


# Cuttings & Propagation

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Friends of Boerner Botanical Gardens

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## Agenda

- Learn**
  - Terms
  - Principles
  - Techniques
  - Materials
- Do**
  - Make cuttings
- Learn**
  - Care

## Propagation: terms



- Sexual**
  - Seeds
- Asexual**
  - Use plant parts to produce whole new plants
    - Leaves
    - Stems
    - Roots
    - Specialized structures
      - Bulbs, Corms, Tubers, Rhizomes, Stolons, Tuberous Roots

## Propagation: terms

- Sexual**
  - Seeds
    - Genetic cross of both parents
      - Pollen
      - Ovary
- Asexual**
  - Use plant parts to produce whole new plants
    - Produce an exact replica = **clone**
    - Produce many plants from one
    - Produce large plants faster

## Propagation: principles

- Totipotency**
  - Ability of all cells to produce entire plant
- Adventitious roots and shoots**
  - Wound causes cells to produce missing parts
    - Shoot produces roots
    - Root produces shoots
- Preformed or latent root initials**
  - Pothos
  - coleus

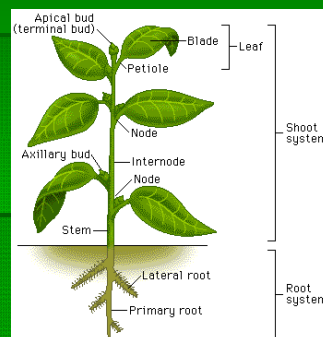



## Propagation: techniques

- Layering
- Offsets
- Plantlets
- Division
- Grafting
- **Cuttings**



## Plant Anatomy: terms



## Specialized stems

- Bulbs
- Corms
- Tubers
- Rhizomes
- Stolons



## Propagation: techniques

- **Cuttings**
  - Leaf
  - Root
  - Stem

### ▪ Leaf Cuttings

- Whole leaf plus stalk
- Whole leaf
- Part leaf



### ▪ Root Cuttings




### Stem cuttings

- Herbaceous – spring thru late summer
  - Houseplants
  - Annuals (tender perennials)
- Woody
  - Hardwood – dormant
  - Semi-hardwood –snaps when bent; summer
  - Softwood – succulent; spring

### Propagation: techniques

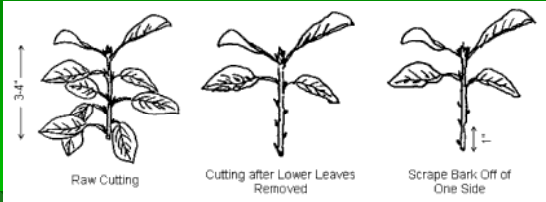
#### Making a stem cutting

- Stem tips – growing point
- Non-flowering (or remove)
- Non-fruiting (or remove)
- 3 – 6" long
- 2 – 4 nodes (or more)





### Propagation: techniques

- Sharp knife or razor blade
- Cut just below node

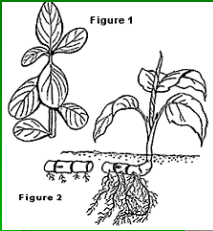

- Remove lowest set(s) of leaves
- Woody stems – scrape bark off one side

- Large leaves - Reduce leaf surface





- Sappy or succulent stems – allow cut end to dry for a day



#### Cane cutting


- **Rooting hormone**
  - Indolybuteric acid (IBA)
  - Optional
    - may speed root formation




- Powder or liquid
- Dip end of cutting
  - Wet end first if not sticking
- Tap to remove excess

- **“Sticking” the cutting**
  - Poke a hole in the pre-moistened medium
    - 1:1 vermiculite and perlite
  - Insert stem end of cutting
  - Firm medium around end
  - Label



- **Care**
  - Place inside plastic bag and seal
  - Indirect but bright light
  - Vent when moisture builds up
  - Water when dry
    - Do not allow to stand in water!
  - Check for rooting after a couple weeks
    - Tug LIGHTLY - resistance means roots have formed.



- **Transplanting/ “Uppotting”**
  - Once good roots have developed




Thanks!

- Gardening Resources from the UW-Extension
- Plant Diagnostics from the UW-Extension

