

# Plant Science

**A Study of Plants and their  
Environments**

# Plant Parts



Scapes, buds, branches



Sepals, petals, stamen,  
anther style

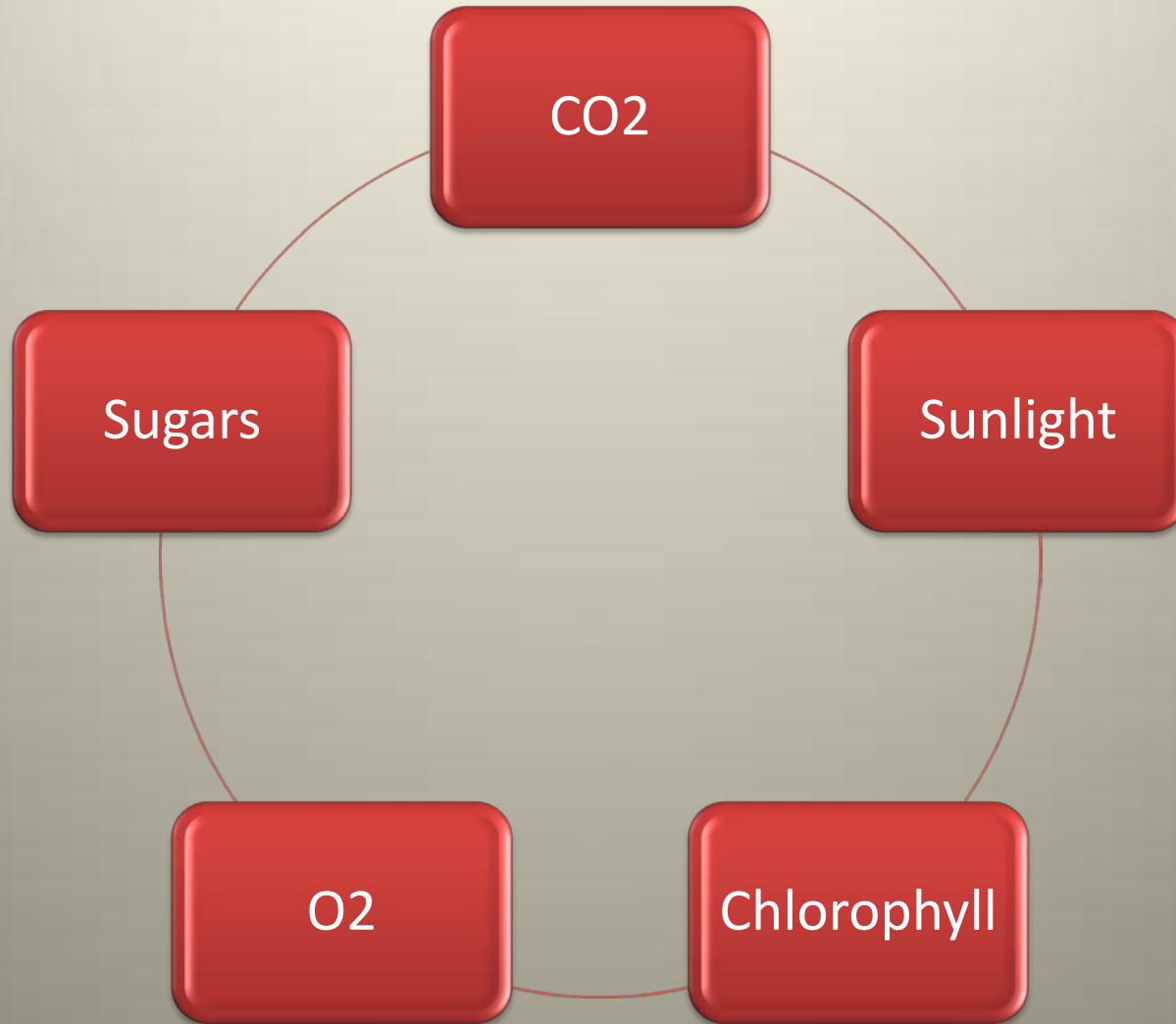


Seed pod and ovary



Roots

# Photosynthesis



# Factors

## Water

- Needed for cell life
- Needed to transport nutrients

## Light

- Needed for photosynthesis
- Needed for energy

## Air

- Need CO<sub>2</sub>
- Need for pollination

## Temperature

- Need warmth

## Pollination

- Needed to reproduce
- Insects, air, birds, humans

## Pests

- Harm plants by destroying them

# Soil

Holds Water

- Water is held in soil to feed plant

Holds O<sub>2</sub>

- O<sub>2</sub> is held as energy source
- Holds Nutrients

Nutrients

- N, P, K, Mg etc needed for cells processes

Provides Support

# Propagation

## Seeds

- Get seeds from plants and grow them and they may have mixed genetics

## Roots

- Take roots and propagate the same plant

## Cuttings

- Take a plant and cut ends and use rooting compound to grow roots and new plant identical to one cut

## Tubers

- Same as roots

## Grafting

- Take a plant and make cuttings and grow the same plant of different root stock

# Native Plants

- Pin Oak
- White Pine
- White Ash
- Juniper
- Silver Maple
- Sugar Maple
- Viburnum
- Ferns, many types

# Invasive Plants

- Purple Loosestrife
- *Hemerocallis fulva*
- Duckweed

# Careers

This describes the horticulture elements

# **HORTICULTURE**

# Gardens



# Terms

- Hardiness zone
- Shade Tolerance
- pH
- Moisture Requirement
- Native Habitat
- Texture
- Cultivar
- Ultimate Size
- Disease Resistant
- Habit
- Evergreen
- Deciduous
- Annual
- Perennial

# Propagation

- Sexual: Need two parents, a male part and a female part, creates seeds which then grow to different plants.
- Vegetative: Use a single parent plant and propagate more of the same by dividing roots, cuttings, grafting.



# Landscape Design

- Good layout and ability to view plants
- Ease of care
- Long blooming period
- Good texture



# **BEDDING PLANTS**

# Seed and Transplant



# Cuttings



Cut new ends of Ginkgo  
Fill pot with perlite and artificial soil, wet well  
Dip end cutting in growing compound, Hormidin  
Keep moist until roots take

# Annuals v Perennials

- Annuals, like tomato and corn grow by new seed each year
- Perennials establish roots and over winter and grow more each year such as daylily

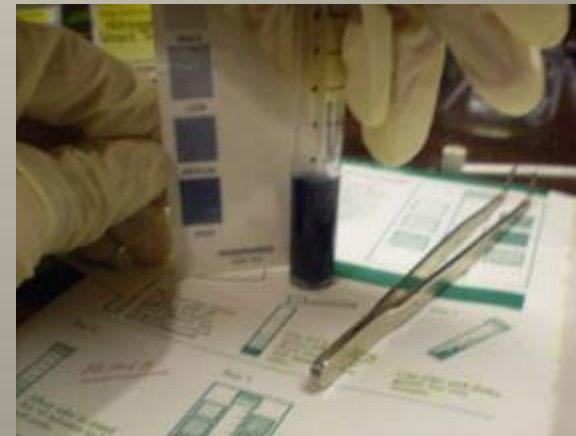
# Soil Testing



Potassium



Nitrogen



Phosphorous