

### Lab #3: Dichotomous Keys & Plant Diversity

1. **Pre-lab reading:**
  - a. "What's in a name" essay posted in Lab Handouts area of Blackboard
  - b. Text section 17.3
2. This lab will include an outdoor portion, rain or shine – so dress appropriately and bring an umbrella if necessary
3. **Quiz 2** covers graphing and general questions from the pre-lab reading (see Lab 2 handout for details)
4. **Homework (hw2)** is due
5. **Homework assigned (hw3 due week of 9/26):** You will carry out a "plant search", describe one plant in detail, and write a haiku poem about it. The instructions are as follows:
  - a. Spend 15-30 minutes looking for/at plants in your neighborhoods. These can be garden plants, weeds along the side of the road, etc. Identify one bryophyte, one gymnosperm, one monocot, and one dicot.
  - b. In a single well-written paragraph, identify where you found each of the 4 types of plants and how you determined which category each belonged to (e.g., what characters did you use to determine that the juniper in their front yard is a gymnosperm) Use complete sentences, not bullet points.
  - c. In one well-written paragraph, describe ONE of the plants you observed using as many of their senses as possible (and as reasonable – don't eat strange plants!). You should make at least 4 descriptive statements.
  - d. Write a haiku poem, either about one observation you made or about the whole experience of looking at/for plants. A haiku poem consists of 3 unrhymed lines of 5, 7, and 5 syllables, respectively. Haiku traditionally includes a seasonal reference – either directly or by implication (i.e., if the haiku mentions acorns, fall is implied). Find more information about haiku and how to write them at <http://www.toyomasu.com/haiku/>. This part of the assignment has several functions. It forces you to think about their experiences and distill them into a precise, concise form – a good writing exercise for any discipline. It also allows you to be creative.
  - e. Use "standard" homework formatting; the usual rules about grading apply.
  - f. The assignment will be graded on completeness, thoroughness, accuracy, and adherence to instructions according to the following rubric:
    - i. 1<sup>st</sup> paragraph: 4 points, 1 for the information about each type of plant
    - ii. 2<sup>nd</sup> paragraph: 4 points; students should make at least 4 descriptive

statements

- iii. Haiku: 2 points for completion

**Next lab (week of 9/26) = Lab #4: Plant adaptations: flowers, fruits & seeds**

1. **Pre-lab reading:**
  - a. text sections 17.9, 17.11, 17.13
  - b. CD exercise 31C p. 1 (parts of flowers)
  - c. CD exercise 31D p. 1 (all), p. 2 (don't click to see fertilization), p. 6 (dry vs. fleshy fruits), p. 7 (general germination)
  - d. Lab manual "Flowers, Fruits and Seeds", exercises 1A, 1B, 2B
  - e. NOTE: lab will include an outdoor portion, so be prepared!
2. **Quiz #3** will cover
  - a. classification, dichotomous keys, plant diversity (the quiz may include keying out objects with a key provided by the TA)
  - b. What is a fruit (structurally, functionally – from text reading)?
  - c. Science process, graphing
3. Homework (hw3) is due
4. Lab 4 will also include an outdoor portion, so be prepared.