

## Objective

The objective of this lesson is for the student to gain a deeper understanding of trees and their importance in Earth Science.

## Materials and Prep

- Pen and paper
- Access to outdoor space with trees
- Internet access for research

No prior knowledge is required for this lesson.

## Activities

1. Go for a Tree Walk: Take a walk in the outdoor space and observe different types of trees. Encourage the student to take notes or sketch the trees they find interesting.
2. Research Tree Species: Using the internet, have the student research different tree species found in their local area. They should focus on the characteristics, habitats, and benefits of each species.
3. Tree Anatomy: Discuss the anatomy of a tree, including the trunk, branches, leaves, and roots. Have the student draw a labeled diagram of a tree to demonstrate their understanding.
4. Tree Rings: Explain the concept of tree rings and how they can provide information about a tree's age and environmental conditions. Show the student images of tree cross-sections with visible rings, and ask them to analyze and interpret the patterns.
5. Tree Importance: Engage in a discussion about the importance of trees in Earth Science. Talk about their role in carbon dioxide absorption, oxygen production, soil erosion prevention, and providing habitat for various organisms.

## Twelfth Grade Talking Points

- "Trees play a crucial role in maintaining the Earth's ecological balance."
- "The study of trees falls under the field of dendrology, which is a branch of botany."
- "Different tree species have adapted to various habitats and climates, allowing them to thrive in specific regions."
- "Tree rings can provide valuable information about past climates and environmental changes."
- "Trees act as natural carbon sinks, absorbing carbon dioxide and reducing the greenhouse effect."
- "Forests are essential for biodiversity, as they provide habitats for numerous plant and animal species."