

Forestry Learning Objectives and Resources

1. Identify common trees without a key and identify specific or unusual species of trees or shrubs through the use of a key.
 - ◆ *Identifying Trees of Michigan* – MSU Extension
http://www.oakgov.com/msu/Documents/publications/e2332_id_trees.pdf
2. Understand forest ecology concepts and factors affecting them, including the relationship between soil and forest types, tree communities, regeneration, competition, disturbance and succession.
 - ◆ Forest Ecology Management Series – MSU Extension
 - Unit One: Forest Terminology and Ecological Systems*
<http://web2.msue.msu.edu/bulletins/Bulletin/PDF/E2635.pdf>
 - Unit Two: Site Conditions and Forest Cover*
<http://web2.msue.msu.edu/bulletins/Bulletin/PDF/E2636.pdf>
 - Unit Three: Soils and Site Productivity*
<http://web2.msue.msu.edu/bulletins/Bulletin/PDF/E2637.pdf>
 - Unit Four: Nutrients, Cycling and Tree Growth*
<http://macd.org/ME/Resource%20Material/Forestry/Forest%20Ecology%20Series%20-%20Unit%20Four.pdf>
 - Unit Five: Measuring Site Quality*
<http://web2.msue.msu.edu/bulletins/Bulletin/PDF/E2639.pdf>
 - Unit Six: Tree Parts and Functions*
<http://macd.org/ME/Resource%20Material/Forestry/Tree%20Parts%20and%20Functions.pdf>
 - Unit Seven: Continuous Change in the Forest*
<http://web2.msue.msu.edu/bulletins/Bulletin/PDF/E2641.pdf>
3. Understand the cause/effect relationship of factors affecting tree growth and forest development (climate, insects, soils, microorganisms, etc.).
 - ◆ *Forest Soils* – Temperate Forest Foundation
<http://www.forestinfo.org/sites/default/files/pdfReports/05-4ForestSoil.PDF>
4. Understand how wildlife habitat relates to forest communities, forest species, forest age structure, snags and den trees, availability of food, and riparian zones.
 - ◆ *Managing Michigan's Wildlife* – (This entire document is useful, for this particular objective focus on the following sections: *Introduction to Forest Management Timber Harvesting, Forest Openings*)
http://www.michigandnr.com/publications/pdfs/huntingwildlifehabitat/landowners_guide/Introduction/TOC.htm
http://www.michigandnr.com/publications/pdfs/huntingwildlifehabitat/landowners_guide/Resource_Dir/Acrobat/Introduction_and_Overview.PDF
 - ◆ *Forest Management Guidelines for Michigan: Wildlife Habitat* – Michigan Society of American Foresters
<http://michigansaf.org/Business/MSAFguide/Wildlife.htm>
 - ◆ *Working Trees For Wildlife* – USDA National Agroforestry Center
<http://nac.unl.edu/documents/workingtrees/brochures/wtw.pdf>
5. Understand the value of trees in urban and suburban settings and factors affecting their health and survival.
 - ◆ *Working Trees for Communities* – USDA Forest Service
<http://nac.unl.edu/documents/workingtrees/brochures/wtc.pdf>

- ◆ *The Right Tree for the Right Place* – Tree City USA
<http://www.arboday.org/programs/treecityusa/bulletins/documents/004-summary.pdf>
 - ◆ *Livable Communities and Urban Forests* – Local Government Commission
<http://www.lgc.org/urban-forests>
6. Understand how the following issues are affected by forest health and management: biological diversity, forest fragmentation, air quality, rural development, fire and recreation.
7. Understand basic forest management concepts and tools such as: how various silvicultural practices are utilized, the use of tree measuring devices, use of technology, and best management practices.
- ◆ *Tree and Forest Measurement* – Agroforestry
<http://www.agroforestry.net.au/edit/pdfs/Farmers%20Forest%20Chapter%205%20Tree%20and%20forest%20measurement.pdf>
 - ◆ *Forest Resource Management Terminology* – MSU Extension
[http://macd.org/ME/Resource%20Material/Forestry/Forest%20Resource%20Mngmt.%20Terminology%20NCR478%20\(rev.%202006\).pdf](http://macd.org/ME/Resource%20Material/Forestry/Forest%20Resource%20Mngmt.%20Terminology%20NCR478%20(rev.%202006).pdf)
 - ◆ *Tree Measurement Types & Methods*
<http://macd.org/ME/Resource%20Material/Forestry/Forest%20Ecology%20Series%20-%20Unit%20Six.pdf>
 - ◆ *Water Quality Best Management Practices on Forest Lands* – MSU Extension
<http://web2.msue.msu.edu/bulletins/Bulletin/PDF/E2770.pdf>
 - ◆ *Forest Management Guidelines for Michigan* - MI Society of American Foresters
<http://michigansaf.org/Business/MSAFguide/MainPage.htm>
 - ◆ *How Much Lumber in that Tree?* MSU Extension
<http://web2.msue.msu.edu/bulletins/Bulletin/PDF/E2915.pdf>
8. Identify complex factors which influence forest management decisions (economical, social, ecological and urban interface).
9. Apply silviculture concepts and methods to develop general management recommendations for a particular situation and management goals.
- ◆ *Forest Management Guidelines for Michigan: Silvicultural Systems* – Michigan Society of American Foresters
<http://michigansaf.org/Business/MSAFguide/SilvSystems.htm>
 - ◆ *Reforestation* – Temperate Forest Foundation
http://www.forestinfo.org/teachers_tools/complete_list#R

Additional Internet Resources for Forestry

USFS <http://www.fs.fed.us/>

Michigan Forests Forever Teachers Guide <http://mff.dsisd.net/>

Project Learning Tree – PLT <https://www.plt.org/>