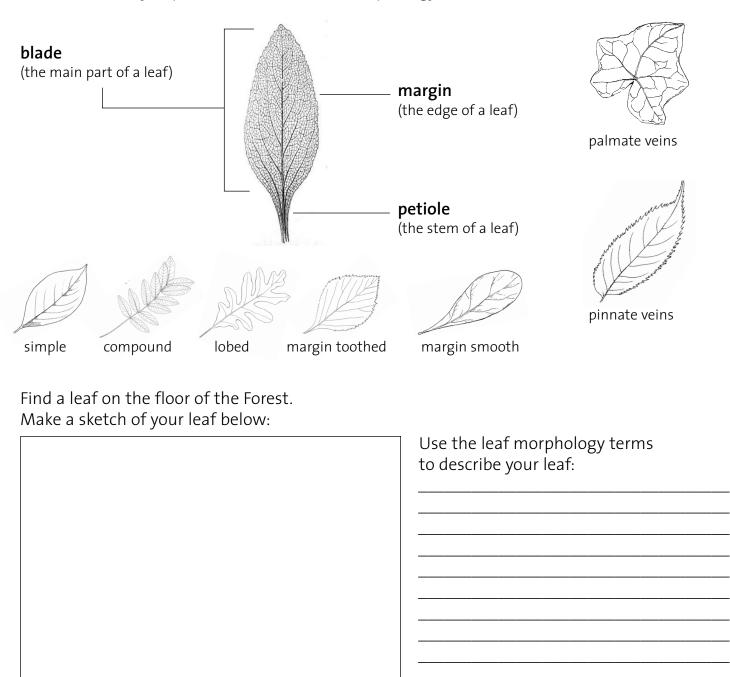
THE NEW YORK BOTANICAL GARDEN

Forest Forays Activity Sheet #1

Leaf Morphology

Morphology refers to the physical form and structure of an organism. Learning how to use some morphological terms to describe the leaves of trees will help you to use a tree identification key. Explore the different leaf morphology terms that are illustrated below.



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Forest Forays Activity Sheet #2

Biodiversity—the variety or diversity of living things in an environment—is an important indicator of the health of an ecosystem. Ecosystems with greater biodiversity are generally healthier than those with less biodiversity. Work with a partner and use the key below to classify the leaves from trees in a small area of the Forest.

Key to the trees of the Forest

- If the leaf is simple, go to 2.
 If the leaf is compound, it is a *Hickory*.
- 2. If the leaf has no lobes, go to 3. If the leaf is lobed, go to 6.
- 3. If the margin of the leaf is continuously toothed, go to 4.

 If the margin of the leaf is smooth, not toothed at all, it is a *Persimmon*.
- **4.** If the base of the leaf is symmetrical (the same on either side of the stem), go to 5. If the base of the leaf is asymmetrical (different on either side of the stem), it is an **American Elm**.
- 5. If the teeth along the margin are widely spaced, it is a **Beech**. If the teeth along the margin are fine and close together, it is a **Choke Cherry**
- **6.** If the margin of the leaf is continuously toothed, go to 7. If the margin of the leaf is smooth, not toothed at all, go to 9.
- 7. If the teeth along the margin are pointed, go to 8.

 If the teeth along the margin are rounded, it is a *Mulberry*.
- **8.** If the leaf is star shaped and has five lobes, it is a *Sweetgum*. If the leaf has three large lobes, it is a *Red Maple*.

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Forest Forays Activity Sheet #2 (cont'd)

- **9.** If the veins are pinnate, go to 10. If the veins are palmate, it is a **Sugar Maple**.
- 10. If the tips of the lobes are pointed, go to 11.

 If the tips of the lobes are rounded, it is a White Oak.



Keep track of your leaf identification data:

How many leaves did you identify?
How many different kinds of trees did these leaves come from?
Which type of tree did you identify the most?
Which type of tree did you identify the least?
Compare your data with another pair of students in your class. How is your data similar to theirs?
How is your data different?
What does your data say about the biodiversity of trees in the Forest?
Other than examining leaves, how else could you identify trees?