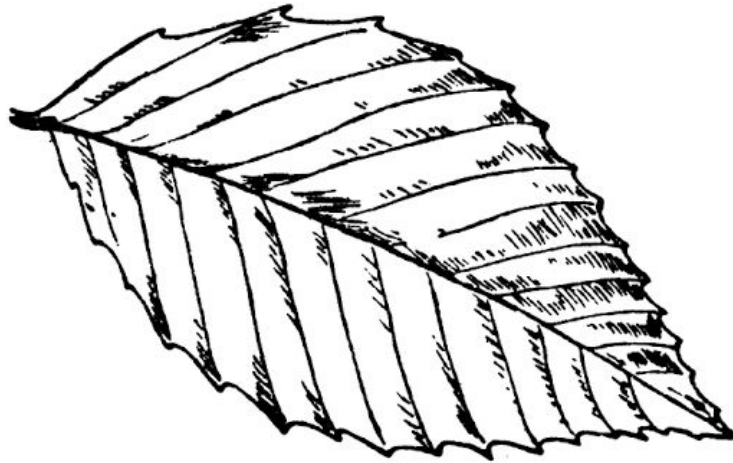


## Diversity of Leaves



### Introduction:

Walking around outdoors in the fall you are likely to see many signs of the season. One of the most striking is the changing colors of the leaves on deciduous (sounds like de-sid-you-us) trees. Deciduous trees are trees that usually lose their leaves in the winter. Coniferous (sounds like con-if-er-us) trees have needles and cones and stay green (with a few exceptions) throughout the year. In this activity you will go outdoors and collect a variety of leaves from your yard, local park or schoolyard. Use the key and questions below to find out more about the leaves you find and identify the trees they came from.

### Materials:

For this activity you will need:

- The attached dichotomous key
- Crayons
- Blank paper

### Instructions:

1. Collect your leaves. Go outdoors to your backyard, local park, or schoolyard to explore and collect as many different kinds of leaves from trees as you can. Try to collect your leaves from the ground instead of pulling live leaves off of trees.
2. Make a leaf rubbing of each leaf you collected by placing the leaf underneath a blank piece of paper and gently rubbing a crayon over the top of the paper. Keep rubbing the crayon over the paper and leaf until you can clearly see the outline and veins (lines inside) of the leaf.
3. Have an adult help you use the dichotomous key to identify the leaves you collected and label leaf rubbings.
4. Couldn't find your leaf on the key? There are *SO MANY* different kinds of trees out there, it is definitely possible the leaf you collected is not on the key. Go as far as you can in identifying your leaf with the key and if you want to use a tree ID app or book after that point go for it! I recommend Leafsnap!

### Art Extension:

Leaves, especially colorful fall leaves, are unique and beautiful. After you have collected and identified your leaves, use wet glue to paste your leaves (along with other natural materials like sticks, acorn caps, and seeds) onto paper to create real or imagined animal shapes. Can you create a butterfly? An ant? What other creatures can your imagination think up?

## Leaf Dichotomous Key

1. A: Leaves are compound.....go to #3  
B: Leaves are simple.....go to #4
2. A: Leaves are pinnate.....go to # 5  
B: Leaves are palmate..... BUCKEYE
3. A: Leaves are opposite..... go to # 6  
B: Leaves are alternate .....go to # 7
4. A: Leaf bases are opposite ..... ASH  
B: Leaf bases alternate .....go to # 8
5. A: Leaves are lobed .....MAPLE  
B: Leaves are not lobed ..... go to # 11
6. A: Leaves are deeply lobed..... go to # 12  
B: Leaves are not deeply lobed....go to # 17
7. A: Leaflets are shorter than 3 inches.....go to #9  
B: Leaflets are longer than 3 inches.....WALNUT
8. A: Leaflet margins smooth.....go to #10  
B: Leaflet margins serrated.....MOUNTAIN ASH
9. A: Fruit pods longer than 5 inches.....HONEYLOCUST  
B: Fruit pods shorter than 5 inches.....LOCUST
10. A: Leaves heart-shaped.....CATAPLA  
B: Leaves not heart-shaped.....DOGWOOD
11. A: Leaves are palmately lobed.....go to # 13  
B: Leaves are pinnately lobed.....go to # 14
12. A: Leaves are star-shaped.....SWEETGUM  
B: Leaves are not star-shaped.....SYCAMORE
13. A: Branches have thorns..... HAWTHORNE  
B: Branches without thorns..... Go to #15
14. A: Leaves have more than 5 lobes...OAK  
B: Leaves have less than 5 lobes....go to #16
15. A: Leaves have 4 lobes.....POPLAR  
B: Leaves have less than 4 lobes...APPLE/PEAR
16. A: Leaf edges smooth.....go to #18  
B: Leaf edges not smooth.....go to # 23
17. A: Leaves thick and leathery.....go to #19  
B: Leaves not thick and leathery....go to # 28
18. A: Leaf underside golden.....CHINKAPIN  
B: Leaf underside not golden..... Go to #20
19. A: Leaves smell like cough drops.....CALIFORNIA LAUREL  
B: Leaves smell normal.....go to #21
20. A: Leaves over 4 inches long.....MADRONE  
B: Leaves less than 4 inches long....go to #22
21. A: Leaves narrow and edges curl.....MOUNTAIN MAHONGANY  
B: Leaves broader and not curled.....OAK
22. A: Leaves are thick and leathery.....go to #24  
B: Leaves are not thick and leathery.....go to 30
23. A: Leaves have sharp points.....go to #25  
B: Leaves do not have sharp points..... go to #26
24. A: All leaves spiny.....HOLLY  
B: Some leaves spiny.....OAK
25. A: Leaves have pointed teeth.....TANOAK  
B: Leaves have rounded or no teeth.....got to #27
26. A: Leaves under 3 inches.....MOUNTAIN MAHONGANY  
B: Leaves more than 3 inches long.....MADRONE
27. A: Leaves are narrow.....go to #29  
B: Leaves are not narrow..... go to #30
28. A: Leaves are silver-gray and scaly.....RUSSIAN OLIVE  
B: Leaves are not silver-gray and scaly....WILLOW
29. A: Leaves are oval.....BUCKTHORN  
B: Leaves are triangular or rounded.....COTTONWOOD/ASPEN

