

Trees & Wood Products Module

Objectives

- Students will understand that a tree is made of systems that have structure/function adaptations and interconnections.
- Students will develop the concept of the forest system as it is affected by natural (climate) and human intervention.
- Students will understand that the growth patterns in trees are impacted by climate and environmental conditions and explore the similarities and variations. They will recognize pattern trends of forest stands and climate effects on the tree growth.
- Students will be able to describe the basic steps in tree harvest and explore uses of biomass in production of wood products. Students will have a wider view of the environmental, economic and social impacts of forestry in their communities and in their lives.
- Students will be familiar with the relationship between environment, source and product in the wood industry and explore some of the local social attitudes pertaining to forestry practices.

Colorado Standards

Grade	Subject	Expectation	Module Activity
6 th	Life Science	Changes in environmental conditions can affect the survival of individual organisms, populations, and entire species	Trees Inside and Out Lesson Climate & Tree Rings Lesson
6 th	Earth Systems Science	Earth's natural resources provide the foundation for human society's physical needs. Many natural resources are nonrenewable on human timescales, while others can be renewed or recycled	Harvest Lesson Wood Products Lesson
6 th	Geography	Human and physical systems vary and interact	Climate & Tree Rings Lesson Harvest Lesson Wood Products Lesson
6 th	Oral Expression & Listening	Successful group discussion require planning and participation by all	Summary Lesson
7 th	Life Science	Photosynthesis and cellular respiration are important processes by which energy is acquired and utilized by organisms	Trees Inside and Out Lesson

7 th	Oral Expression & Listening	Small and large group discussions rely on active listening and the effective contributions of all participants	Summary Lesson
7 th	Economics	The distribution of resources influences economic production and individual choices	Harvest Lesson Wood Products Lesson
8 th	Life Science	Human activities can deliberately or inadvertently alter ecosystems and their resiliency	Trees Inside and Out Lesson
8 th	Earth Systems Science	Earth has a variety of climates defined by average temperature, precipitation, pressure, and wind that have changed over time in a particular location	Climate & Tree Rings Lesson

STEM Connections

Science – Students will explore the structure, function, and growth of trees, and how the management and processing of these renewable resources impacts ecological systems.

Technology – Students will understand how different types of technology are used to understand trees and create wood products.

Engineering – Students will consider the characteristics of different materials and explore how biomass materials are made into usable products.

Math – Students will use climate data to identify trends and use geometry, an understanding of volume, and arithmetic to solve problems relating to wood products.