

Harvard LTER Schoolyard Program

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Teacher Developed Lessons and Documents that  
integrate Harvard Forest Schoolyard Ecology Themes  
into curriculum



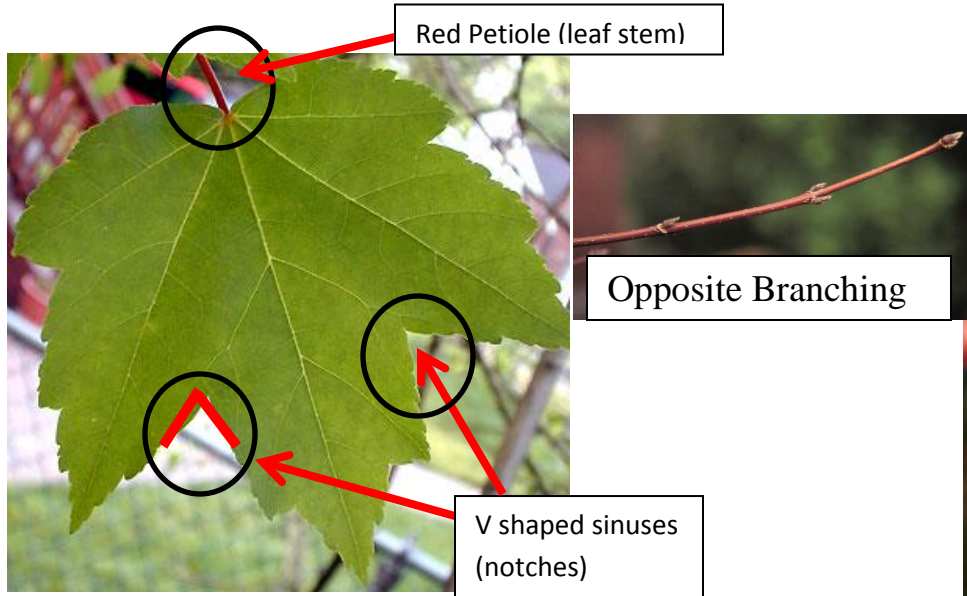
- Lesson Title: *Schoolyard Field Guide Sample*

Teacher/Author: Nicholas Kostich

- School: Oakmont High School
- Level: High School
- Date: April 3, 2014

# Deciduous

## Red Maple (*Acer rubrum*)

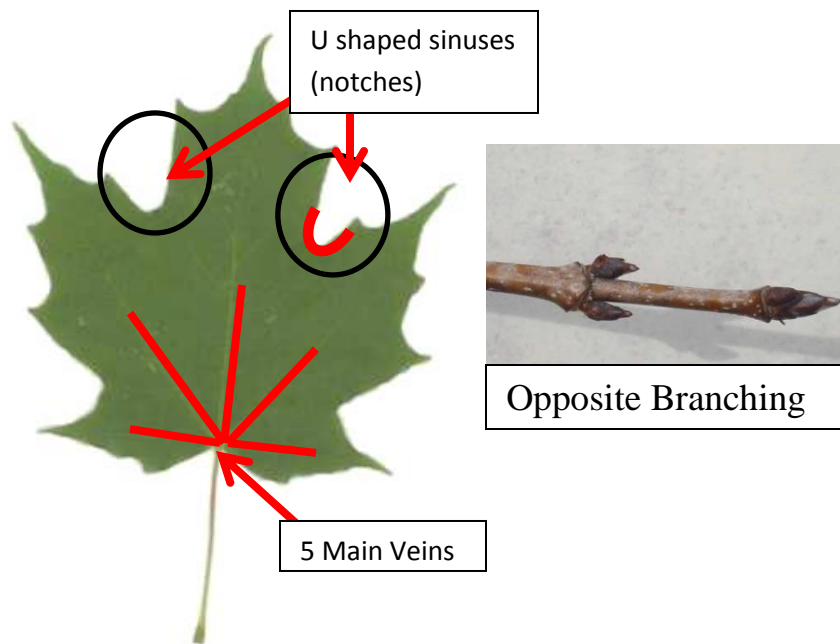


Older Bark

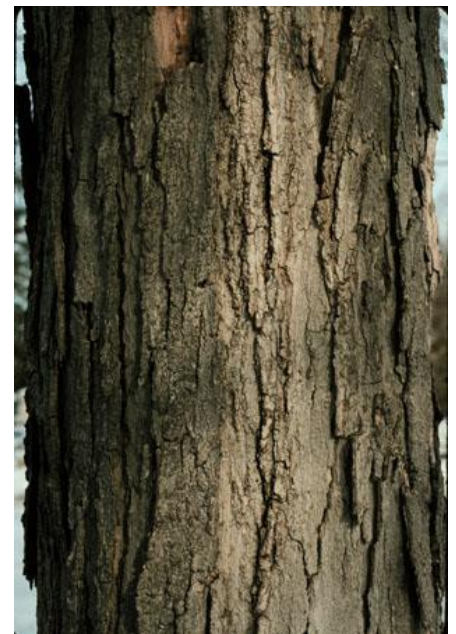


Young Bark  
(Appears similar to Beech)

## Sugar Maple (*Acer saccharum*)



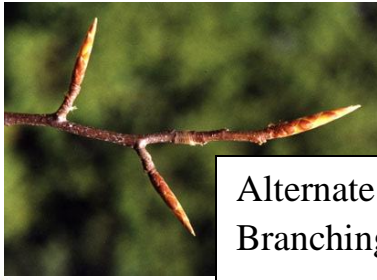
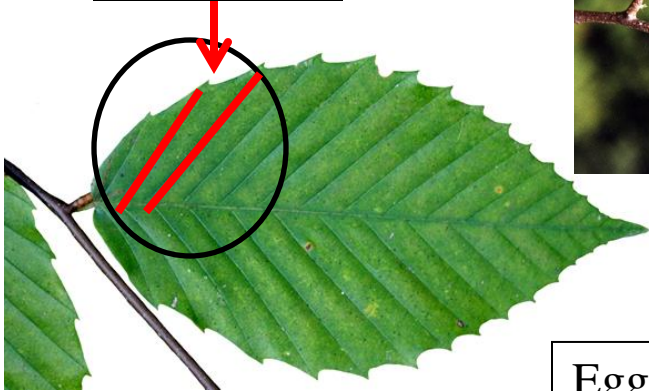
Sugar Maple -  
summer colour



Sugar Maple Bark  
(Note overlapping scales)

# Beech Tree (*Fagus grandifolia*)

Each vein ends in a tooth



Alternate Branching



Beech Bark

Beech Bark with Beech Bark Disease



Egg Shaped Leaf



# Red Oak (*Quercus rubra*)



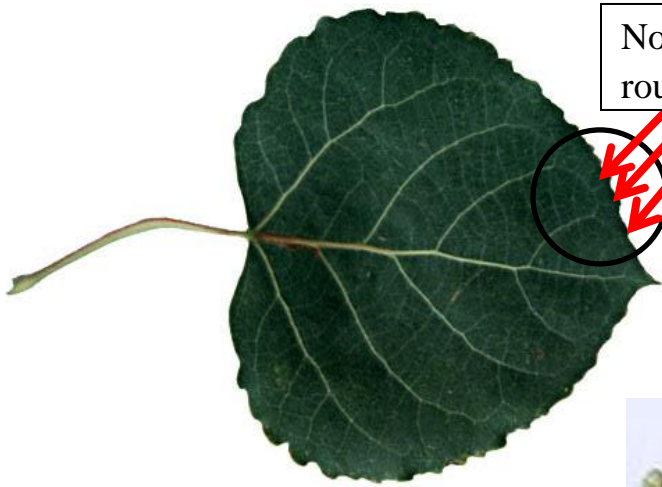
Smooth grey veins in between rough bark

Alternate Branching





# Quaking Aspen (*Populus tremuloides*)



Note the small rounded teeth

Heart Shaped Leaf

Smooth white bark, furrows with age.  
**Does not peel easily**

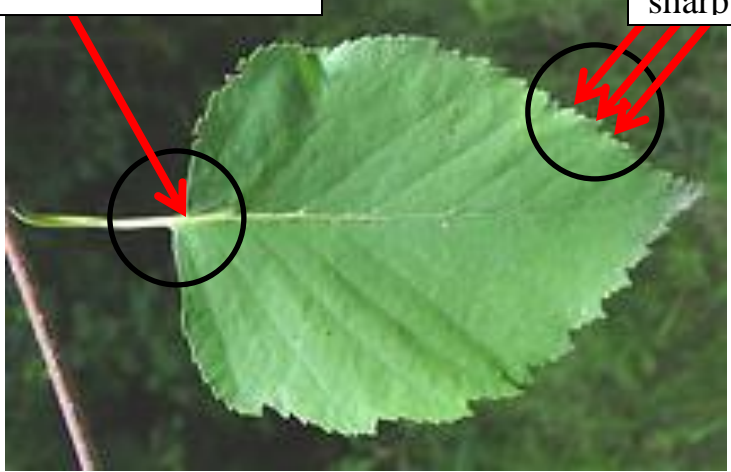


Alternate Branching

# Paper Birch (*Betula papyrifera*)

Often uneven where petiole meets leaf

Note the small sharp teeth



Smooth white bark  
**Peels easily**



Alternate Branching

# Coniferous

## Eastern Hemlock (*Tsuga canadensis*)



Leaves have white underside



Alternate Branching

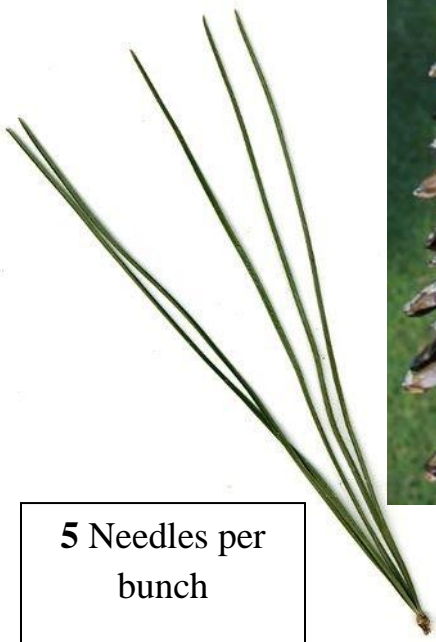


← Young Cone  
Older Cone →



Tree attacked by Hemlock Woolly Adelgid

## White Pine (*Pinus strobus*)



5 Needles per bunch



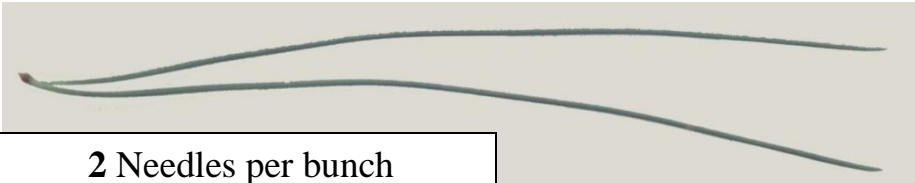
Slender cones up to 6 inches long

Darker bark with deep furrows





# Red Pine (*Pinus resinosa*)



2 Needles per bunch

Scaly Bark,  
red color underneath and  
between plates



Smaller cone,  
Scales fold at end

