TREE TRAILS

★ 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 other important landmarks along the way.

Goal and Objectives

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

Objectives: Students will

1. Select a variety of trees for their class Tree Trail.
2. Order and chart the selected trees and name their class Tree Trail.
3. Explain why trees are important landmarks that help them know the relation to their school and neighborhood environment.
4. Mark their trees on the Tree Trails online map.
5. Evaluate their *Map a Tree Trail* experience.

Materials

General
- Tablet(s) or computer(s) with internet access
- Projector and screen
- White board or chart paper and markers
- Tree Trails Portfolio, Student Learning Log/Journal

Handouts
- Tree Trails Data Sheet

Activity Materials
- Map of school, from either Map My Property or student created

Time and Internet Links

Preparation Time: 2 hours
Instructional Time: 2-3 sessions, 45 minutes each

- Tree Trails
  www.treetrails.org
- Instructional Strategies, KWL graphic organizer
  http://schools.spsd.sk.ca/curriculum/instructionalstrategies/
- Getting Started
  http://tfsweb.tamu.edu/treetrails/
- Map My Property
  http://tfsfrd.tamu.edu/MapMyProperty/
- Texas Forest Information Portal
  http://texasforestinfo.tamu.edu/
- Sample Tree Trail
  www.treetrails.org
  Search By, Trail Name, enter: Heights HCBTR Trail

Instructional Procedures

I. Engage/Excite

A. Large Group Discussion: Conduct a discussion about what it was like to discover America; i.e., did the early pioneers have a plan to explore the new land? Did they have a map? Did they create a map? How did they map their new discoveries? Talk about the significance of being the first to map a country, an ocean, an island, etc. and how it helped those explorers who followed.

B. Large Group Discussion continued: Connect to students' prior knowledge by asking what they know about maps. Ask students what is the purpose of maps. Ask students to name different kinds of maps. Ask how are maps used. List their responses on a chart. If students do not name a school or campus map, ask if they know what tells us about our school and its landscape?

C. Large Group Discussion continued: Develop a KWL Chart and include their responses on the "What we *Know*" portion of the chart.

II. Explore

A. Large Group Discussion: Lead a discussion about the kind of map that would help us relate more to the landscape and school environment. Discuss how and why a map of trees on the school landscape could be important in understanding our relationship to our community, its resources and landmarks. Record the responses. Tell students that some trees have been mapped like the Texas A&M Forest Service office in Houston and other trails on the online application for Tree Trails.

B. Large Group Discussion continued: Prompt students to describe what they need to know and do to develop a Tree Trail map. Continue the KWL chart by adding the "What we *Want* to Know and Do" on a chart/whiteboard. Encourage them to include: work in small groups, explore the trees on their school landscape, use technology to map the trail, select a variety of trees and work cooperatively. List their responses and keep the chart available for additions and future reference.

Teacher Tip: If there are not enough trees on campus, adopt another landscape in close proximity and gain necessary permission to use the area.

III. Explain

A. Small Group Activity: Have students move into groups of three to give them greater interaction with their tree. (More students in a group would not be conducive to activities.) Tell students that each group will adopt one tree for the class Tree Trail. Students may give their tree group a name, such as the Investigators. Once each group has selected their name, have them share their names with the class.

Teacher Tip: Ideally these groups should stay the same throughout the modules. However, if it becomes necessary to change the composition of group members, the group's name should stay the same.

B. Large Group Discussion: Ask students to start thinking of a name for their class Tree Trail which will

III. Explain continued

be a name for the trail of all the trees. For example: Investigator group + the Explorer Group + all the other groups = the class Tree Trail. Encourage the students to select a name that represents this new learning adventure of creating a Tree Trail. The class Tree Trail name will be published on the Tree Trails website.

C. Large Group Discussion: Prompt a discussion about how technology is used to make maps. Project the Texas Forest Information Portal website on a screen. Have students follow along. Open Tree Trails. Let them know this is the website where they will create their Tree Trail.

Teacher Tip: If not conducting the following Small Group Activity, open some of the other applications on the site and explore together as a group.

D. (Optional) Small Group Activity: Regroup students into their Tree Trail groups of three. Provide each group with computer(s). Provide time for students to get acquainted with the Texas Forest Information Portal website. Let them explore the other different applications on this website too, such as Forest Ecosystem Values, Forest Distribution, etc. Invite them to investigate the Tree Trails application and its different tabs and sections. Conduct a discussion about what they found and enjoyed.

E. (Optional) Individual Activity: Have the students take the *Map A Tree Trail* pretest.

Teacher Tip: Explain that the test is only to make sure the learning activities are appropriate and not something they already know. The pretest will help them know more about what they will be learning.

To administer the tests by paper, copy from the teacher lesson module. To administer the test electronically, recreate the test in an online survey program. Free programs allow the creator to see results from a class set.

IV. Extend/Elaborate

A. Large Group Discussion: Explain the next steps to map or locate trees and tell them how they will use technology to help them create their maps.

Teacher Tip: Select a method to locate and mark selected trees. This could be a printed map/chart of the school or student generated.

To make a printed map of the school or another selected location, open the Map My Property website, then enter the address and different information you want to put on the map. If using this method, print a copy of the map for each group.

Another option is to allow your students to create a map themselves and mark significant landmarks and trees.

Note: A Tree Trails phone or tablet stand-alone application is available on Apple iTunes applications. However, it requires the user to enter all data for each tree when the tree is marked on the map. It does not allow the user to enter partial data as these first three modules are written. Note, though, that it is the only option for adding a photo of a tree into the online trail. It is recommended to use the Apple iTunes application after the entire trail and each tree's data is collected, after Module Three.

IV. Extend/Elaborate continued

B. Large Group Discussion continued: Ask each group to select a different tree or, if there are not enough varieties of trees and it is necessary to select the same type of tree more than once, choose a different size, condition, etc. Discuss how the groups will select their trees. Discuss the need to cooperate in the selection of each tree.

Teacher Tip: You may need to devise a method to select which group will explore each tree (draw numbers, let students choose, etc.).

C. Small Group Activities: Take students outside to select trees for their class Tree Trail. Next, have each group find or plot all the trees on their map. Now, as a class, number the trees in the order (1, 2, 3, 4, etc.) that each tree will be visited on the trail. After the trees are located and numbered, assign each tree to a Tree Trail group.

D. Large Group Discussion: Return to the classroom and decide on a name for the class Tree Trail. The class name will be the name published online and available for other users to see. Encourage the students to select a name that represents their school and classroom.

E. Large Group Discussion continued: Now is the time that the class Tree Trail will be entered into the online application. Have the students follow the computer projection of the Texas Forest Information Portal website. Open Tree Trails, zoom to the trail location on the map, choose Add Trail and follow the onscreen instructions. Begin marking the trees by asking the group with the first tree to provide the location of their tree. Select that location on the map to add the tree. Continue until all trees are entered in numerical order. After entering the last tree, double tap to end the trail. Then, select the green trail line to enter the name of the class Tree Trail and choose the type as School Trails. Once these steps are completed, you can save the trail.

F. Individual Activity: Provide each student with a Tree Trails Data Sheet. Have them complete their Name, Group Name, School/Organization, Type, Tree Order #, and start a tally of Hours Involved. Tell them they will complete each section on the data sheet during the next two modules. When their chart is finished and the information is entered on the Tree Trails website, their class Tree Trail will be complete for all to see. They can keep the data sheets in a Tree Trails Portfolio.

G. Large Group Discussion: Conclude the Tree Trail mapping activity by reviewing the discussion about their Tree Trail as part of the landscape. Make a chart entitled "Trees in Relation to our Landscape and Environment." Ask how their trees form a reference point and help us relate to our landscape. Record their responses.

H. (Optional) Individual Activity: Students may enter these responses in their Learning Log.

V. Evaluate

A. Small Group Activity: Move students into small groups and ask them to reflect over their learning experience. Assign a secretary/recorder for each group to generate the steps they used in the development of their Tree Trail.

B. Large Group Activity: Have each group post their charts and share. Ask the students to analyze each group's synopsis. Then conduct a "Challenge" session by offering each group a chance to respond about any steps left out or any that need further explanation.

V. Evaluate continued

C. Large Group Activity continued: After the class has concluded their challenges, combine all the steps taken in the process of selecting, charting and pinpointing on the website, and use their information to complete the KWL chart for "What we *Learned*."

D. (Optional) Individual Activity: Have students take the *Map A Tree Trail* posttest. Have them compare their results to self-evaluate what they learned and what they did not know.

Teacher Tip: You may use the results to determine the need for Extra Mileage/Attention.

E. (Optional) Individual Activity: Have students use their Learning Log to enter their individual learning phrases or sentences and reflect on Module One: Map a Tree Trail.

VI. Extra Mileage/Attention

Extra Mileage: Regroup students using the expert model; i.e. allow leader to extend a discussion about how Tree Trail projects across the state could help increase awareness about the value of our trees and how they contribute to the landscape. They may post their ideas in their Learning Logs labeled Module One: Map a Tree Trail.

Extra Attention: Have students work in pairs to retell the process of developing their class Tree Trail. Discuss what was easy and what was more difficult. Regroup students according to the different things they found difficult. Have students enter their solutions for making the task easier and post solutions in their Learning Logs.

TEXAS A&M
FOREST SERVICE

Map A Tree Trail
Directions: Answer the following questions by rating your response 1-5, with 5 being the highest.

Key: 1 = Not Sure   2 = Poor   3 = OK   4 = Good   5 = Great

1.	I know how to develop a tree trail.	1	2	3	4	5
2.	I know how to map trees on a tree trail.	1	2	3	4	5
3.	I like to work in small groups to learn.	1	2	3	4	5
4.	Learning logs help me use what I learn.	1	2	3	4	5
5.	I like learning activities that are outside.	1	2	3	4	5
6.	I can use technology to learn about trees.	1	2	3	4	5
7.	I know how maps tell us about our land.	1	2	3	4	5
8.	I can find my school online on the Texas Forest Information Portal website.	1	2	3	4	5
9.	I am interested in knowing more about trees.	1	2	3	4	5

Comments:

Learning Log

Use this Learning Log to write about your reflections, concerns, questions, responses, and just to add notes about your module experience. Each time you sign into your Learning Log, record the date and the Module number you are responding. If you have more than one entry for the same module, sign in again with a different time.

Tree Trails Data Sheet

Name _____

Group _____

School / Organization _____

Trail Name _____

Trail Type ☐School ☐Nature Center ☐Park ☐Other

Hours Involved _____

Tree Order #	Latitude (decimal degrees)	Longitude (decimal degrees)	Tree Species	Circumference (inches)	Diameter (inches)	Height (feet)

Crown Spread (feet)	Condition Rating (Good Fair Poor)	Comments

Tree Order #	Latitude (decimal degrees)	Longitude (decimal degrees)	Tree Species	Circumference (inches)	Diameter (inches)	Height (feet)

Crown Spread (feet)	Condition Rating (Good Fair Poor)	Comments

Tree Order #	Latitude (decimal degrees)	Longitude (decimal degrees)	Tree Species	Circumference (inches)	Diameter (inches)	Height (feet)

Crown Spread (feet)	Condition Rating (Good Fair Poor)	Comments

Tree Order #	Latitude (decimal degrees)	Longitude (decimal degrees)	Tree Species	Circumference (inches)	Diameter (inches)	Height (feet)

Crown Spread (feet)	Condition Rating (Good Fair Poor)	Comments

Tree Order #	Latitude (decimal degrees)	Longitude (decimal degrees)	Tree Species	Circumference (inches)	Diameter (inches)	Height (feet)

Crown Spread (feet)	Condition Rating (Good Fair Poor)	Comments

Tree Order #	Latitude (decimal degrees)	Longitude (decimal degrees)	Tree Species	Circumference (inches)	Diameter (inches)	Height (feet)

Crown Spread (feet)	Condition Rating (Good Fair Poor)	Comments

Tree Order #	Latitude (decimal degrees)	Longitude (decimal degrees)	Tree Species	Circumference (inches)	Diameter (inches)	Height (feet)

Crown Spread (feet)	Condition Rating (Good Fair Poor)	Comments