Botany Training Guide

Colorado Master Gardener Training

Training Guide:
Botany / How Plants Grow

SETTING UP

Materials needed:

- **Homework Answers** for Review; GardenNotes #155: Botany
- **Worksheet Copies for students** (individual or small group quantities):
  - GardenNotes #150: Leaf Characteristics
  - GardenNotes #151: Plant Structures
  - GardenNotes #152: Plant Processes
- **General reference materials** or books; and GardenNotes for Botany
- **Laminated leaf set** (optional activity; use set if available, you can create slides with leaf images)
- **Supplies list:**
  NOTE: The number you purchase/provide should allow for 3-4 people to be observing at the same time and drawing their observations.

  - Hand lens (or ask students to bring their own)
  - Cutting boards for plant dissection
  - Knives/scalpels
  - Rulers
  - Giant post-it notes for group activity
  - Poster markers

- **Shopping/collection list:**
  - Fresh flowers for dissection; 1 flower for every 1-2 students
    - Recommended (select based on what you have access to): alstroemeria, lily, daffodils, tulips, etc... select flowers you can see MOST parts through simple dissection/exploration.
  - Branches for demonstrating plant growth; 1 for every 3-4 students if possible
    - A branch from each of two different trees showing 3+ years’ growth. They can both be deciduous, evergreen or one of each, whatever is easiest for you to gather.
    - Recommended (select what you have access to): apples, crabapples, pears, cottonwood, chokecherry and evergreen samples.
  - Apples – Some cut in half horizontally, some vertically for observing the structure
  - Strawberries – cut in half horizontally for observation
>> REVIEW HOMEWORK FROM ONLINE CLASS

Time: 10 minutes

GardenNotes #155 – Botany Questions

Review student responses to the six botany-related questions.

ACTIVITY 1: GARDENNOTES WORKSHEET #151

PLANT STRUCTURES LAB

Time: 25 minutes

PART ONE: FLOWERS (Questions 1-2)
- Handout GN 151 Worksheets + flowers + access to cutting board/knife as needed.
- **NOTE:** Be prepared to show students correct parts based on the flowers you are providing. Some flowers may not have all parts!
- Have students identify the parts of the flower and complete worksheet individually or as a small group.

PART TWO: FRUIT (Question 3)
- Make fruit (apples and strawberries) available for dissection and observation to answer this question individually or in pairs.

PART THREE: BRANCHES (Question 4)
- Make available or hand out branch samples.
- Have students complete the worksheet individually or in small groups.
ACTIVITY 2: GARDENNOTES WORKSHEET #152

PLANT PROCESSES GROUP ACTIVITY

Time: 25 minutes

- Break class into small groups of 4-6 people (or as appropriate).
- Assign groups #1, #2, or #3 from the worksheet.
- Have groups spend 5 minutes reading and answering the question assigned.
- Groups should use poster paper and pens to draft their response/answer.
- Spend the remaining class time sharing out these responses and discussing answers.

*OPTIONAL* ACTIVITY 3: GARDENNOTES WORKSHEET #150

LEAF CHARACTERISTICS WORKSHEET

Time: 15 minutes

- This activity is in the online course. You can choose to expand on it in class as time allows if you have samples/photos or the laminated leaf samples available.