TREE IDENTIFICATION KEY

BEGIN HERE:

Tree has needles.....**CONIFER KEY**

Tree has broad leaves .....**BROADLEAF KEY**

CONIFER KEY

1. Needles in bundles or groups (2)
1. Needles single or flattened and scaly (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 (4)
3. Needles single (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 (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.

TREE IDENTIFICATION KEY
BROADLEAF KEY

1. Opposite branching (2)
1. Alternate branching (4)
   2. Compound leaves (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 (5)
   4. Simple leaves (8)
5. 7 or fewer (usually 5) leaflets, egg-shaped nut.....**shagbark hickory *(Carya ovata)***
5. 7 or more leaflets (6)
   6. Leaflets rounded..... **black locust *(Robinia pseudoacacia)***
   6. Leaflets pointed (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 (9)
   8. Leaves lobed: Oak species (see a-f below)
      - a. Rounded lobes, 5 to 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 of leaves ..... **bur oak *(Quercus macrocarpa)***
      - c. Rounded lobes, leaf narrow at base and broad near middle, hairy underside of leaves ..... **swamp white oak *(Quercus bicolor)***
      - d. Pointed lobes, sinuses extend halfway to mid-vein, leaves hairless, dull green.....**red oak *(Quercus rubra)***
      - e. Pointed lobes, deep sinuses extend 3/4 of the way to mid-vein, leaves hairless, bright green and shiny .....**northern pin oak *(Quercus ellipsoidalis)***
      - f. Pointed lobes, deep sinuses, young leaves hairy underneath, dark green and shiny, leathery.....**black oak *(Quercus velutina)***

TREE IDENTIFICATION KEY
BROADLEAF KEY

9. Bark not papery (10)
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 flat (11)
10. Leaf petiole round (12)
11. Leaf triangular-shaped with coarse teeth ..... **eastern cottonwood *(Populus deltoides)***
11. Leaf 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 (13)
12. Leaves longer than wide (14)
13. Leaf margin finely toothed..... **balsam poplar *(Populus balsamifera)***
13. Leaf margin coarsely toothed..... **basswood *(Tilia americana)***
14. Leaf less than 3 times as long as wide (15)
14. Leaf at least 3 times as long as wide..... **willow species (common species include weeping willow and black willow)**
15. Leaf veins thin and branch often (16)
15. Leaf veins thick and run from center to edge of leaf without branching (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 (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)**