

2023 Forestry Study Guide

Identification

1. Parts of a tree- including tissue of roots, stem, and leaves
 - i. [Parts of the tree](#)
 - b. Identify by leaves, bark, flower, or seeing for trees listed on [MN DNR website](#)
2. [Forest Types in MN](#)

Forest Ecology

3. [Forest Structure](#)
 - a. Canopy, understory, shrub, ground
 - b. Regeneration and competition
4. [Wildlife](#) Benefits
 - a. [Stewardship](#)
5. [Forest Health](#)
 - a. Invasive species
 - b. Common insects and diseases
 - c. [Climate Change](#)
 - i. How it will affect [MN forests](#)
6. [Wildfire](#)



Tree Uses

7. [Products](#)
8. [Urban Landscape trees](#)- economic, social, threats and values to communities
9. Watershed protection- benefits of trees near water
 - a. [Buffer zones](#) and filter strips

Forest Management

10. Harvesting ([Silviculture Techniques](#))
 - a. Thinning, shelterwood, clearcutting, seed tree, single tree or group selection
 - i. Even-aged, uneven-aged
 - b. Types of [equipment](#) used by logger
11. Tree measurements and [tools used to collect each](#)
 - a. Basal area (prism or angle gauge)
 - b. Diameter (diameter tape)
 - c. Height (clinometer)
 - d. Age (increment borer)

Links:

Forestry A Primer:

https://files.dnr.state.mn.us/forestry/education/primer/allaboutminnesota'sforestsandtrees_aprimer.pdf
<https://www.fs.usda.gov/managing-land/national-forests-grasslands>

Tree ID: <https://www.dnr.state.mn.us/trees/native-trees.html>

Parts of a tree: <https://www.dnr.state.mn.us/forestry/education/foresttreasures/partsofatree.html>

MN Trees & Tree Facts: use left side table of contents for content

<https://www.dnr.state.mn.us/forestry/education/foresttreasures/index.html>

<http://files.dnr.state.mn.us/forestry/education/foresttreasures/minnesota-forest-treasures.pdf>

Forest Health:

https://www.dnr.state.mn.us/treecare/forest_health/index.html

<https://www.fs.usda.gov/managing-land/invasive-species>

https://mn.gov/frc/assets/Climate_Change_and_Minnesota's_Forests_2020_tcm1162-471265.pdf

https://forestadaptation.org/sites/default/files/ClimateChangeFieldGuide_NMNForests_HiRes.pdf

Forest Management/Silviculture Techniques:

<https://www.maine forestry.net/timber-harvest-methods>

<https://extension.unh.edu/resource/timber-harvesting-and-silviculture>

<https://www.youtube.com/watch?v=j72u9i8IAjY>

<https://www.youtube.com/watch?v=uWQg2iBM4aY>

Wildfire:

<https://www.rayonier.com/stories/how-forest-management-prevents-forest-fires/>

Tree Products:

<http://www.gatrees.gov/resources/publications/WhatDoWeGetFromTrees.pdf>

<https://sciencing.com/what-products-are-made-from-trees-12217179.html>

Urban:

<https://www.dnr.state.mn.us/forestry/urban/index.html>

<https://www.minneapolis parks.org/park-care-improvements/trees/>

<https://www.scfc.gov/management/urban-forestry/>

Riparian Buffers:

<https://extension.umn.edu/agroforestry/riparian-buffers>

Tools:

<https://www.nnrg.org/fieldguidetoforesterstools/>