



G-E-T High School Curriculum
Align, Explore, Empower
Scope and Sequence
Forestry

Unit 1 - Investigate Wisconsin Forests

Length of Unit - 1-2 weeks

- Students will explore the history of use and misuse of our forest along with identifying types and characteristics of major forest types.

In this unit, students will ...

Discover how history of use and misuse has led to modern multiple use forestry management. Students will also be able to identify the major forest types in Wisconsin.

Standards for Forestry

EHS1.b.6.h: Communicate the results of an investigation of current issues' effects on social, economic and ecological systems.

EHS1.a.12.h: Evaluate the impact of personal choices on the interactions or interdependency between natural and human-built systems.

EHS1.c.8.h: Explain the factors that contribute to the development of social, economic and ecological systems issues and policies.

Unit 2 - Understanding Tree Biology and Growth

Length of Unit - 1 week

In this unit, students will ...

Use tree biology concepts and apply it to pruning and tree growth.

Standards for Forestry

PS1.d.7.h: Relate the principles of primary and secondary growth to plant systems.

PS1.d.5.h: Define primary growth and the role of the apical meristem.

PS1.d.6.h: Explain the process of secondary plant growth.

PS1.b.10.h: Identify root tissues and explain the pathway of water and nutrients into and through the root tissues.

PS1.b.5.m: Identify the components and the functions of plant stems.

PS1.b.4.m: Identify the components, the types and the functions of plant roots

PS2.a.1.e: Define the elements that plants need to grow successfully.

PS3.b.15.h: Demonstrate proper techniques to control and manage plant growth through mechanical, cultural or chemical means.

PS1.b: Apply knowledge of plant anatomy and the functions of plant structures to activities associated with plant systems
PS3.b.16.h: Create and implement a plan to control and manage plant growth

Unit 3 - Investigate Silviculture Methods Used in Forestry

Length of Unit - 2 weeks

- Students will study different silvicultural methods when planning and managing different tree species and forest types.

In this unit, students will ...

Use forest measurement to evaluate a stand of trees. Using approved silviculture practices students will plan and determine management decisions.

Standards for Forestry

NR1.b.11.h: Compare and contrast trees and other woody plants.
NR2.c.14.h: Develop and conduct a timber stand improvement (TSI) plan.
PS2.a.1.e: Define the elements that plants need to grow successfully.
PS2.a.2.e: Identify the different ways that land is used to grow plants.
PS2.a.8.h: Design, implement and evaluate a plan to maintain optimal conditions for plant growth.
PS3.b.3.e: Demonstrate proper planting procedures and post-planting care
PS3.b.9.m: Monitor the progress of plantings and determine the need to adjust environmental conditions.
PS3.b.13.h: Prepare and implement a plant production schedule based on predicted environmental conditions.
PS3.d.3.h: Prepare and implement a plan for an agricultural enterprise that involves practices in support of sustainable agriculture.
PS4.a.6.h: Select plants, hard goods, supplies and other materials for use in a design based on a range of criteria.
NR3.a.15.h: List and describe uses of tree species and determine when to harvest forest products.

Unit 4 - Measurements used in Forest Management

Length of Unit - 1 week

- Students will use different measurement tools to monitor and get data that will aid in forest management. Students will use a cruising stick, compass, basal tool, to determine such things as board feet, cords, stocking rates and harvest locations.

In this unit, students will ...

Students will use forest measurement to evaluate a stand of trees.

Standards for Forestry

NR1.b.11.h: Compare and contrast trees and other woody plants.
NR2.a.9.h: Locate natural resources using a land survey and employ a Global Positioning System and/or Geographic Information Systems technologies to inventory features in natural resource management.
NR2.b.7.h: Discuss procedures used to conduct resource inventories and population studies.

Unit 5 - Identify Important Wisconsin Forest Trees and Their Growth Patterns

Length of Unit - 1 week

- Students will correctly identify trees important to the forest industry along with their forest habitats and importance to the industry.

In this unit, students will ...

Use a dichotomous key to identify tree species, create a management plan for an important forest tree species.

Standards for Forestry

NR1.b.11.h: Compare and contrast trees and other woody plants.

PS1.a.8.h: Describe the morphological characteristics used to identify agricultural plants.

PS1.a.5.m: Identify major groups of plants based on physiological characteristics.

PS1.a.6.m: Identify agriculturally important plants by common names.

PS1.a.9.h: Identify agriculturally important plants by scientific names

PS1.b.2.e: Match fruit to the plant structure that produces it and compare seeds of plants.