Teacher's Guide

Maryland Forestry and Parks
CENTENNIAL
1906-2006
Celebrating a Century of Conservation and Recreation

Arbor Day
Seedling Distribution Program

A Maryland Forest
Education Initiative

MARYLAND

MARYLAND
DEPARTMENT OF
NATURAL RESOURCES

Maryland Department of Natural Resources Forest Service and
Maryland State Department of Education

Maryland State Department of Education

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Dear Arbor Day Teachers,

The Arbor Day Teacher's Guide was written by Maryland elementary school educators who have been involved with Arbor Day in their schools. The development of the Guide was a cooperative effort between Maryland's Department of Natural Resources and the State Department of Education. We have tried to make the activities child-centered, fun and authentic, while keeping the use of activities flexible enough to meet your particular class or school needs. The activities in the Teacher's Guide should be helpful to you as you prepare for Arbor Day. Although Maryland's 'official' ArborDay is the first Wednesday in April, almost any day is a good day to plant trees. Planting directions and informative classroom activities are included in the Guide.

Arbor Day is a wonderful opportunity to help students developtheir sense of appreciation and ability to care for living things in general and trees in particular. We are dependent on trees and forests for many difference resources we use every day. Trees and forests give us jobs, many environmental benefits and a quiet place to walk on a summer day. We hope you find this Teacher's Guide helpful and easy to use, and that as you implement Arbor Day you take a few minutes to sit in the shade with two of Maryland's special resources, our trees and our children.

Rebecca H. Bell
MSDE Environmental Education Specialist

Contents and Overview

Science Outcomes	Activities	Reading/Writing
Introductory Activities		
Concepts of Science	• KWLS • Johnny Appleseed • Jigsaw strategy • parent/family letter	• Read for literary experience • Read to be informed
Gathering Information		
Concepts of Science Nature of Science	• Plan needs investigation • Soil investigation • Journal writing • Riparian forest buffers	• Read to perform a task • Collecting and organizing data • Read to be informed
Evaluating and Making a Choice		
Concepts of Science Nature of Science	• Location decision checklist • Alternatives • Making a choice	• Summarizing information • Write to inform
Planting		
Applications of Science	• Planting directions	• Read to be informed • Evaluate information • Write to persuade • Peer Response • Read to perform a task
Culminatng Activities		
Nature of Science	• Tree quote • L&S if KWLS	• Write to inform
Extensions		
Concepts of Science Nature of Science	•Read and respond to letter and nursery notes • My Tree and Me timeline • Poem writing • Internet research	• Write to informdata • Write for personal expression • Read to perform a task • Read to be informed

Introduction/Planning

Most activities are designed to allow the students and teachers to complete the activity without further directions. Refer to the contents page throughout the unit.

Use the KNOW-WONDER-LEARN-STILL WONDER chart to pre-assess student's knowledge about trees.

• Read Johnny Appleseed by Steven Kellogg as a shared reading activity.

• Duplicate and send home the parent/family letter at the beginning of the unit.

• If finding appropriate locations for planting the seedlings is a problem, modifications to the activities may be needed. Students may be able to plant on school property or at a friend's or relative's house. For information or assistance, call the forester in your area.

• Prepare a bulletin board by posting a bare tree. Students will be completing and hanging leaves as an introductory activity.

• Remember to check back to the Maryland Department of Natural Resources, Forest Service web site for future events - www.dnr.state.md.us/forests

KWLS

I Know	I Wonder	I Learn	I Still Wonder

Jigsaw Strategy

Use the jigsaw strategy with cooperative groups to create lists of (1) uses of trees and (2) the importance of tree planting as depicted in or inferred from the story, Johnny Appleseed by Steven Kellogg. Have the students number off 1, 2, 3, 4. Put all the ones in a group, all twos, etc. Give each group a question from the chart below. Allow a few minutes for the group to research the answers. Have each student record a response generated by the group on a leaf.

What were some of the uses of trees in the story, Johnny Appleseed?	What was the importance of tree planting in the story, Johnny Appleseed?

Have the students return to their original 1234 groups and allow a few minutes for each member to share the information on their leaf. Color and cut out the leaves. Display on a tree in the room, bulletin board or other display.

The year 2006 marks the 100th anniversary of forest conservation in Maryland. If the history of scientific forest management in Maryland reveals anything, it is that land and people have been intertwined throughout that history. We invite you to become a partner by planting trees as we begin preparing for the Maryland's Forestry Centennial Celebration.

Maryland's forest resources were mostly privately owned and in a state of near total depletion at the turn of the century. In 1906, John and Robert Garrett offered close to 2,000 acres of cut-over forestland to the state as a gift, provided an agency be created to manage it according to scientific forestry principles. Frederick W. Besley, Maryland's first State Forester, was passionate about his work, and was challenged to reverse the bad practice of indiscriminate harvesting and uncontrolled forest fires. He focused his early efforts on reforesting cut over private and public land and controlling wildfire to protect the newly established forests.

In Maryland, Arbor Day is celebrated each year on the first Wednesday in April. It is a time to plant trees or seedlings and reflect upon the importance of trees and forests to all living things. As time goes by, more and more people are recognizing the value of trees to our natural environment.

Very soon a tree seedling will be sent home with your child with the hope that it will be planted and nurtured so that it too can contribute to the well being of our environment. The Forest Service has provided your child's teacher with planting instructions and suggested activities that can help generate interest and involvement in the future of trees. Too often trees are taken for granted and not appreciated for the many values they offer. You may want to talk with your child about a tree you may have planted or one that you have watched grow and change through the seasons. Perhaps together you may observe where and why the trees grow best in your community.

Trees beautify our homes and communities and they offer many values and products to our every day existence. Trees and forests offer homes for many kinds of wildlife, from songbirds to forest animals. They can help reduce sound, provide windbreaks, help modify temperatures by shading and help control erosion. Trees and forests planted in buffer strips along waterways prevent surface runoff and filter many contaminants in the soil. Literally thousands of products we use every day come from trees. Trees, as a renewable resource, can be used, enjoyed and more can be planted to continue the cycle for future generations.

The Forest Service has been helping Marylanders recognize the importance of trees and forests for one hundred years. Seedlings are grown at the John S. Ayton Forest Tree Nursery and sold at cost to Marylanders to be planted for conservation purposes on at least 1/4 acre. Trees and forests represent the most environmentally conscious land use and as a Service, we strive to maintain healthy forests, trees and greenspace for the well being of all. The planting of your child's tree seedling puts us all one step closer to protecting our watersheds.

The selfless dedication by a series of influential forest conservation leaders saw the return of the forest and the development of a suite of forestry programs and services targeting our state's forestlands. A century of forest management has contributed substantially to the natural beauty we enjoy today, as well as the health of our environment and the Chesapeake Bay. The proper management and stewardship of the land enhances our quality of life and contributes greatly to Maryland's economy. We salute your interest and commitment to improving your land by planting trees and we value our partnership in continuing the restoration and management of our state's forest resources.

We thank you for your interest and involvement and look forward to serving you in years to come as we continue planting trees for the future. Please visit our website at www.dnr.state.md.us/forests and stay in touch.

Sincerely

Steven W. Koehn

Steven W. Koehn
Director / State Forester

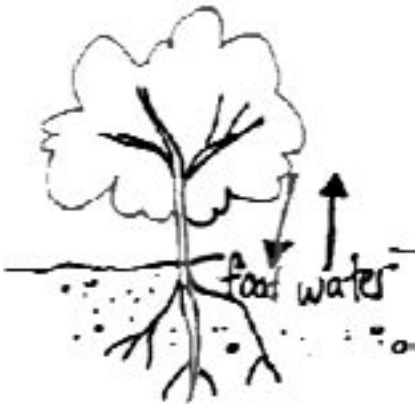
Plant Needs

Plants are organisms that grow and reproduce their own kind. They need food, air, soil, water, light, and space to grow.

Plants need soil. Water and minerals are taken from the soil through roots. Soil also provides support for the plant and an anchor for the roots to grow in. Decaying plants and animals leave behind minerals in the soil that are essential for future plant growth.

Plants need sunlight in order to grow properly. They use light energy to change the materials - carbon dioxide and water into food substances (sugars). This process of food production is called photosynthesis. Only in light can a green plant make food.

Plants must also have clean air. Green plants take in carbon dioxide from air and use it during photosynthesis to make food. Dirty, smoggy air blocks sunlight that plants must have.



Plants need water. Water is essential to all life on earth. No known organism can exist without water. Plants use water to carry moisture and nutrients from the roots to the leaves and food from the leaves back down to the roots.

Plants must also have space in order to grow. Plants are found everywhere - deserts, mountains, arctic regions, forests, jungles, oceans, and even in cracks of sidewalks of busy cities. If the space is small, the plants will be small and stunted. Big plants need big spaces for their roots and branches.

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What do Plants Need to Grow?

I. Topic Area

Biological Science: Plants -- What do plants need to grow?

II. Introductory Statement

Students will understand that in order to grow healthy plants, soil, water, light and air must be provided.

III. Math Skills

a. Measurement

Science Processes

a. Observation
b. Comparing
c. Recoding data

IV. Materials

Milk Cartons--from school lunches
Bean, radish or corn seeds
Potting soil mixture

V. Key Question

What do plants need to grow?

VI. Background Information

Plants require sunlight, water, soil and air in order to grow and be healthy. Energy received from the sun is used to convert carbon dioxide and water into food. When plants do not receive the things they need to live and grow, they will either die or be stunted in their growth.

VII. Management Suggestions

1. Save the 1/2 pint milk cartons from the students' lunches, rinse them out and cut the tops off.

2. Use fast growing seeds such as radish, corn or bean seeds.

VIII. Procedure

1. Gather enough 1/2 pint milk cartons from the cafeteria for the class.
2. Cut the top off the milk carton.
3. Fill the carton with a soil mixture.
4. Choose seeds that sprout fast, such as radish, bean or corn.
5. Plant the seeds in the milk cartons. Dampen the soil.

6. After the seedlings sprout, divide them into four different groups.
7. Subject them to different growing conditions.
8. Condition #1 -- Plant has soil, water, and air but does not have light. Put these plants under a box or in the closet.
9. Condition #2 -- Plant has soil, light, and water but no air. Seal these plants in a large clear plastic bag.
10. Condition #3 -- Plant has soil, light, and air but no water. Do not water these plants.
11. Condition #4 -- This is the control group. The plants have soil, air, light and water.
12. When the seedlings come through the soil, measure each week how much the plants have grown in each environmental condition.
13. Record each on a separate graph.
14. After several weeks compare the graphs. Are there differences in rate of growth of the different plants in the separate conditions?

IX. Discussion

1. Discuss with the students what each plant needs in order to grow (soil, air, light, and water).
2. Have the students explain what the plants look like in each of the conditions and what need was lacking in each one.

X. Extensions

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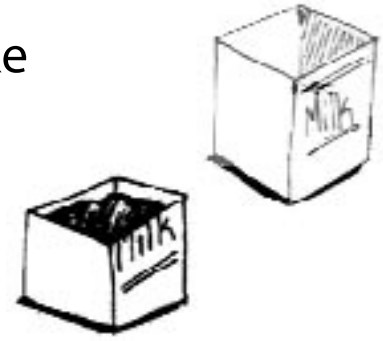
What do Plants Need to Grow?

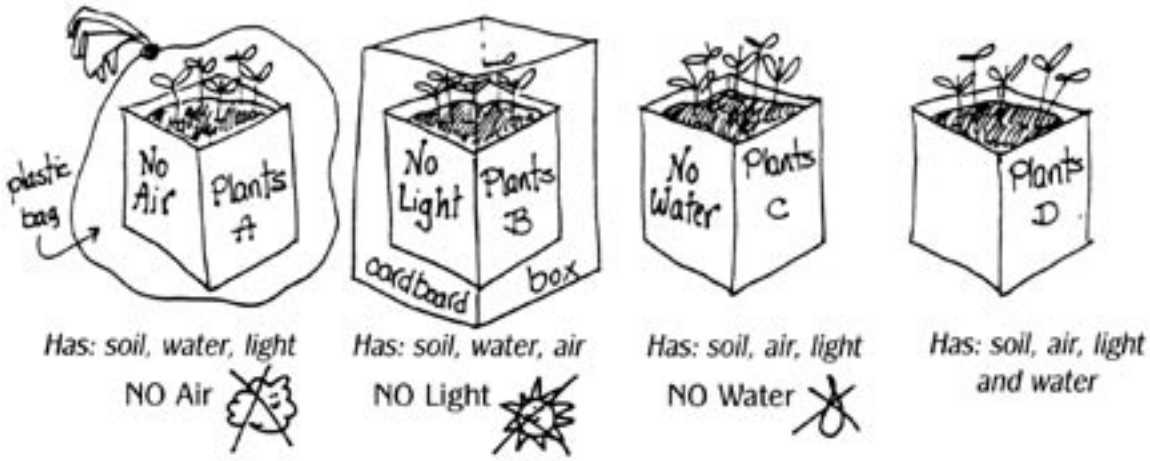
You will need:

4 milk cartons
soil
radish, bean or corn seeds
scissors

Do This:



1. Cut off the top of the milk cartons to make planters.
2. Decorate with roving or paper.
3. Fill the cartons will soil
4. Plant the seeds in the soil. Dampen the soil.
5. Wait. After the seeds sprout, divide the cartons into 4 groups to test growing conditions.
6.



7. Watch to see which plants grow best. What do plants need to grow?

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Which Soil Works Best?

I. Topic Area
Biological Science: Plants -- Soils

II. Introductory Statement
Students will plant seeds in a variety of soils to see which soils provide the best medium for plant growth.

III. Math Skills
a. Measurement

Science Processes
a. Observing
b. Comparing
c.. Recording data

IV. Materials
Clear plastic 9 oz. tumblers
Potting soil
Sand
School yard "dirt"
Clay
Water
Large bean seeds

V. Key Question
Which soils are good for growing plants?

VI. Background Information
Soils provide the water and mineral that a plant needs. Without soil, the plant can be watered, but it becomes difficult to give the plant the nutrients that it gains from the soil. Soil also provides support for the plant and its root system.

Soil usually has three separate layers. The top layer contains minerals and humus, the decayed remains of animals and plants. Humus and minerals are needed by plants for good growth. The second layer contains humus and minerals that have been leached from the top soil. The third layer consists of rocks that are being broken down to form soil.

A great helpmate to the enrichment of soils is the earthworm. Earthworms burrow through the soil and leave castings of digested leaves and other matter which help enrich the soil. They also improve the soil with their tunneling by making it easier for air and water to soak in. Earthworms do not make poor soil into good soil, but rather they keep the soil in good condition for growing.

VII. Management Suggestions
1. Students may wish to work in pairs or teams of three or four to plant and observe four sets of seeds.
2. Teamwork also makes it appropriate for "jobs" to be assigned. They may all wish to keep a daily log of activity and then compare notes.

VIII. Procedure
1. Use four clean clear cups per team. Fill each one three-fourths full with different types of soil: potting soil, sand, playground "dirt" and clay. Plant a bean seed in each cup, placing the seed up against the clear side wall of the cup for easy viewing. Add measured amount of water to each cup and record.
2. Predict and record what you think will happen in each cup.
3. Allow time for seeds to grow. Illustrate the results.
4. Compare results and discuss. Draw conclusions regarding best medium for growth.

IX. Discussion
1. How are all the types of soil alike? How are they different?
2. Why do you think one might be better than another for growing bean plants?
3. Discuss the difference between germination and actual plant growth.
4. How shall we decide which seed grew the best? Which kinds of things do we look for? size of plant? color? number of leaves?
5. Does more than one kind of soil produce a good plant?
6. Could soils be combined to make a better growing bed?
7. Can plants grow without soil? How?

X. Extensions
1. Create a new soil mix and test it.
2. Write a poem or a story about seeds and soils.
3. Use adjectives to describe soil: rough, sandy, earthy, etc.
4. Write a soil poem.
   Soil
   Earthy
   Sandy
   Rough
   Loamy
   Smells good.

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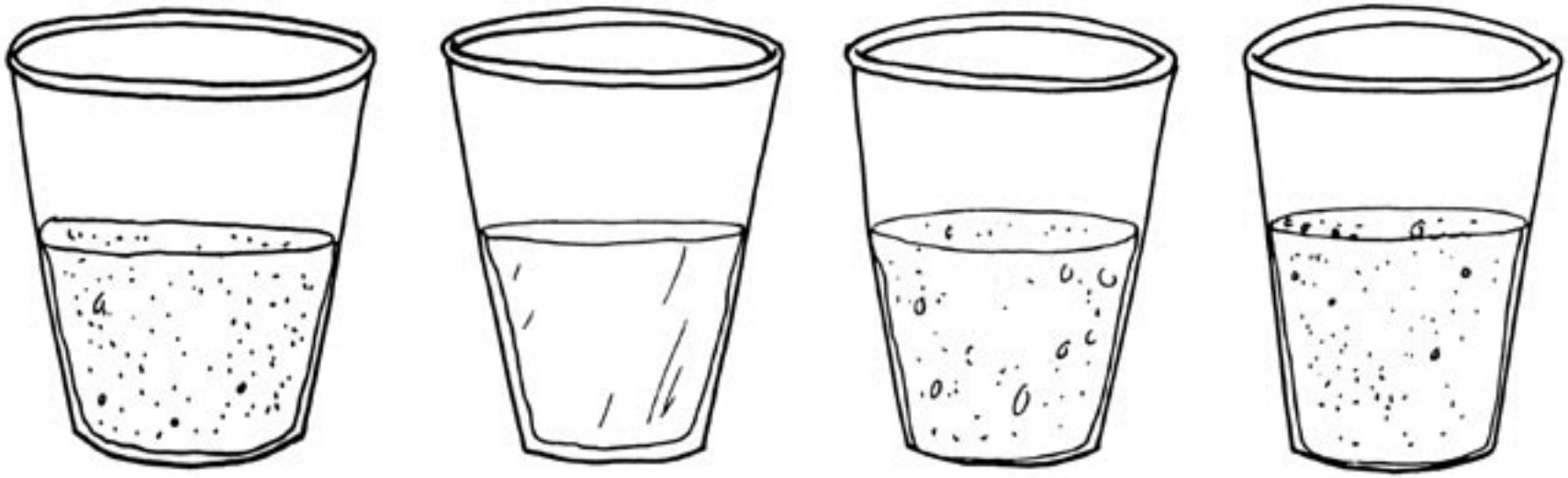
Which soil works best?

Plant a seed in each cup. Water and watch them grow. Draw what happens to each seed.

What do you think will happen? _____



potting soil | clay | playground soil | sand

What happened? _____

Journal Writing Activities

Have the students maintain journals for the investigations. Students should document changes observed. They may also analyze the causes of the changes, predict investigation outcomes, and illustrate observations.

Differentiating the use of Journals

Students who need more support

1. Write a list of what is observed.
2. Compare what is observed to previous documentation.
3. Illustrate their findings.
4. Predict what will happen next.

Students who can work alone or with a partner

1. Write about what is observed and explain why they think it is this way.
2. Compare previous documentation and try to analyze specific causes of the change
3. Illustrate and label findings.
4. Predict what will be observed next and predict investigation outcomes.

Students who are able to go beyond

1. Write a summary statement of what is observed. Include comparative information. Analyze causes to support predictions of future observations.
2. Illustrate and label findings using correct scientific terminology for plant parts.
3. Based on observations, predict what would happen if the investigations were extended by one week, two weeks,...

Riparian Forest Buffers

Riparian forest buffers are areas of trees alongside streams and rivers. These streamside forests are ecosystems that provide food and habitat for stream communities. They also are very important in controlling pollution. The riparian forest buffers protect the quality of water in the streams. They work as filters, transformers, sinks, and sources.

Filters

As a filter, tree roots and fallen leaves can help keep the soil from eroding and running off into the streams. Sediment run off is one of the most common pollution problems. Toxic chemicals stuck on the soil sediment are filtered out and trapped in the soil.

Transformers

As tree roots trap the sediment run off, they create soil rich moisture and bacteria. These bacteria can transform or change some toxic chemicals into harmless gases which can be used by plants and the bacteria themselves.

Sinks

The streamside forests can work as sinks by storing nutrients for a long time. The nutrients can be stored in the soil which was trapped by the roots, in the trees themselves, and in the fallen leaves on the ground. The nutrients are then used by animals as they eat the tree products or by plants when they take nutrients from the soil.

Sources

Trees provide a food source for the water inhabitants. The leaves, fruit, branches, and insects that fall from the trees into the water are eaten by fish, bacteria, fungi, and invertebrates that live in the streams. The trees are also a source of shade which helps control the temperature of the stream.

Sources
Riparian Forest Buffers. (Online image} Available
www.dnr.state.md.us/forests/publications/buffers.html

Riparian Forest Buffers

Investigation and Activities

Materials:

- Paint tray
- clay
- 2" sponge
- muddy water
- Ripariain forest buffers information sheet

Activity I

Read the information about riparian forest buffers.

Set up a mock forest buffer by securing sponge strips to the base of the ramp in the paint tray with clay. Sponge strips may overlap as long as the strips extend the entire width of the base of the ramp. Make sure you leave room for the water to pool in the tray beyond the sponge strips.

Based on the information you have read about riparian forest buffers, predict what you think will happen when the water is poured in the paint tray at the top of the ramp.

Activity II

Carefully pour the water in the tray at the top of the ramp. Watch it flow down the ramp, through the sponge, and into the base of the tray.

With your group, discuss the purpose of a filter. How does the sponge act as a filter? Talk about the significance of transformers.

On your own, draw and label a diagram of your mock forest buffer. Explain in your own words how the sponge is significant in the investigation about forest buffers.

Activity III

This is a short-term investigation. Why can't the sponge demonstrate the function of a natural sink?

Explain why the stability of a riparian forest buffer can work as a sink?

Activity IV

Discuss with the group what might happen if you cut away a two inch section of the sponge in the paint tray and repeat the investigation.

On your own think about and write what might happen to the sources provided by a riparian forest buffer if a section of trees in the buffer was removed.

Where Can I Plant My Tree?

- Now you are ready to make a decision about where you'll plant your seedling. One way to do that is to make a checklist. Checklists are often used to evaluate. Use the checklist to evaluate the two locations you are considering.
- In the boxes marked #1 and #2, record the two possible locations you've identified.
- Evaluate both locations on the important facts. Put a checkmark under location #1 if #1 would be suitable based on that information. Then do the same thing for location #2.

Location #1		Location #2
	Does your location provide...	
	adequate sunlight	
	rich soil?	
	clean air?	
	space to grow in the future?	

Review your checklist

- Does one location seem better than the other? If so, this is probably the location you'll want to choose for your tree.

- Do both locations seem suitable? If so, either location would be appropriate. Then you may want to consider other things to help you make your choice (where would it look best? Which location do you like better?)

- Do you think another location would be more suitable than these two? If so, try using your checklist to evaluate a third idea. You may want to choose this location instead of #1 or #2.

- If you're worried about your location or about making you choice, you may want to talk with your teacher or another adult.

  Use the checklist information to make your choice now and write it in the box below. Make sure you explain why you chose your location using information from you chart.

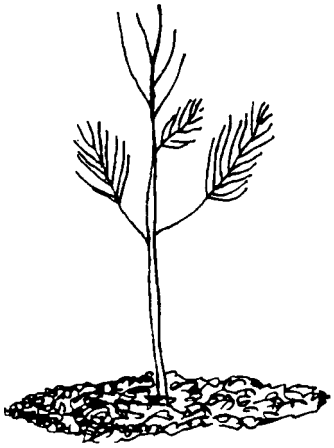
My planting location will be

How to Plant Your Tree

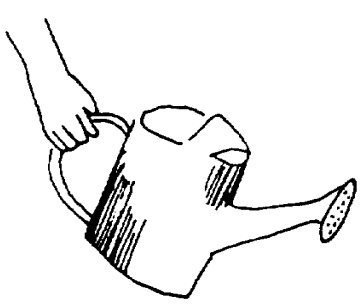
Here you are with a new tree.
What should you do with it?
Plant it and enjoy watching it grow.
It's easy-just follow these directions.

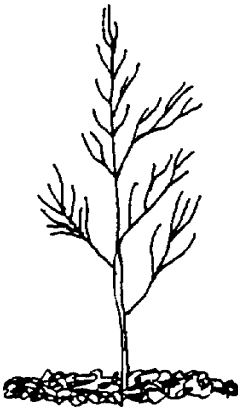
Decide where you want to plant your tree. Seedlings (baby trees) will grow either outdoors or in a pot on your porch or patio.

Get your seedling in the ground as soon as you can. Don't let its roots get dry before you plant it.



Dig a hole deep enough for the root to fit in without being bent or broken. Hold your tree in the hole and carefully fill the hole with good soil. Then pack the soil firmly around the roots.





After your tree is planted, don't just forget it. It is important to water young trees during the summer months. Take care of it and watch it grow.

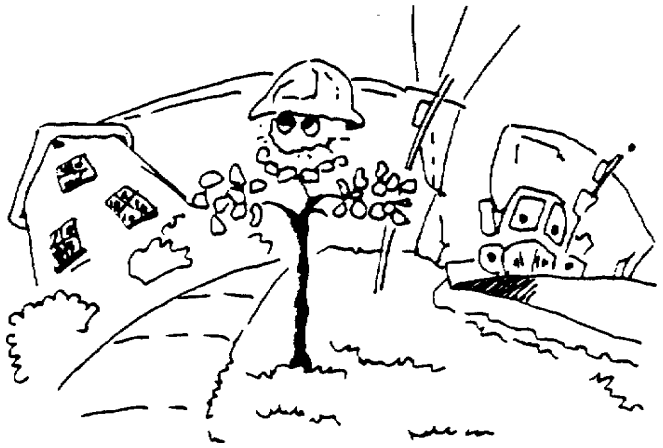
Plant A Tree

Plant a tree from Environmental Education Acitivity Guide Pre K 8 Project Learning Tree 1993

Choose Your Site Carefully

Look up, around and down-

The tree you plant today could eventually reach 40 to 100 feet (12 to 30 meters) in height (depending on the tree type). Give your tree plenty of room-its roots will grow wide and deep.



Plant it well away from buildings and powerlines, so that it won't do any damage, or need disfiguring or harmful pruning later in its life. Plant the tree where its roots will not grow into sewers and pipelines, or under driveways and sidewalks.

Look at the tree-

Make sure it's suited to the environment you are planting it in, so that it has the best chance of surviving.

Take Care Before and During Planting

Keep the tree cool and shaded, and keep its roots moist until planting. During planting, try not to handle the tree's roots. Tamp the dirt firmly, but don't pack it too tightly or the roots won't be able to either reach out for water and nutrients, or anchor the tree. Soak the soil around the tree with water to encourage deep rooting.

If you're Planting a sapling-

Dig a hole twice as wide and as deep as the rootball. Build a mound of soil, and place the sapling on top of the mound so that it is two inches (five cm) above the hole's bottom. If the roots are wrapped, remove the burlap. Fill the hole with dirt, tamping it down with your foot and wetting it with water as you fill the hole.

If you're planting a seedling-

Dig a hole a little deeper than the roots' length. Fill the hole around the seedling with dirt. Then gently pull the trunk of the seedling up slightly to straighten out the roots.

Give Special Care During The Early, Developmental Years

A tree is most vulnerable during the first years of its life. Protect it from pests and animals. Water it frequently. Then sit back and enjoy! If cared for properly, each tree you plant will grow and flourish, providing you and all of us with benefits and beauty for generations.

Planting - Comparing Directions

Now that you've decided on the best planting location for your seedling, you need to learn how to plant it.

Read direction sheets I and II. You many want to read it by yourself, with a partner, or together with your teacher and class.

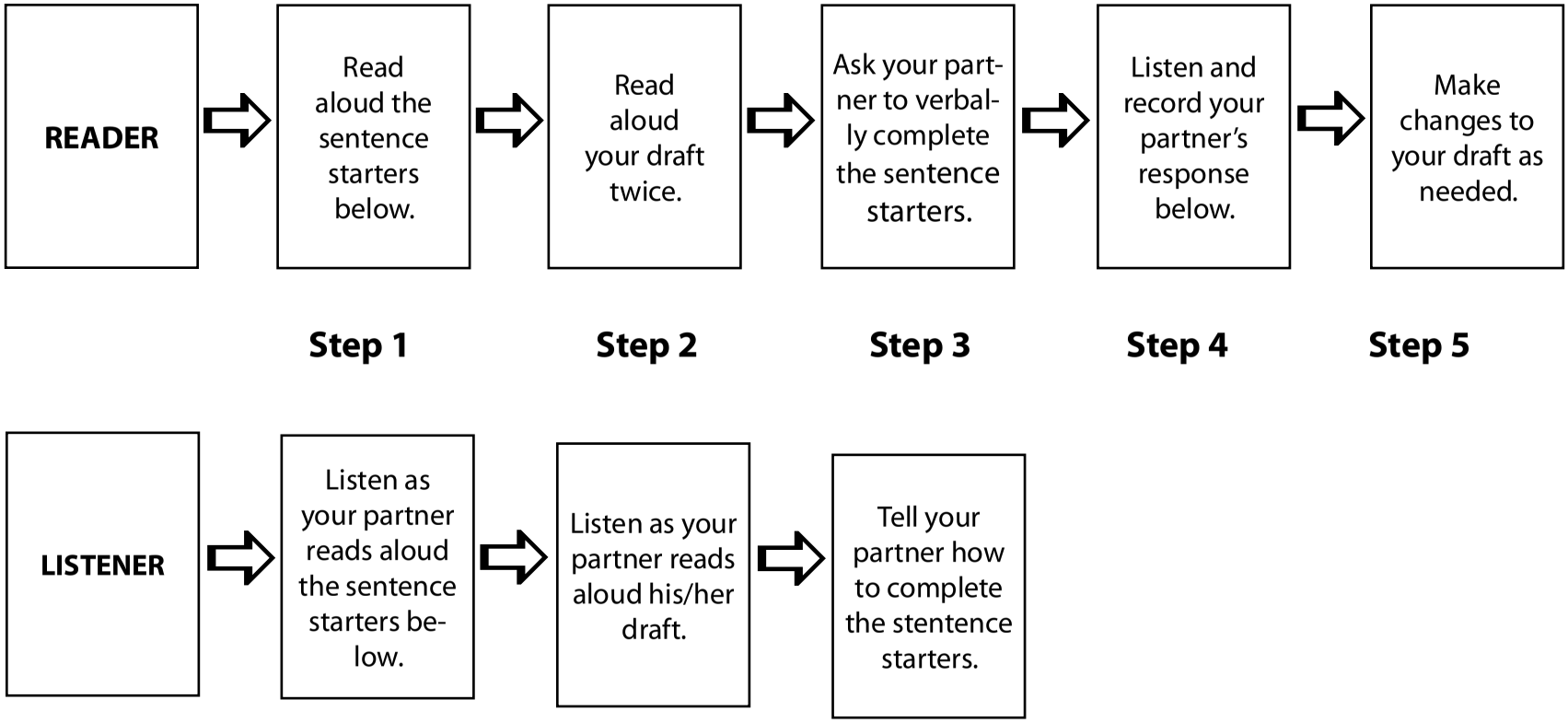
As you read, compare the two sets of directions. How are they alike? How are they different?

You may share your ideas with a friend or with your whole class.

Which set of directions will you use to plant your seedling? Look at Directions I and Directions II again. Which directions do you think will be more helpful to you? What makes that set better for you to use?

In the space below, tell which set you will use. Be sure to support your answers by giving at least two reasons why you think those directions are more helpful.

Peer Response -- Writing to Persuade



Sentence Starters

- This draft could persuade someone to _____

_____

_____

- This darft could persuade someone even more if _____

_____

Use the directions you chose to plant your seedling in the location you selected. When you've planted it, complete the certificate below. Keep the certificate to help you remember this special day!

Certificate of Planting

This certifies that a
seedling was planted

on _____
date

at _____
location or address

by _____
student

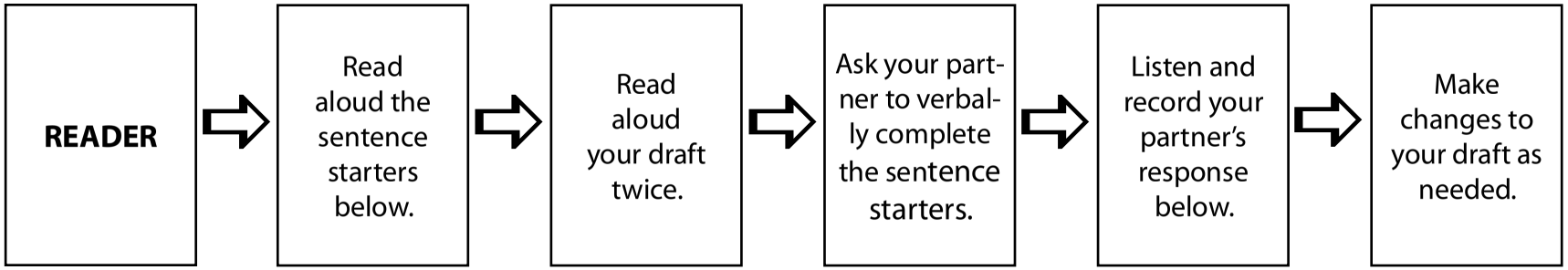
_____ _____
planter's signature seedling height at planting

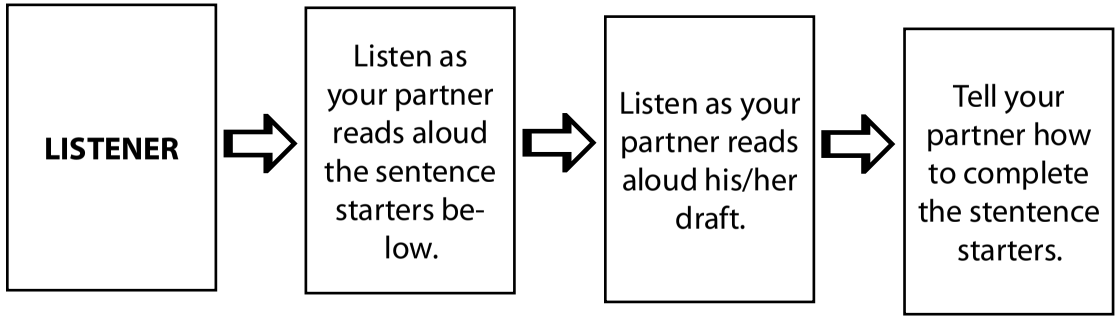
Read this quote.

The best time to plant a tree was 20 years ago.
The second best time is now.
Anonymous

What do you think the author of this quote meant?
Think by yourself. Then pair with a friend to talk about it. Then share your ideas in a class discussion. On the lines below, tell what you think the message of the quote is and tell how you feel about what the author said.

Peer Response -- Writing to Inform





Sentence Starters

- The most important information in the draft was _____

_____

_____

- This draft should have more facts and details about _____

_____

Extending Ideas

Letter from Forester/Nursery Notes

Read the letter from Nursery Manager Richard Garrett and review the nursery notes. Respond by writing a friendly letter. You may choose to develop a model letter with your class. Use a process writing approach to guide students through this writing activity. Completed letter may be sent to:

Manager
John S. Ayton Forest Tree Nursery
3424 Gallagher Road
Preston, MD 21655

My Tree and Me Time Line

Use the Nursery noted as a reference for labelling the timeline. Discuss illustration ideas together before letting students work independently.

Tree Poems

Complete the "Celebrate Arbor Day! Celebrate Trees" page. Follow up by using the poem frames to have the students write their own tree poems.

Go On-line

Visit the National Wildlife Federation at www.nwf.org
Log on to www.arborday.org for more information about trees and Arbor Day.
For more information about riparian forest buffers go to www.dnr.state.md.us

Notes from the Nursery

About your Seedling

1. Your seedling grew from a seed:
   Seeds are collected from all over Maryland
   Seeds planted at State Nursery

2. Nursery staff cared for your seedling as it grew:
   Protection from weeds, weather, insects or animals, disease
   Irrigation if rainfall was insufficient

3. Your seedling was harvested this spring,

4. Your seedling was stored:
   Seedlings put in tubs 1,000 to 1,500 to a tub
   Tubs wrapped in canvas to keep trees from drying out
   Put in cold storage 34 degrees F, 80% humidity

5. Your seedling was sorted and graded with all the seedlings that were harvested:
   Only acceptable seedlings were used

6. Your seedling's roots were coated with clay slurry to retain moisture.

7. Your seedling was packed with all seedlings for your county:
   Trees were counted, packed and labeled

8. Your seedling was picked up at the State Nursery by a forester from your area:
   Seedlings counted and packed for each school

9. Your seedling arrived at your school.

10. You select your seedling!

About Where to Plant.

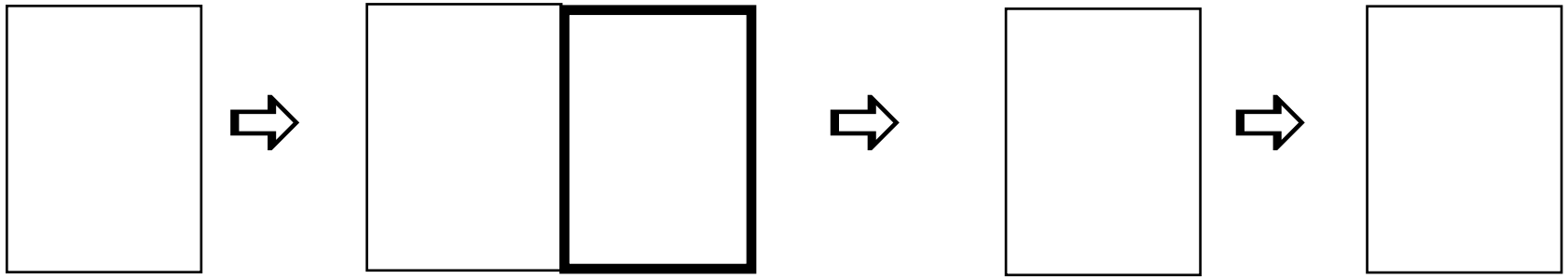
✓Your seedling will grow best in full sunlight.
✓Soil shouldn't be too dry or too wet.
✓Plant away from house, driveway or sidewalk or anything that might damage your seedling.

About When to Plant

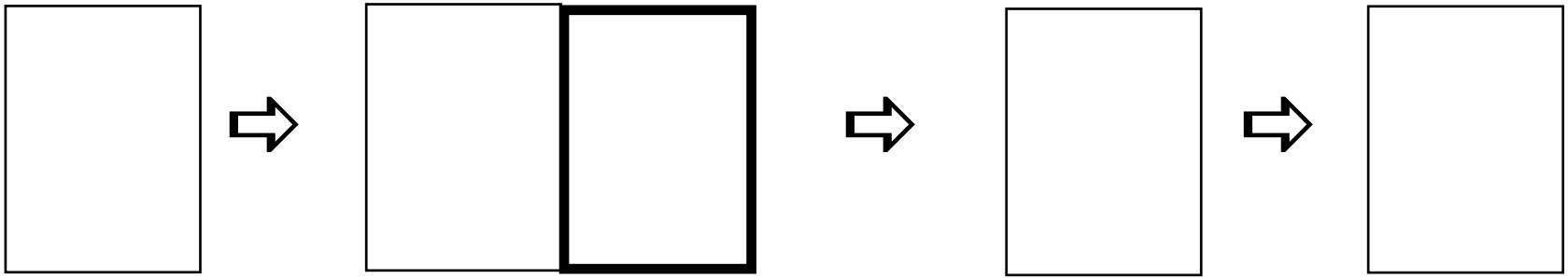
✓Your seedling will grow best if you plant it as soon as possible after you bring it home.
✓If you can't plant your seedling right away:
- Moisten the paper towel around the roots
- Wrap the roots and paper towel in a plastic bag
- Store in the refrigerator
- Plant as soon as possible

Good luck!

My Tree and Me



2 years ago _____ **This spring** _____ **This Week** _____ **2 years from now** _____ **10 years from now** _____



2 years ago _____ **This spring** _____ **This Week** _____ **2 years from now** _____ **10 years from now** _____

The seedling you received this week is living and growing-just like you are! Use pictures in these boxes to show the appearance and activities of your seedling and yourself at each point along the timeline. You may want to add a few words to the boxes, too, to tell your age or to describe what's happening in the lives of you and your tree. When you have completed your timeline, explain your drawings to your class or to a group or partner.

Celebrate Arbor Day! Celebrate Trees!

Read these poems about trees. You may want to read them by yourself or with a friend a group.

A

The
snow-covered tree
Sparkles in the soft moon-
light.
The wind rushes by.

B

Forests
Graceful, growing
Climbing among the clouds
Calmly awaiting the sunrise
Alive.

Poems from
Environmental Educaiton Activity Guide Pre-K-8
Project Learning Tree-1993

C

Seed
Small buried
Growing breathing living
Protection oxygen shade
habitat
Dying rotting crumbling
Moist rich
Soil

D

Branches
Shade rubber
fruit clothes
paper wind barrier fuel
furniture resources nuts
Tree houses maple syrup park
Multiple uses seeds oxygen
Lumber habitat energy
Building materials
Baseball bats leaves
Photosynthesis
Roots
Gum
Cork
Books
Pain
Coca
Sponge

E

I
dreamed
I was a tree
On a hillside
Playing with the wind
Joyfully

Now choose one to read again.
Discuss it in a group with students who have chosen the same poem. Be ready to tell the class about your poem. What message about trees do you think the author wanted to express? Discuss the poems with your teacher and class.

Now look at all five poems to help you to answer these questions:
Which author's ideas are most like your feelings about trees?
Why did you choose that one? Write your answer below.

Write a Tree Poem

Reread the poems about trees. Look at poetry patterns below. Which style would you like to use to write your own peom about trees! Use the pattern for the style you've selected to write a poem. You may want to use what you know about the writing process.

A HAIKU

Three Lines:
First line 5 syllables
Second Line 7 syllables
Third line 5 syllables

B CINQUAIN

Five Lines
Title 2 syllables
Description of title 4 syllables
Description of action 6 syllables
Description of feeling 8 syllables
Another word for title 2 syllables

C DIAMANTE

Diamond-shaped
seven line pattern

noun
adjective adjective
participle participle participle
noun noun noun noun
participle participle participle
adjective adjective
noun

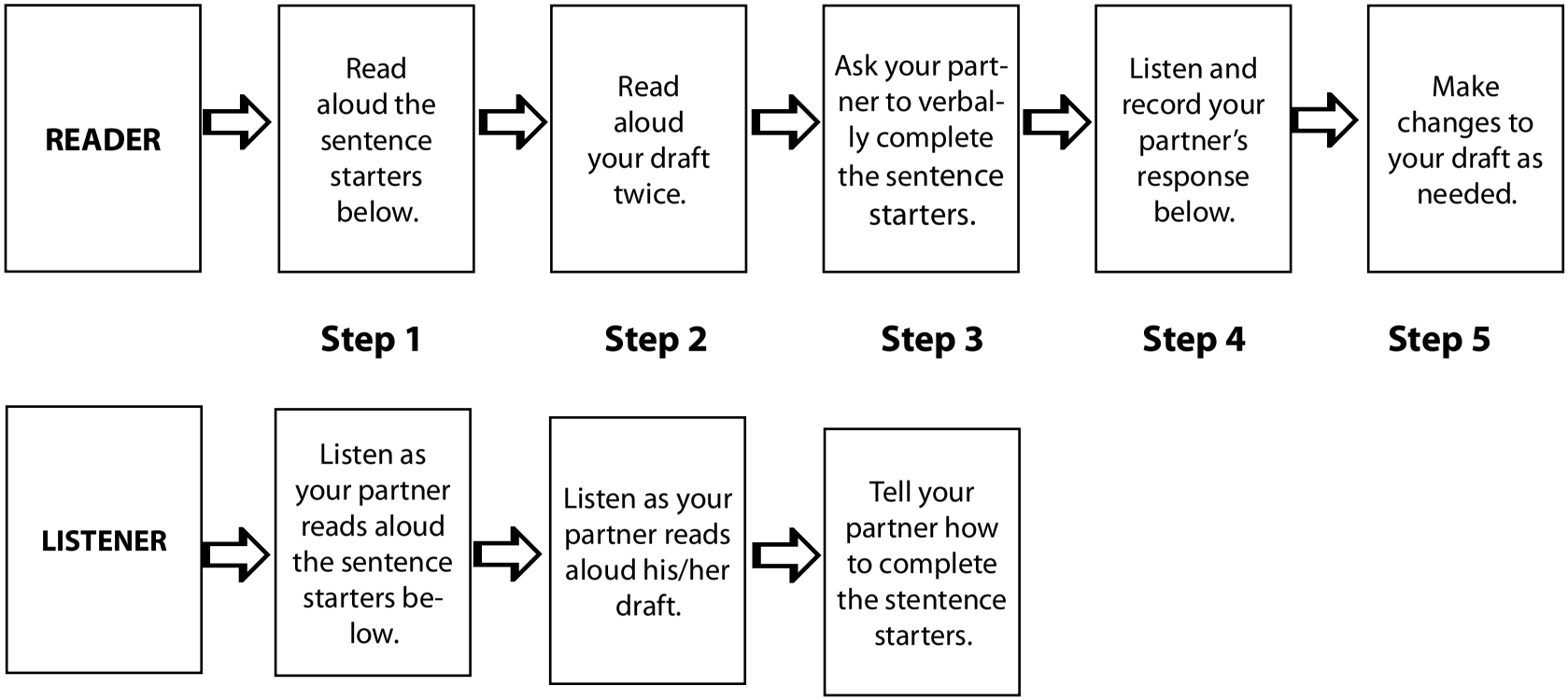
D PICTURE POETRY

Words in the poem
form a picture of
what is happening
in the poem.

E WINDSPARK

Five-line pattern:
I dreamed
I was ... (someone or something)
Where
An action
How

Peer Response Form -- Writing for Personal Expression



Sentence Starters

• Details that should be added to be beginning are _____

_____

_____

• Details that should be added to the middle are _____

_____

• Details that should be added to the ending are _____

_____

Dear Student

My name is Richard Garrett and I am delighted to have the opportunity to write to you ! I am the nursery manager at the state tree nursery operated by the Department of Natural Resources Forest Service. Our nursery, the John S. Ayton Forest Tree Nursery, is located on the Eastern Shore near Preston, in Caroline County, Maryland. The three hundred (300) acre facility officially opened in the spring of 1996 to supply the residents of Maryland with the finest conservation, reforestation and afforestation bare root tree seedling planting stock possible. Prior to the opening of this state of the art facility, the nursery had been located in Harmans, Maryland near BWI Airport.

The tree seedling that you will receive this week grew from a seed. Each year, in the fall, we collect seeds from trees all over Maryland. Your seed, and millions of others are then planted at the nursery. The next spring, your seed sprouted and became a seedling. We cared for your seedling until this spring when it was ready for harvest.

At harvesting time five nursery employees worked to gather the seedlings. Working together we were able to harvest each bed of 30,000 seedlings in thirty minutes. Then we stored the seedlings and later prepared them for distribution to your school and many other schools across our state.

I have enclosed a fact sheet for you. I hope it will help you know your seedling better and choose the best possible location for it. I am interested in hearing from you. Please write about the thinking you used to decide on a suitable location for your seedling.

Sincerely,

Richard Garrett
Nursery Manager

Special thanks to the following educators who helped develop the Arbor Day Teacher's Guide using Maryland School Performance Assessment format and language:

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Baltimore County

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The Mission of the Maryland Department of Natural Resources

The Department of Natural Resources preserves, protects, enhances and restores Maryland's natural resources for the wise use and enjoyment of all citizens.

Forest Service Mission

To restore, manage, and protect Maryland's trees,
forests, and forested ecosystems to sustain
our natural resources and connect people to the land.

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