Bulbs

- Plants have evolved many ways to survive adverse climatic conditions
- Store food in many organs when conditions are unfavorable
- New growth and flowers when conditions are favorable

Types of Bulbs

- True Bulb:
  - A complete miniature plant
  - Food stored in fleshy leaves (scales)
  - Roots emerge from hardened basal stem
  - Examples: Tulips, Hyacinth, Daffodil, Lilly

Bulb

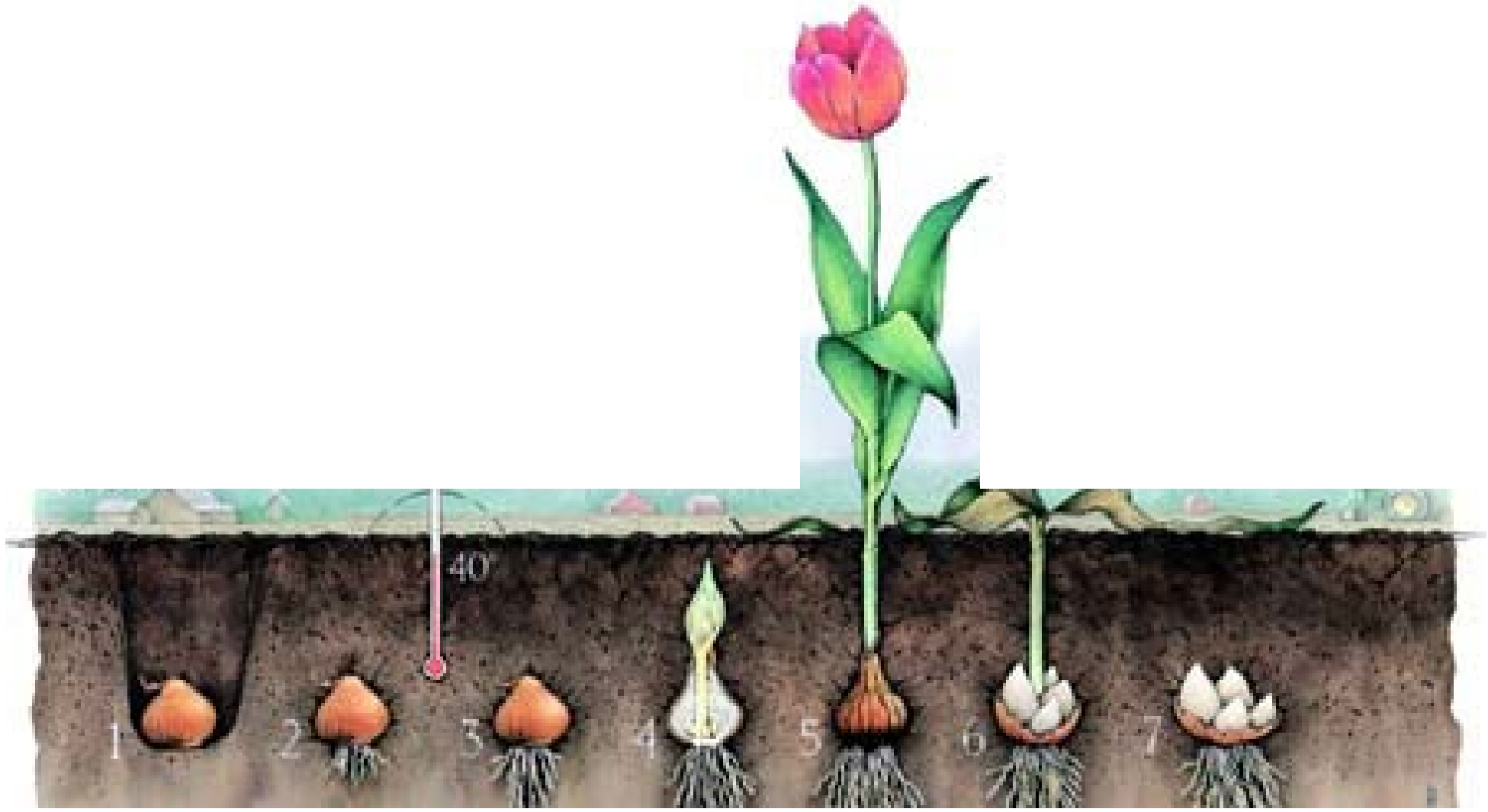
- True bulbs can be left in the ground to over winter
- Bulbs left in the ground may need to be divided periodically

True Bulbs

Tulips, Daffodils, and Hyacinths

Amaryllis

Life cycle of a true bulb



October Dec-Jan Mar Apr May Jun

Tulips.com

Others..

- <u>Corm:</u>
  - Food stored in the base of the stem
  - No fleshy scales
  - Roots grow from a basal plate
  - Examples: Gladiolus, Crocus

Corm

- <u>Tuber:</u>
  - Stores food in the stem
  - Lacks scales or basal plate
  - Roots are generated from many parts of the surface
  - Examples: Caladiums, Tuberous Begonias

Tuber

- Tuberous roots:
  - Food stored in the root tissue
  - Fibrous roots to draw water and nutrients
  - Buds grow from the base of the old stem
    Examples: Dahlia, Ranunculus


Tuberous root

- Rhizome:
  - Food stored in the stem
  - Grows horizontally, and sends shoots upwards at intervals
  - Examples: Canna, Calla


Rhizome

Gladiolus (Corm)

Dahlia (Tuberous roots)

Tuberous Begonia (Tuber)

Canna (Rhizome)

Flowering time

Most of bulbs bloom in spring, but there are variations

- Some bulbs flower during summer
- Some bulbs can be forced to flower in winter

Early spring: Iris, Crocus, Daffodils
Spring: Tulips, Ranunculus, Hyacinth
Early Summer: Alliums, Caladiums, Tuberous Begonia, Canna, Gladiolus
Summer and Fall: Dahlia, Cyclamens
Winter (Forcing): Tulips, Hyacinth, Lily

Planting depth

Tuberous begonia

Canna

Gladiolus

Tulip

Daffodil

Dahlia

Hyacinth

1”

2”

3”

4”

5”

6”

7”

8”

9”