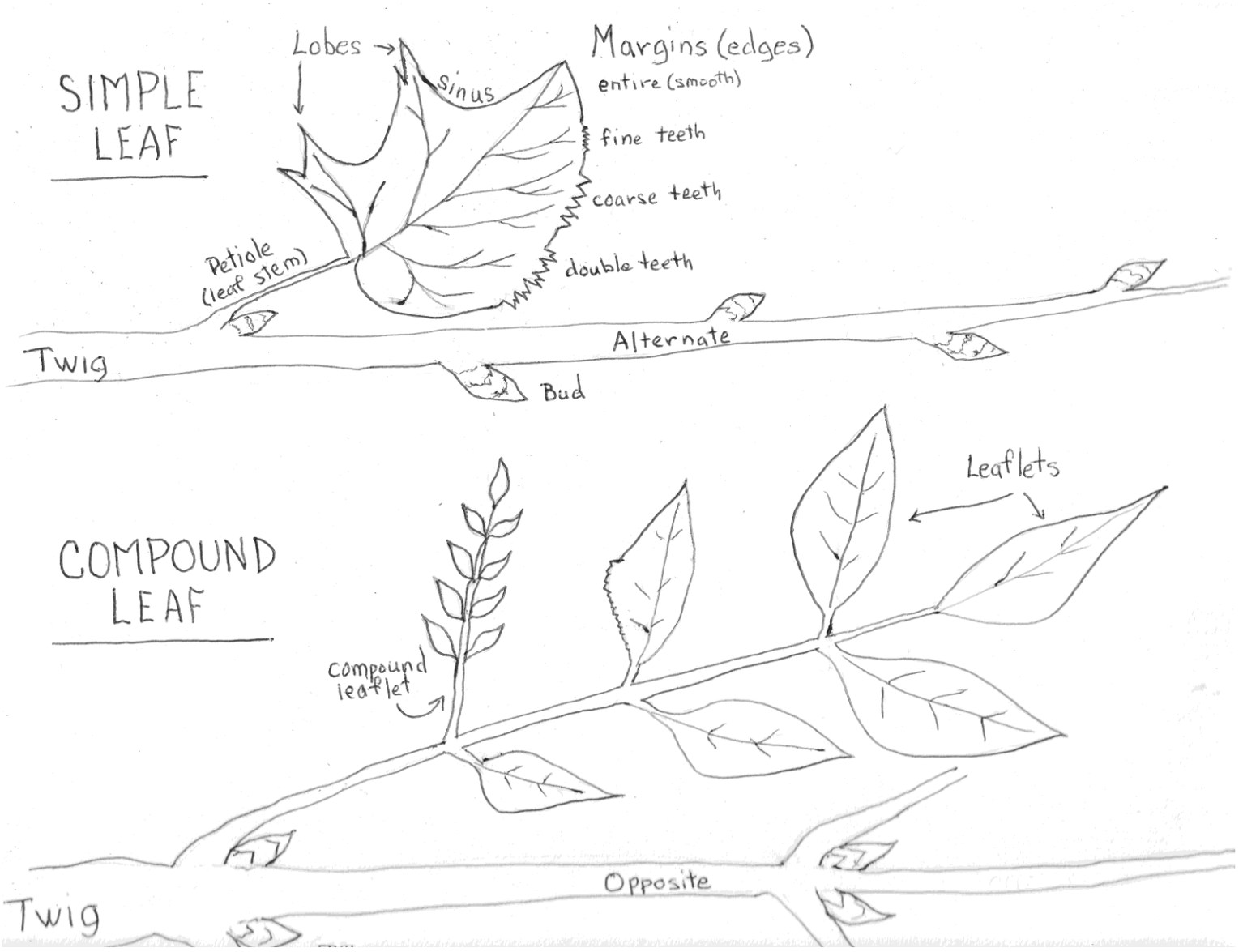
Vocabulary

for

Broadleaf Identification

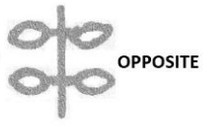


Opposite branching – Only for maples, ashes, dogwoods and horse chestnut (MAD DOG HORSE)
Alternate branching – ***EVERY OTHER TREE***

BROADLEAF KEY

TREE IDENTIFICATION KEY

BEGIN HERE *if the tree has* ***BROAD LEAVES*** *(not needles) :…….....* ***BROADLEAF KEY***





1. **Opposite** branching (**go to #2**)
1. **Alternate** branching (**go to #4**) "MAD DOG HORSE"

- ***2***. **Compound** leaves (**go to #3**)
- ***2***. **Simple** leaves: **Maple species (see a-c below)**

a. Leaf margin entire, 5 lobes ..... **sugar maple *(Acer saccharum)***
b. Leaf margin double-toothed, 3 to 5 lobes .....**red maple *(Acer rubrum)***
c. Leaf margin single-toothed, 3 to 5 lobes, lobes separated by deep, angular openings..... **silver maple *(Acer saccharinum)***

3. 3 (rarely 5) leaflets .....**boxelder *(Acer negundo)***
3. 5 to 11 leaflets: **Ash species (see a-c below)**

a. 7 to 13 leaflets, leaflets do not have petiole ..... **black ash *(Fraxinus nigra)***
b. 5 to 9 leaflets, leaflets have petiole, smile-shaped leaf scar extending up sides of new bud..... **white ash *(Fraxinus americana)***
c. 7 to 9 leaflets, leaflets have petiole, leaf scar ends at base of new bud.....**green ash *(Fraxinus pennsylvanica)***

- ***4***. **Compound** leaves (**go to #5**)
- ***4***. **Simple** leaves (**go to #8**)

5. 7 or fewer (usually 5) leaflets, egg-shaped nut.....**shagbark hickory *(Carya ovata)***
5. 7 or more leaflets (**go to #6**)

- ***6***. Leaflets rounded..... **black locust *(Robinia pseudoacacia)***
- ***6***. Leaflets pointed (go to #7)

7. Leaf 6 to 8 inches long..... **mountain-ash *(Sorbus americana)***
7. Leaf 8 to 24 inches long.....**black walnut *(Juglans nigra)***

- ***8***. Leaves not lobed (**go to #9** *to look at bark*)

8. Leaves lobed: **Oak species (see a-g below)**

a. Rounded lobes, 5-9 deep, even lobes and sinuses; leaves hairless..**white oak** *(Quercus alba)*
b. Rounded lobes, pair of deep sinuses near middle of leaf, hairy underside.... **burr oak** *(Quercus macrocarpa)*
c. Rounded lobes, leaf narrow at base and broad near middle, hairy underside. **swamp white oak** *(Quercus bicolor)*
d. Pointed lobes, sinuses extend halfway to mid-vein, leaves hairless.....**red oak** *(Quercus rubra)*
e. Pointed lobes, deep sinuses extend 3/4 of the way to mid-vein, leaves hairless, bright green & shiny .....**northern pin oak** *(Quercus ellipsoidalis)*
f. Pointed lobes, deep sinuses, young leaves hairy underneath,dark green & shiny, leathery .....**black oak** *(Quercus velutina)*
g. Very small, pointed lobes (almost teeth), 10-12 lobes per side..... **chinkapin oak** *(Quercus muehlenbergii)*

9. **Bark** not papery (**go to #10** *to look at petiole or leaf stem*)
9. **Bark** papery: **Birch species (see a-c below)**

a. Leaf margin single-toothed, white peeling bark..... **white birch *(Betula papyrifera)***
b. Leaf margin double-toothed, dull green leaves, yellow or bronzed bark ..... **yellow birch *(Betula alleghaniensis)***
c. Leaf margin double-toothed, shiny green leaves, reddish-brown to silvery-gray bark ..... **river birch *(Betula nigra)***

10. Leaf **petioles** (leaf stem) **flat** (**go to #11** *to look at leaf shape*)
10. Leaf **petiole** (leaf stem) **round** (**go to #12**)

11. Leaf shape: triangular with coarse teeth ..... **eastern cottonwood *(Populus deltoides)***
11. Leaf shape: oval - **Aspen species (see a-b below)**

a. Leaves have small, fine teeth less than 1/16 inch..... **trembling aspen (*Populus tremuloides*)**
b. Leaves have large teeth..... **bigtooth aspen *(Populus grandidentata)***

12. Leaves nearly as wide as long (**go to #13** *to look at margin or leaf edge*)
12. Leaves longer than wide (**go to #14**)

13. Leaf **margin (edge)** finely toothed..... **balsam poplar *(Populus balsamifera)***
13. Leaf **margin (edge)** coarsely toothed..... **basswood *(Tilia americana)***

14. Leaf less than 3 times as long as wide (**go to #15** *to look at leaf veins*)
14. Leaf at least 3 times as long as wide..... **willow species**
(common species: weeping & black willow)

15. **Leaf veins** thin and branch often (**go to #16** *to look at teeth)*
15. **Leaf veins** thick and run from center to edge of leaf without branching (**go to #17)**

16. Fine blunt **teeth**, leaves 2 to 6 inches long, bark dark ..... **black cherry *(Prunus serotina)***
16. Sharp pointed **teeth**, leaves 2 to 4 inches long and hairy, leaf base asymmetrical ..... **hackberry *(Celtis occidentalis)***

17. Leaf shiny and leathery (thick), coarse sharp teeth..... **beech *(Fagus grandifolia)***
17. Leaf dull and rough (**go to #18**)

18. Most leaf bases even, seed in elongated clusters ..... **ironwood *(Ostrya virginiana)***
18. Leaf base uneven, seeds flat and papery..... **elm species (common species include American elm, rock elm, and slippery elm)**

TREE IDENTIFICATION KEY (CONIFERS)

BEGIN HERE** if the tree has **NEEDLES: ..... **CONIFER KEY**

CONIFER KEY

TREE IDENTIFICATION KEY

1. Needles in **bundles** or groups (**go to #2**)

1. Needles **single** or flattened and scaly (**go to #3**)

2. Needles in clusters of more than 5 needles.....**tamarack* *(Larix laricina)***

2. Needles 2 to 5 per bundle: **Pine species (see a-c below)**

a. Five needles per bundle.....**white pine *(Pinus strobus)***
b. Needles in pairs, 3 to 4 inches long..... **red pine *(Pinus resinosa)***
c. Needles in pairs, under 2 inches long, bark dark gray .....**jack pine *(Pinus banksiana)***

3. Needles **scaly and flattened** (**go to #4 below**)

3. Needles **single** (**go to #5**)

4. Has cones, scales flat, branches fan-like....**northern white-cedar *(Thuja occidentalis)***

4. Has berries, may have scaly and prickly needles on same tree, scales rounded .....**eastern redcedar *(Juniperus virginiana)***

5. Needles **flat** (**go to #6**)

5. Needles **square**, 4-sided, stiff, sharp: **Spruce species (see a-b below)**

a. Needles 1/3 to 3/4 inch long, twigs hairless.....**white spruce *(Picea glauca)***
b. Needles 1/3 to 3/4 inch long, twigs have hair, grows in wet areas ..... **black spruce *(Picea mariana)***

6. Needles 1/2 inch long with short petiole.....**eastern hemlock *(Tsuga canadensis)***

6. Needles 3/4 inch to 1 1/4 inches long, no petiole, bubbles in bark.....**balsam fir *(Abies balsamea)***

*Note: A tamarack is a deciduous conifer.