

# 2024 MN State Envirothon

## Forestry study Guide/Outline



### Identification

1. Be familiar with the variety of trees in Minnesota  
(<https://www.dnr.state.mn.us/trees/native-trees.html>)
2. Understand how to use a dichotomous key for identification  
(<https://kids.britannica.com/students/article/dichotomous-key/624999>)

### Forest Management Related to Climate Change

1. Understand resistance, resilience, and transition management strategies  
(<https://extension.umn.edu/natural-resources-news/managing-forests-future>)
2. Understand the types and reasons for assisted migration of trees  
(<https://www.fs.usda.gov/features/traveling-trees>)  
  
(<https://apnews.com/video/trees-washington-plants-california-climate-change-0da5874499bc45cd9d5d17f957489eb9>)

### Insect Impact on Forests

1. Spruce Budworm  
(<https://extension.umn.edu/forest-pests-and-diseases/eastern-spruce-budworm>)  
  
([https://www.wjfw.com/spruce-budworm-defoliation-spreads-in-some-northwoods-counties/video\\_4b56822e-d7fb-52f5-801e-f7856fcde4d2.html](https://www.wjfw.com/spruce-budworm-defoliation-spreads-in-some-northwoods-counties/video_4b56822e-d7fb-52f5-801e-f7856fcde4d2.html))
2. Impact of Emerald Ash Borer on black ash swamps  
(<https://twin-cities.umn.edu/news-events/potential-impacts-emerald-ash-borer-wildlife-black-ash-wetlands>)  
  
(<http://www.emeraldashborer.info/blackash>)

### Benefits of Forests

1. Top Benefits of Trees (<https://www.dnr.state.mn.us/trees/benefits-trees.html>)

### The Sugarbush

1. Traditional & current ways of tapping trees and making syrup  
(<https://cms9files.revize.com/redcliffband/Document%20Center/Division/THPO/Sugarbush/Sugaring%20How%20to%20Guide%20-%20FINAL.pdf>)  
  
(<https://extension.umn.edu/my-minnesota-woods/prepping-syrup-season>)

## Trees in your Backyard

- 1) What should you consider when planting a tree?  
(<https://www.treesaregood.org/treeowner/plantingatree>)