Botanical Terminology Online Tutorial

Plant identification is based on one's ability to recognize the characters that allow us to distinguish one plant from another. This requires knowledge of plant structures and a familiarity with the names by which they are known. These terms give precision to the identification process. All plant flora, identification manuals and keys use these terms because they have a definite and exact meaning. Mastering of this terminology will make the learning of plant identification much easier and also allow you to use identification keys to identify unknown plants in the future. Although the terminology is extensive, this project concentrates on the most commonly used terms that are applicable to plants in the temperate climate.

The easiest way to learn these technical terms is to master those that are commonly used and then to look up the others as needed. This allows one to understand these commonly used terms better by giving a chance to compare related ones. For example, the exact meaning of an "acute" apex becomes apparent when one compares it with the related "acuminate" and "obtuse".

Assignment:
Students randomly selected to learn botanical terminology through the use of the online tutorial should work with the tutorial until they achieve an average of 80% for their last 10 on-line quizzes. This needs to be done by 10 am September 13. Online quizzes are not graded. The Botanical Terminology post-test for comprehension on September 20 is worth 5% of your final grade.

How to use the tutorial:

Because the tutorial is to be available to only one-half of the class, students are required to log in. All information regarding the identity of students and their information will be kept confidential. Names of students will not be used in combination with research results.

1. Go to: http://plants.nres.uiuc.edu/

2. **Log in** using your UIUC **NetID** (see your I-Card) and your **Active Directory password**.

    Once you have logged in, you can access the tutorial and quizzes anytime. When you close your browser, your session will automatically end. If you don't think you have an active directory (AD) password click on the link below the Sign in button or go to:

    > **Active Directory (AD) password**
    > http://accounts.ad.uiuc.edu/
    >
    > 1. Click on "**I want to reset my AD password.**" (even if you didn't previously have one). In the upper right-hand corner of the page. You will need your Bluestem password (used for course registration) to access this information.

> 2. Once your password has been set, go to the Tutorial and log in.
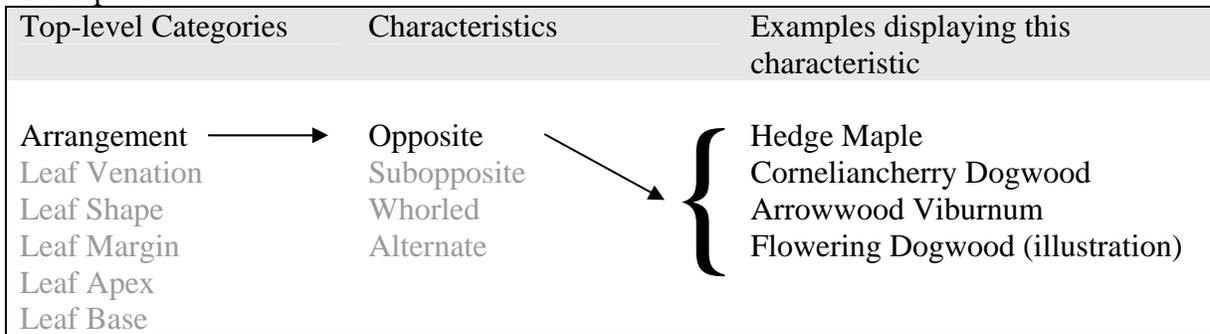> http://plants.nres.uiuc.edu/

Tutorial

There are 6 categories that contain a total of 55 terms. These are the terms you will need to know for the botanical project, as well as the comprehensive post-test. (See "Leaf Characteristics" below for a full list of the terms covered).

Navigating through the tutorial

Select one of the six top-level leaf characteristic categories (arrangement, venation, shapes, etc.). View all of the characteristics from that category, each with a short description. Click on any of the images to find multiple examples of that same characteristic in common with different species of woody plants.

Example 1:

Top-level Categories	Characteristics	Examples displaying this characteristic
Arrangement ⟶	Opposite	Hedge Maple
Leaf Venation	Subopposite	Corneliancherry Dogwood
Leaf Shape	Whorled	Arrowwood Viburnum
Leaf Margin	Alternate	Flowering Dogwood (illustration)
Leaf Apex		
Leaf Base		

There is a right-hand menu that allows you to quickly navigate the 6 characteristic categories. Additionally there are links to the beginning of the tutorial, and to the quiz sections.

You can easily access the UI Plants website through the links at the top of the page, and if you have any questions you can send email to Laura Hayden (lhayden@uiuc.edu).

Online Quiz

To take a quiz, select "Begin New Quiz" from the Quiz History page. Use each quiz as a learning tool. You can take the quizzes as many times as you like. Once you begin a quiz, it will remember your session even if you've logged out. When you come back, the quiz picks-up right where you left off.

All of your past quizzes are available for review. The score, average, details, and the date the quizzes were taken are all displayed once you log in.

Glossary

A glossary containing over 200 terms is available within the tutorial to assist you with readings, labs, and lectures.

Problems: email Laura Hayden   lhayden@uiuc.edu

Leaf Characteristics

4 different leaf arrangements:
1. alternate
2. opposite
3. subopposite
4. whorled

6 different venation patterns:
5. dichotomous
6. impressed
7. palmate
8. parallel
9. pinnate
10. reticulate

17 different leaf shapes:
11. awl-shaped
12. cordate
13. deltoid
14. elliptical
15. falcate
16. flabellate
17. lanceolate
18. linear
19. oblanceolate
20. oblong
21. obovate
22. orbicular
23. ovate
24. perfoliate
25. rhombic
26. scale-like
27. spatulate

13 different leaf margins:
28. crenate
29. dentate
30. doubly-serrate
31. entire
32. incised
33. involute
34. lobed
35. revolute
36. serrate
37. serrulate
38. sinuate
39. spinose
40. undulate

7 different leaf apices:
41. acuminate
42. acute
43. emarginated
44. mucronate
45. obtuse
46. rounded
47. truncate

8 different leaf bases:
48. acute
49. attenuate
50. auriculate
51. cordate
52. cuneate
53. oblique
54. rounded
55. truncate