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Designing Collaborations Between Community Based Organizations and Schools to Produce Curriculum Models for Service-Learning Programs (Tree Trust)

Tree Trust

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Designing Collaborations Between Community Based Organizations and Schools to Produce Curriculum Models for Service-Learning Programs

Purpose of project, as stated in RFP:

1. To connect community based organizations with schools to produce curriculum models that focus on the learning activities in the community.
2. To produce curriculum models that demonstrate how the learning in the community meets Minnesota graduation standards contained in the basic skills and Profile of Learning.

NSLC
c/o ETR Associates
4 Carbonero Way
Scotts Valley, CA 95066

Tree Trust Performance Package

Tree Trust's T.R.E.E.S. for TEENS program is a curriculum-based, school-to-work program, that emphasizes on the environment, and integrates classroom education with community service, service learning, and local resources.

Content Standard: People and Cultures

Level: High School

Title of Package/Activity: Community Tree Planting

Summary of Statement of Content Standard

A student shall demonstrate an understanding of the relationship between organizations and the communities they serve through direct service or experience.

Summary of Service-Learning Activity

Tasks/Activities

1. Research the social and economic benefits of community forestry.
 - a. Generate questions to learn about the health, economic and social benefits of community forestry
 - b. Discuss impacts in community groups and large urban areas
 - c. Research written information
 - d. Determine how the benefits apply to the neighborhood
 - e. Discuss energy conservation benefits
 - f. Organize observations about the neighborhood-safety & property value
 - g. Compile and organize information using a Data Sheet
 - h. Synthesize and develop conclusions
 - i. Report on findings
2. Select community tree planting project.
 - a. Create an RFP (Request for Proposal) for community projects
 - b. Create a database of community organizations eligible for tree planting
 - c. Develop survey form to review community based projects
 - d. Interview prospective groups
 - e. Contact organizations who will receive assistance with a planting project
3. Learn proper planting techniques.
 - a. Discussion on how to select a quality tree
 - b. Discuss the importance of site selection
 - c. Research what equipment is needed to plant a tree
 - d. Collect information, compile, and organize steps for proper tree planting
 - e. Demonstrate proper planting techniques
4. Perform planting project.
 - a. Work with selected organization in planting process
 - b. Follow landscaping plan submitted as part of RFP

Skills and Knowledge Goals

This program provides opportunities for students to learn about urban forestry and creates options for careers and life long learning. Through participation in these environmental projects students will learn to transfer knowledge and skills into work that benefits neighborhoods, fosters community pride; strengthens human relationships and biological systems; and forms sustainable partnerships that benefit students, schools, and neighborhoods.



Memo

To: Michelle Kamenov

From: Gail Steinman 

Date: 09/24/98

Re: Designing Collaborations Between Community-Based Organizations and Schools

Michelle- Attached is a draft the curriculum for your final report. As I mentioned to you over the telephone, we had originally planned to write the entire curriculum outlined in our proposal but because of time constraints, we were only able to do one package.

The performance package that I have enclosed is designed to be used by a school that has formed a partnership with Tree Trust. We feel that this curriculum can not stand alone and establishing partnerships and doing outreach projects is beneficial for students and the community.

If you have any questions please do not hesitate to call me at 920-9326.

TREE TRUST
Performance Package
Minnesota Profile of Learning

Content Standard: People and Cultures Level: High School

Title of Package/Activity: Community Tree Planting

Summary Statement of Content Standard:

Understanding the relationships between organizations and the communities they serve through direct service or experience.

Description of Student Performances:

Task 1: Research the social and economic benefits of community forestry.

Task 2: Select community tree planting project.

Task 3: Learn proper planting techniques.

Task 4: Perform planting project.

FINAL ACHIEVEMENT: Use the following scoring criteria when evaluating student performance.

Scoring Criteria

- 4 - Performance on the part(s) of the standard addressed in this package achieves and exceeds expectations of high standard work.
 - 3- Performance on the part(s) of the standard addressed in this package meets the expectations of high standard work.
 - 2 - Work on the part(s) of the standard addressed in this package has been completed, but all or part of the student's performance is below high standard level.
 - 1 - Work on the part(s) of the standard addressed in this package has been completed, but performance is substantially below high standard level.
- No package score is recorded until ALL parts of the package have been completed.

PERFORMANCE PACKAGE TASK 1
Community Tree Planting

Content Standard: People and Cultures

Level: High School

Specific Statement(s) from the Standard:

What students should know:

1. Understand the ramifications of selected community or environmental issues, events or services for specific populations.

What students should do:

1. Assess and evaluate the impact of an issue event or service on a target population.

Product(s):

- Create a list of the benefits of community forestry.
- Written summary of benefits of community forestry.

Task Description:

Overview: Research and gather information about the economic and social benefits of community forestry. Record the findings on the enclosed data sheet.. Finally, students will write a summary of their findings from the data sheet.

1. Complete *Data Sheet* to determine the benefits of community forestry.

A. In small groups have students discuss both the economic and social benefits of community forestry. Consider the impacts of those in community groups and larger urban areas.

B. After discussions have been completed about the benefits have students work independently or in pairs to find written research on the subject.

Sources for data collection:

- Tree Trust Community Outreach Manual
- Journal of Arboriculture
- American Forests
- Journal of Forestry
- University of Georgia Extension Service Web Site
- USDA Forest Service Web Site
- Internet Searches
- Local Community Forester

2. Tour the neighborhood to determine how the benefits apply to the neighborhood. How do the benefits of community forestry affect you? Do the trees provide energy conservation benefits? Do neighbors feel safe in the neighborhood landscape? Do any of the trees improve property values?

3. Discuss the findings with a partner. Agree to some conclusions about the benefits of community forestry. Summarize your results.

4. Independently or with a partner prepare a written report of your findings.

Special Notes:

The intent of this task to familiarize the students with the benefits of community forestry. If students are unable to submit a written report we would suggest having students submit artwork that would depict the benefits of community forestry.

Resources:

Tree Trust Community Outreach Manual, K. Himanga, D. Jones, J. Monear, G. Steinman, K. Widin Ph.D., 1996 Tree Trust. Guides' community groups through the process of a planting project. The book also provides technical information.

PERFORMANCE PACKAGE TASK 1
Community Tree Planting

Data Sheet of the Benefits of Community Forestry

Health Benefits

Economic Benefits

Social Benefits

SUMMARY:

PERFORMANCE PACKAGE TASK 1
Community Tree Planting

CHECKLIST FOR DATA COLLECTION

The purpose of the checklist is to provide feedback to the student about his/her work relative to the content standard. Have the standard available for reference.

Y=Yes
S= Satisfactory
N=Needs Improvement

<u>Student</u>		<u>Teacher</u>
_____	Participates in discussion of community forestry.	_____
_____	Sources of information are appropriate.	_____
_____	Used multiple sources for finding research.	_____
_____	Summary accurate for findings.	_____
	OVERALL EVALUATION	_____

Overall Comments (information about student progress, quality of the work, next steps for teacher and student, needed adjustments in the teaching and learning processes, and problems to be addressed):

PERFORMANCE PACKAGE TASK 1
Community Tree Planting

CHECKLIST FOR WRITTEN REPORT OF RESULTS

The purpose of the checklist is to provide feedback to the student about his/her work relative to the content standard. Have the standard available for reference.

Y=Yes

S= Satisfactory

N=Needs Improvement

<u>Student</u>		<u>Teacher</u>
_____	Report accurately presents the information and data collected.	_____
_____	Report represents thorough and comprehensive research.	_____
_____	Conclusions are supported with evidence.	_____
_____	Significant issues are described.	_____
	OVERALL EVALUATION	_____

Overall Comments (information about student progress, quality of the work, next steps for teacher and student, needed adjustments in the teaching and learning processes, and problems to be addressed):

PERFORMANCE PACKAGE TASK 2
Community Tree Planting

Content Standard: People and Cultures

Level: High School

Specific Statement(s) from the Standard:

What students should know:

1. Know the purpose and function of public and private organizations and agencies that focus on selected issue, event or service.

What students should do:

1. Suggest, apply and evaluate strategies designed to improve the community through direct service or other authentic experience.

Product(s):

1. Create an RFP (Request for Proposal) for community projects.
2. Create database of community organizations eligible for tree planting.
3. Develop survey form to review community based projects.
4. Students will interview prospective groups.
5. Write letter to groups that will receive assistance with a planting project.

Task Description:

Overview: Create an RFP. Mail RFP to prospective community groups. Develop survey form to review completed RFP's. Write letters to selected groups.

1. Create an RFP (Request for Proposal) for community projects.

- A. Spend time in class discussing what type of information students would need to know about a project.

Example questions to lead discussion:

- Who is eligible?
- Do we want to limit request amounts?
- Do we want to restrict the area?
- Do we want to restrict the types of plants?

2. Create database of community organizations eligible for tree planting.

- A. Work with students to brainstorm groups in the community that might be eligible for a tree planting grant.
Students will also want to contact the local chamber of commerce or local neighborhood group to receive a list of community based organizations in your area.

3. Develop survey form to review community based projects.

4. Students will interview prospective groups.

5. Write letter to groups that will receive assistance with a planting project.

PERFORMANCE PACKAGE TASK 2
Community Tree Planting

CHECKLIST FOR SELECTING TREE PLANTING PROJECT

The purpose of the checklist is to provide feedback to the student about his/her work relative to the content standard. Have the standard available for reference.

Y=Yes
S= Satisfactory
N=Needs Improvement

<u>Student</u>		<u>Teacher</u>
_____	Participates in group brainstorming.	_____
_____	Creates RFP for community based projects.	_____
_____	Database organized in a logical manner.	_____
_____	Community interviews conducted in a professional manner.	_____
	OVERALL EVALUATION	_____

Attach all documents that are relevant to the performance task.

Overall Comments (information about student progress, quality of the work, next steps for teacher and student, needed adjustments in the teaching and learning processes, and problems to be addressed):

PERFORMANCE PACKAGE TASK 3
Community Tree Planting

Content Standard: People and Cultures

Level: High School

Specific Statement(s) from the Standard:

What students should know:

1. Know skills needed in specific organizational settings.

What students should do:

1. Apply strategies designed to improve the community through direct service or other authentic experience.

Product(s):

1. Understand the importance of Right Tree Right Place.
2. Demonstration Tree Planted.
3. Poster outlining proper planting technique.

Task Description:

1. Describe and show students the correct way to plant a tree using the resource information in the *Special Notes Section*.
2. At the end of the lesson have students illustrate on a piece of poster board how to plant a tree and write the steps for planting.

Special Notes:

How do you Select a Quality Tree?

One of the first things to consider during a planting project is to determine if you have the right tree in the right place. Placing in the right tree in the right place is not only important to tree health it is also important to the health of the urban forest. Some of the first decisions that need to be made is whether or not the planting will have all native trees or if there will be a mix of non-native species. Another concern to address is whether there are powerline in the area of the planting. If there are powerlines, short stature trees will have to be selected for that planting situation.

It is very important to plant only quality trees. A quality tree can also be defined as a healthy tree. Healthy trees grow to maturity and provide beauty and enjoyment for generations to come. To choose the best tree for planting, be sure to find the healthiest tree with the best form. Important characteristics to keep in mind when choosing a tree include:

- Looking for a straight, single stem or leader
- Checking for severe pruning cuts
- Inspecting for dead bark, cankers, or signs of disease or insects on trunk or branches
- Avoiding trees with paint on wounds or pruning cuts
- Don't select trees with tight, vertical branches where bark is squeezed between two branches or between trunk and branch

There are other important considerations to bear in mind when selecting a tree. Site selection is as important as tree selection. The Plant Selection and Placement Lesson Plan describes in great detail the characteristics one should look for when choosing a planting site. The planting of a

Quality tree in a poor site is detrimental to the health, maturity and longevity of the tree.

What Equipment is needed to Plant a Tree?

The equipment required to plant a tree is very basic. Most garages or tool sheds should contain a sufficient supply of tree planting equipment. A list of useful equipment for tree planting would include:

- Large Spade or Shovels
- Wheelbarrow
- Heavy Duty Wire Clippers/Bolt Cutters
- Small Pruning Saw
- Measuring Stick
- Pruning Shears
- Utility Knife
- Gloves
- Garden Rake
- Garden Hose
- Buckets

What are the Different Types of Planting Stock?

Before we delve into the different types of planting stock we should first learn what planting stock is. In the case of trees, planting stock means the form the trees are sold in. We will discuss five types of planting stock including balled and burlapped (B & B), bareroot (BR), containerized, container-grown and tree spade.

Balled and Burlapped (B & B)

Balled and Burlapped trees are dug with a firm ball of soil around the roots, held securely in place with burlap, twine and sometimes a wire basket. Deciduous B & B plant stock can be planted in the spring, summer and fall while coniferous plant stock should only be planted in the spring or fall. A broken, damaged or dry soil ball can mean serious damage to the roots. The trunk should not wobble in the soil ball. Because of the weight of the soil ball, B & B trees can be difficult to transport and plant without special equipment. B & B stock is often the most expensive but, if handled properly, it may be as reliable as container grown stock.

Bareroot (BR)

Bareroot trees are dug from nursery fields, soil is removed from the roots and plants are held in humidity and temperature controlled storage over winter. They should be planted early in the spring before growth begins. Because many roots are cut during field digging bareroot trees suffer severely from transplanting shock. Bareroot stock is normally the least expensive but, if handled improperly, can have the highest mortality.

Containerized

Containerized trees are bareroot trees placed in plastic or paper containers or wooden bushel baskets then sold in the container. They can be planted in the spring, summer or fall. Roots must be established in the container well enough to hold the soil together during transplanting.

Container-Grown

Container-grown stock has been growing in a container throughout most of its life. Because

Roots are not disturbed at the time of planting, container-grown trees suffer little transplant shock and may be planted at any time during the growing season. The largest tree of this type is not always the best buy - it may have outgrown its container, which can result in girdling roots.

Tree Spade

Mature trees are often moved with a tree spade, a machine that digs up the tree with a mass of soil that includes some of the roots. The tree often stays in the machine until it is planted into a pre-dug, matching hole. An experienced tree spade operator can mean the difference between success and failure. Matching soils from digging site to planting site also is important, as is compaction within the hole; roughing up the side of the hole can offset this compaction. Trees can be moved spring, summer or fall with a spade, although trees dug in full leaf should have an oversized ball and receive special post-planting attention.

The Right Way to Plant a Tree.

- **Select the Right Plant** for the right site.
- **Prepare the Site** by digging a hole 3 to 5 times larger than the root ball. Remove sod or grass. Till or break up the soil to a depth of 10 to 12 inches.
- **Dig a Hole** in the center of this circle that is 1 foot larger in diameter than the root ball and is exactly as deep. Maintain undisturbed soil beneath the root ball to prevent the tree from settling.
- **Place the Tree** carefully in the center of the hole and double-check that the tree's root collar (the bulge right above the root system) is just above the top of the soil.
- **Back fill** when the tree is standing straight up. Back fill the hole with the soil that was removed. As the back fill is added, lightly pack or water the soil to eliminate air pockets. Back fill to the height of the root ball, but do not pack soil on top of the root ball.
- **Mulch** Add woodchips to a depth of 4 inches on top of the planting circle. Keep the mulch 4 inches away from the trunk to prevent fungus from growing on the tree trunk.
- **Water** is very important to a newly planted tree. A slow root saturating one hour trickle once a week is a good rule of thumb for a new tree. This provides the new roots with sufficient moisture without drowning them. If it rains or is very dry the watering schedule should be adjusted accordingly.

Notes For Planting Balled & Burlapped Trees

Balled and burlapped (B & B) trees have the root ball held together by burlap that is encased in a wire basket. B & B trees are generally larger than containerized trees and can weigh hundreds of pounds.

- Carefully place the tree in the hole and cut around the bottom of the wire basket with a bolt cutters, and then up the sides. Remove the sides of the wire basket.
- Cut and remove all twine and rope from around the ball.
- Remove the nails holding the burlap together and gently fold the burlap back.
- Gently cut away burlap.
- Either remove or lay burlap in the bottom of the planting hole.

Note: The basket and burlap should not be removed until the tree is positioned in the hole. This keeps the root ball intact.

Notes For Planting Containerized Trees

Containerized trees can come in plastic or paper containers, and wooden bushel baskets.

- If the tree is very difficult to get out of the pot at the planting site, lay the tree on its side and press the pot to free it from the soil ball.
- If the tree is too large or the root ball is loose, place the tree & pot in the planting hole and adjust for final position. Next carefully cut around the base of the pot then make a slice up one side of the pot. Gently back fill and remove the sides of the pot.

Note: Unless the tree is root bound, remove only the bottom of the container until the tree is in the hole. This helps keep the root ball intact.

Note: If the trees roots are wound tightly inside the pot, remove the pot and then make a vertical slice up each quarter of the root ball. Make a X cut across the bottom of the soil ball and continue planting in a normal manner.

Notes for Bare Root Trees

- **Prune broken root tips with a sharp hand pruner.** Prune branches that are broken.
- **Check the planting hole dimensions.** The plants root system should easily go into the hole without circling around. The hole should be one foot beyond the root tips. The root tips should not touch the planting hole.
- **Keep the roots moist at all times.** Store plants in a cool shaded area. Cover the roots with moist straw or saw dust
- **Sweat bareroot trees** in a warm shaded place such as a garage. Some plants including (birch, hackberry, oaks, hawthorn, and ironwood) need help breaking dormancy this is called sweating. Keep warm and moist until the buds open. Soak roots in water one hour prior to planting.
- **Place the Tree** carefully in the center of the hole and double-check that the trees root collar (the bulge right above the root system) is just above the top of the original soil line.

Resources:

Right Tree Right Place. University of Minnesota, Northern States Power, and Minnesota Power. 1991. Northern States Power. This handbook outlines the correct trees that should be planted near and under powerlines.

PERFORMANCE PACKAGE TASK 3
Community Tree Planting

CHECKLIST FOR LEARNING

The purpose of the checklist is to provide feedback to the student about his/her work relative to the content standard. Have the standard available for reference.

Y=Yes
S= Satisfactory
N=Needs Improvement

<u>Student</u>		<u>Teacher</u>
_____	Understand "Right Tree Right Place"	_____
_____	List all steps necessary for proper tree planting.	_____
_____	Demonstrate proper planting technique.	_____
_____		_____
	OVERALL EVALUATION	_____

Attach all documents that are relevant to the performance task.

Overall Comments (information about student progress, quality of the work, next steps for teacher and student, needed adjustments in the teaching and learning processes, and problems to be addressed):

PERFORMANCE PACKAGE TASK 4
Community Tree Planting

Content Standard: People and Cultures

Level: High School

Specific Statement(s) from the Standard:

What students should know:

1. Know skills needed in specific organizational settings.

What students should do:

1. Apply and evaluate strategies designed to improve the community through direct service or other authentic experience.

Product(s):

1. Tree planting journal.
2. Trees planted in the community.

Task Description:

Using the skills learned in Task 3 students will work with the selected organization or church in the community. Students primary responsibility is planting the trees and shrubs as outlined on the initial landscape plan that was submitted as part of the RFP.

Participate in tree planting project. Students lead groups of students in community tree planting.

Special Notes:

Students should be supervised at all times during the planting project.

PERFORMANCE PACKAGE TASK 4
Community Tree Planting

CHECKLIST FOR TREE PLANTING

The purpose of the checklist is to provide feedback to the student about his/her work relative to the content standard. Have the standard available for reference.

Y=Yes
S= Satisfactory
N=Needs Improvement

<u>Student</u>		<u>Teacher</u>
_____		_____
_____	Knows proper planting equipment.	_____
_____	Leads peers in planting.	_____
_____	Organizes planting group effectively.	_____
	OVERALL EVALUATION	_____

Attach all documents that are relevant to the performance task.

Overall Comments (information about student progress, quality of the work, next steps for teacher and student, needed adjustments in the teaching and learning processes, and problems to be addressed):