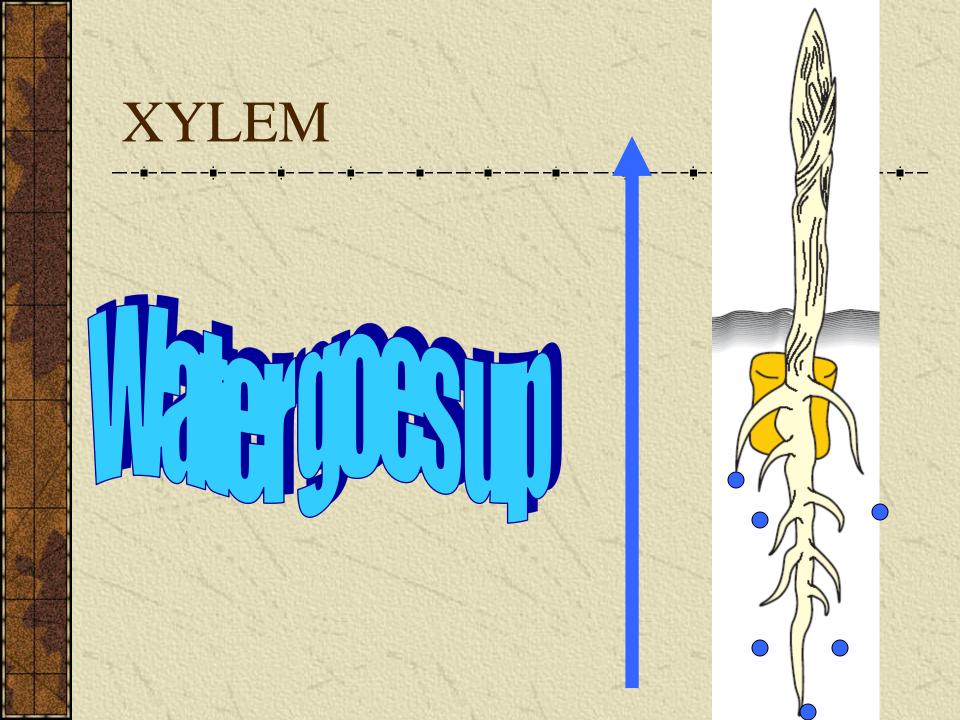


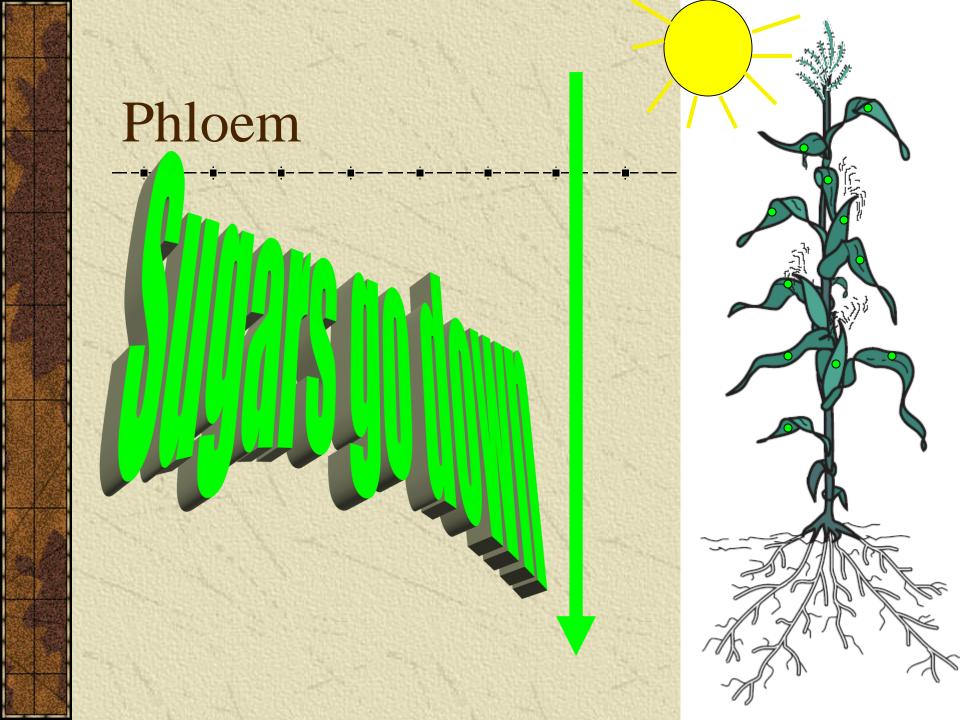


## Inside the Stem

Xylem

Phloem





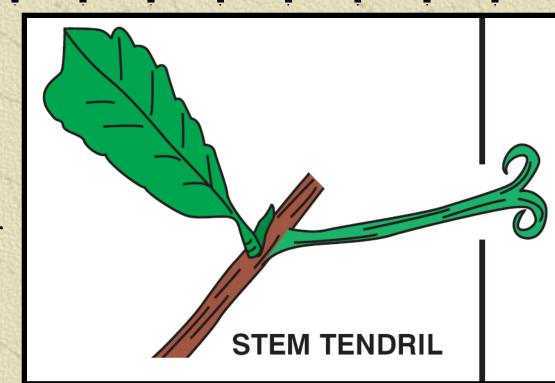
# Examples of Stems

#### Tendril

Is a threadlike leafless growth on a stem that attaches itself around other stems and objects.

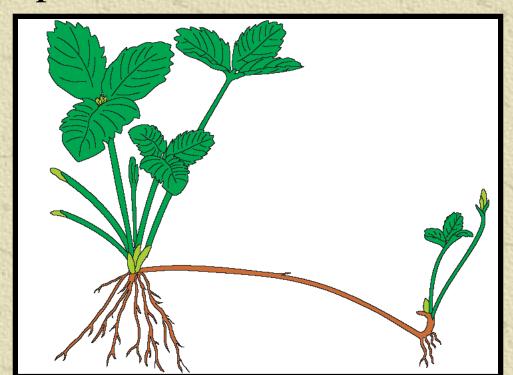
Tendrils typically grow in a spiral shape. After attaching itself, it holds the stem in position.

Vines and climbing plants often have tendrils. -examples include sweet peas and cucumbers.



#### Stolon

Is an above ground stem that grows horizontally and propagates new plants. - examples include strawberries



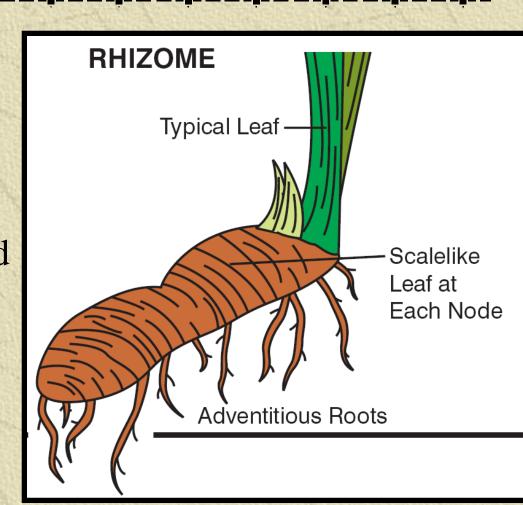
#### **Modified Stems**

Not all stems grow above ground

#### Rhizome

An underground stem that grows horizontally.

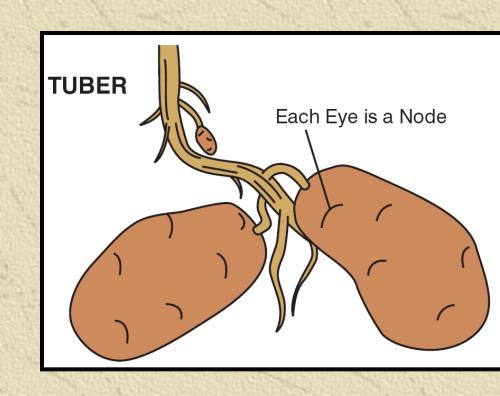
It may grow adventitious roots and stems to develop as a separate plant. - examples include iris and wild ginger.



#### Tuber

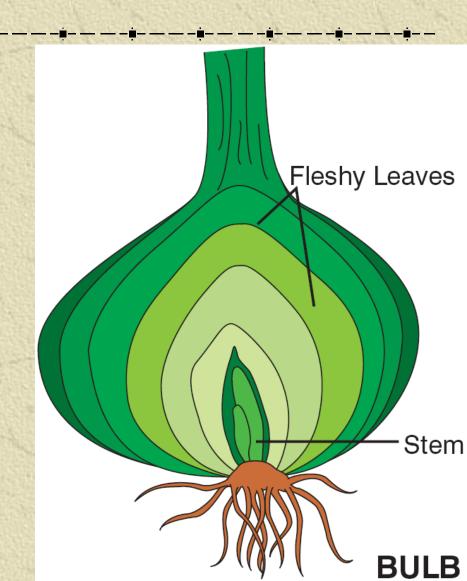
Is an enlarged part of a stem that grows underground.

A tuber can develop into a separate plant. -examples include potatoes and yams.



#### Bulb

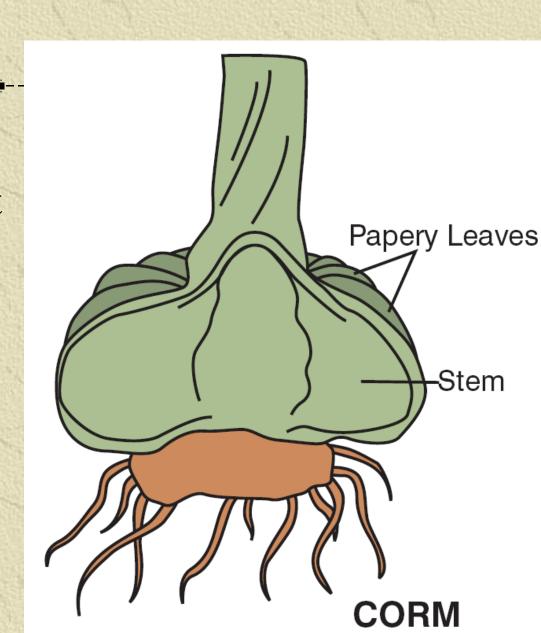
Is an underground food-storage organ consisting of flattened, fleshy stem-like leaves with roots on the lower side. examples of bulbs are onions



#### Corm

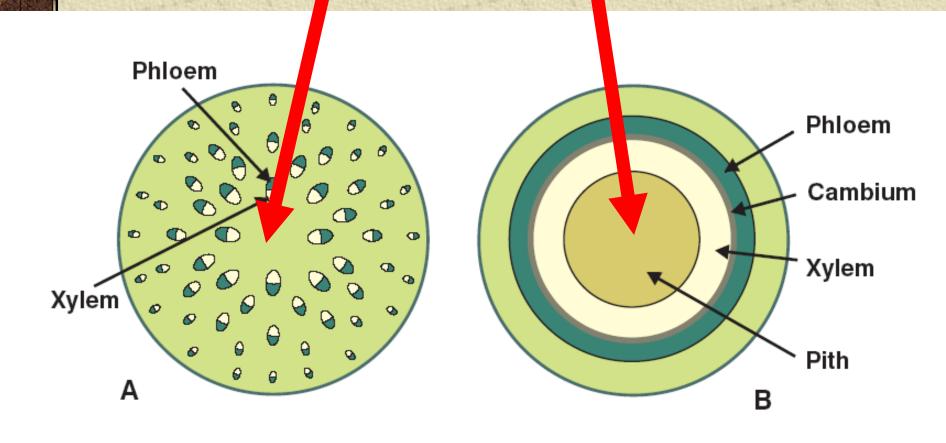
Is a food storage structure at the end of a stem that grows underground.

It is an enlarged or swollen stem base. - examples include gladiolus and crocus.



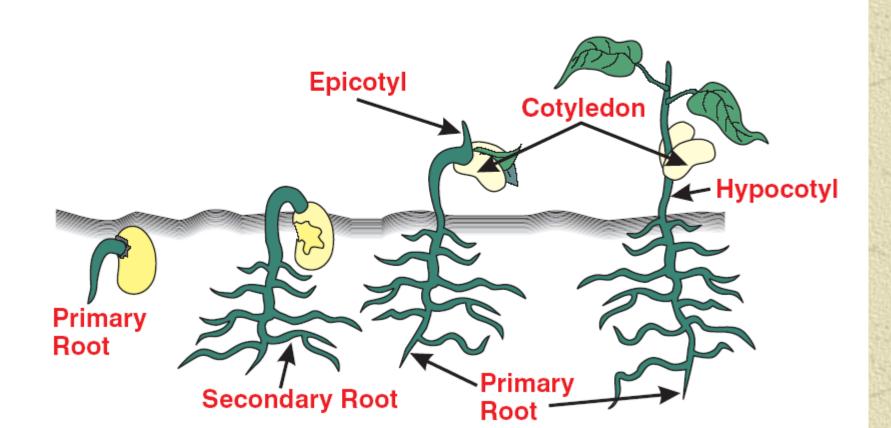


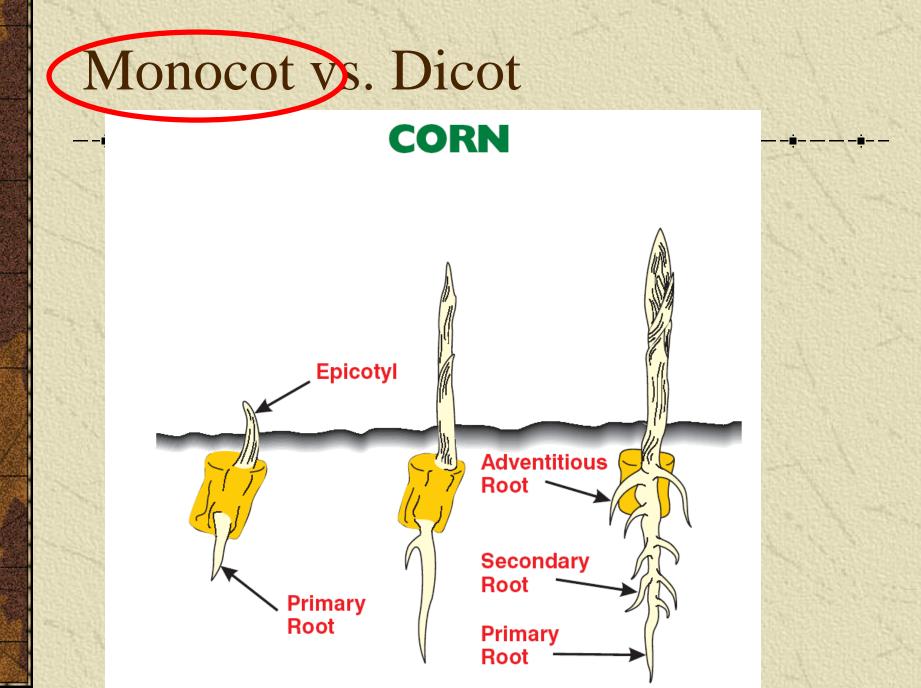
### Monocot vs. Dicot











#### Taproot of Fibrous root



