★ Tree Trails Curriculum ★

Tree Trails is a conservation education project to enhance outdoor classrooms at schools, nature centers and public parks. The project creates an education trail focused on trees. Students actively participate in selecting trees, mapping and identifying those trees, and then immersing themselves in related topics like tree structure and function, benefits of trees, tree health, history of famous trees, and ultimately producing and participating in a service learning experience.

Tree Trails serves schools in the digital age with a high-tech online, easy-to-use, educationally sound project that gets kids outside and active in the environment. Tree Trails includes 10 lesson modules and provides a research-based instructional approach that integrates language arts, mathematics, science, social studies, technology and state testing measures, STAAR/TEKS, with online and outdoor activities to create learning forests at schools.

Texas A&M Forest Service and Texas Urban Forestry Council are excited to expand their educational role directly into K-12 school classrooms with this program. Both organizations believe that environmental awareness is a critical component of youth education that leads to improved stewardship of our natural resources.

Lesson Modules

Tree Trails lesson modules are free and accessible online. An online GIS mapping system allows you to enter the tree trail data and displays the trails.

The modules are:

One:	Map a Tree Trail
Two:	Tree Identification
Three:	Tree Measurement
Four:	Tree Structure and Function
Five:	Benefits and Values of Trees
Six:	Diversity of Species and Ecosystems
Seven:	Tree and Forest Health
Eight:	Tree History
Nine:	Urban Forestry
Ten:	Student Service Leader

Lesson Format

The curriculum is aligned to Texas Essential Knowledge and Skills (TEKS) in reading, mathematics, science, social studies and technology application and to the State of Texas Assessments of Academic Readiness (STAAR) tests of science, mathematics and reading.

Lesson modules are formatted in an easy to use, student-centered, instructional approach that is based on best practices and strategies. The instructional procedures follow the 5 E's learning cycle (R.W. Bybee). The 5 E's are excite, explore, explain, elaborate and evaluate.

Mapping Application texasforestinfo.com

Teacher Lessons and Resources tfsweb.tamu.edu/treetrails

Tree Trails curriculum was developed by Texas A&M Forest Service in cooperation with Texas Urban Forestry Council and was supported by a grant from the USDA Forest Service.

Texas A&M Forest Service

★ Lesson Modules ★

One: Map a Tree Trail

By understanding maps, students get a sense of where they are in relation to their home, school and neighborhood. Trees are often important landmarks along the way.

Goal: Students will select a minimum of three trees for the Tree Trail.

Two: Tree Identification

Tree identification is a critical first step towards an understanding of 'diversity.' By learning the names of trees, we come to appreciate them.

Goal: Students will identify their Trail Trees and explain how identification relates to tree knowledge.

Three: Tree Measurement

Tree measurement is fundamental to the practice of forestry. Foresters count trees and measure trees. With just a few basic measurements, we can assign values to trees and compare them to each other.

Goal: Students will measure trees and explain how measurement is used to place value on trees and forests.

Four: Tree Structure and Function

Trees are living organisms with many specialized structures – leaves, roots, wood, and the living cells that connect them. Understanding how trees are constructed and grow is essential to care for trees and calculate the benefits that trees provide.

Goal: Students will explain the structure and function of tree parts.

Five: Benefits and Values of Trees

Advances in the science of urban forestry allow us to assign monetary values to a wide range of benefits that trees in urban areas provide. As trees grow, these values rise – the only part of the built environment of our cities that does so!

Goal: Students will determine the benefits of trees and calculate their value.

Six: Diversity of Species and Ecosystems

Promoting 'diversity' is a basic principle of urban forestry. A diverse forest implies a more resilient forest, since disease or insect outbreaks likely won't affect every tree all at once.

Goal: Students will evaluate how the diversity of species affects the ecosystem.

Seven: Tree and Forest Health

History has shown us the risk of planting too many of the same species in the urban forest. Cities and forests have lost many millions of trees to foreign or species-specific diseases and insect pests. Exotic tree species can sometimes invade our forest landscapes and crowd out native species.

Goal: Students will demonstrate ways to keep trees and forests healthy.

Eight: Tree History

Trees fascinate us because the oldest among them span many human generations. Trees can be a living link to our past, or may be planted by the current generation as memorials to important events or people in the community.

Goal: Students will research the history of a tree(s) and make connections to the past.

Nine: Urban Forestry

The trees around us – those that make up the 'urban forest' – are a reflection of the community itself. Cities often organize the protection, planting and care of trees in public spaces, through a Tree Board or other volunteer group. Tree City USA is one symbol of a community that cares about its trees.

Goal: Students will create a Campus Tree Trail Care Plan.

Ten: Student Service Leader

Arbor Day is the celebration of trees where we live, work, learn and play. Communities set aside one day each year to plant and care for trees, usually on public property, such as a school or park. Students can provide the leadership for a project to plant or care for trees – either on school grounds or in the surrounding community.

Goal: Students will design and conduct a service learning project.