

Forest Ecology and Tree ID

October Homeschool Class at Cedar Creek Ecosystem Science Reserve

Although Minnesota is renowned for its lakes, only 8.4% of the state's area (7302 square miles) is covered in water. Compare that to the 31.3% (27187 square miles) of the state that is forested! Our deciduous and conifer forests contribute hugely to our economy, ecology, recreation, and quality of life. Come learn about the factors that structure our forests and how to identify common tree species, and practice the techniques scientists use to study forested ecosystems!

Cedar Creek's newest long-term experiment, the Forests and Biodiversity experiment, studies the impact of different diversity treatments on forest growth, disease spread, health and structure. One of our oldest experiments focuses on the role of fires in forested ecosystems. Today's class will include a mix of indoor instruction, outdoor investigation, visits to long-term experiments and science games. Come prepared to learn lots and have a great time!



By the end of the day, students will be able to:

- Describe and model the basic structure of a forest.
- Explain the process of succession and how scientists study this slow process.
- Independently use a dichotomous key.
- Identify Minnesota trees from their leaves and bark.
- Explain the physical structure of a tree and identify xylem, phloem, cambium and bark layers in a tree cookie.
- Estimate the height and age of a tree using tools they constructed themselves.
- Examine some of the issues associated with carbon sequestration.
- Describe how scientists study forests in field settings – both natural experiments and manipulated experiments.
- Explain ways forests are important to Minnesotan stakeholders.