New York Ag in the Classroom

2010 Agriculture Literacy Week

Teacher Resource Guide

Dear Educators,

We'd like to take this opportunity to thank you for welcoming our volunteers into your classrooms to celebrate NY Agriculture Literacy Week and National Agriculture Week.

Every year teachers across NY state open up their doors to celebrate Agriculture Literacy Week. It's no exaggeration to say that there is no way Ag Literacy Week could happen without you. Through your help and feedback, we've been able to introduce new elements every year, and increase participation across the state. We hope that you'll continue to work with us by participating in Agriculture Literacy Week next year March 14th-18th, 2011.

On behalf of our wonderful county coordinators, and our many partners throughout the state, thank you for your support.

Sincerely,

Heather Davis

Coordinator New York Agriculture in the Classroom

New York Ag in the Classroom

Fostering an Understanding & Appreciation for Agriculture and the Food and Fiber System.

www.nyaged.org/aitc

What's Inside -

Overview of NYAITC

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REMINDER!!

Fill out the teacher survey and return it to your county coordinator!!

Thank you for your participation, see you next year!

New York Agriculture in the Classroom

NYAITC is a partnership between Cornell University, NYS Department of Agriculture & Markets, NYS Education Department, and New York Farm Bureau. The program operates out of the Department of Education at Cornell University and is funded through the NYS Department of Ag & Markets, and from grants, donations, and specialty license plate fees.

Agricultural Literacy is important for everyone

Getting through the day without agriculture is impossible, yet many people don't understand and appreciate this connection to daily life or the vital role agriculture plays in our economy. While less than 2% of our population is involved in producing food, 20% of our nation's workforce is involved in food processing, marketing, distribution, and sales—and we all eat! A national set of agricultural literacy standards cover the multi-faceted nature of food and fiber systems across the curriculum in the areas of food systems, history, geography, culture, science & technology, the environment, business, economics, nutrition and health.

Bringing Learning to Life

NYAITC offers programs, workshops, classroom visits, and instructional resources through a network of local Cornell Cooperative Extension educators, Farm Bureau volunteers, teachers, and others to help New Yorkers:

- Appreciate the economic, social, historical, and scientific importance of agriculture in our society
- Develop an accurate picture of today's agriculture
- Explore the many career opportunities in all areas of agriculture
- Recognize the connection between agriculture production and the daily consumption of food and fiber products

With a special focus on elementary grades, we help teacher's integrate knowledge about agriculture and the food & fiber system into their curriculum and address NYS learning standards, to provide relevant learning experiences across the curriculum that enhance student achievement and bring learning to life.

New York Ag in the Classroom
106 Kennedy Hall Cornell University
Ithaca, NY 14853
www.nyaged.org/aitc 607-255-9253

Workshops
Workshops are offered for teachers, extension educators and volunteers.

Kids Growing Food
Over 325 school gardens have been started throughout New York connecting students to the food system.

Bluebird Project
A mini-grant program for teachers to foster connections between classrooms and farms and the environment.

Be Aware of NY Agriculture Contest
Pre-K-6th grade contest that promotes learning about agriculture through artwork, poems and stories. Students receive prizes as well as recognition at the New York State Fair.

Teacher of the Year
A teacher is recognized each year for outstanding innovation in integrating agricultural concepts into their curriculum.

Ag Literacy Week
Volunteers throughout the state will go into classrooms to read a book with an agricultural theme and talk to students about agriculture. The book will be donated to the school library with a special bookplate recognizing the donor and NY Ag Literacy Week.

Food, Land and People
Food, Land & People is a national science-and social sciences-based Pre-K to 12th grade curriculum. The curriculum consists of 55 hands-on lessons, with subjects ranging from environmental science and stewardship to human populations. NYAITC is the state affiliate for Food, Land & People in New York. We have aligned the 55 lessons with New York State Learning Standards in all curriculum areas.

Forestry Facts

The Importance of Trees

Perhaps because of their constant presence, most of us rarely lend much thought to the importance of trees in our lives, communities, and histories. Trees, however, are a vital and nurturing force. They benefit our environment and provide us with food, medicine and a wide array of products used in our everyday lives. One of the best ways to realize the importance of trees is to imagine our world without them. The disappearance of trees would bear dire environmental consequences. Animals would flee for lack of food and shelter, the air would become dark and dirty, and the water supply would grow stale. The very air we breathe, water we drink and ground we stand on is improved by the presence of trees. In order to feed themselves, trees absorb harmful chemicals such as carbon monoxide and in turn give off oxygen. As well, they filter and trap pollutants such as smoke, dust, and ash making our air cleaner. Where water is concerned, trees not only absorb water - preventing flooding, but also help disperse rainfall over a more even area. As well, by retaining water, trees help reduce the amount of topsoil the runs off into our sewers and streams. Leaves on the ground, keep moisture close to the ground aiding growth and traps chemicals keeping them out of lakes and rivers. On a larger scale, trees maintain our global environment in ways that we are just beginning to understand. By acting as enormous *carbon sinks*, trees absorb massive amounts of carbon dioxide from our atmosphere. If trees did not perform this vital function, there would be little to mitigate the effects of global warming caused by the Greenhouse Effect.

Trees also serve as a source of nourishment and provide us medicine. Apple, pear, and orange trees are just a few of the types of trees that provide pleasurable tastes as well as much needed vitamins. The ginkgo tree, dating back more than 300 million years, it is the oldest know species of tree. For centuries the Chinese have used tea made from ginkgo seeds as a cure for respiratory illnesses, such as asthma. In more modern times, ginkgo leaf extract has been used as a treatment for a wide range of aliments such as Alzheimer's and depression.

Everyday we use products that are derived from trees from the home that we live in to the paper we write on, even the clothes that we wear. The importance of trees seems apparent when one tries to imagine a world without them. Cleaner air and water, food for our tables and thoughts, as well as inspiration for our senses are but a few things given to us by trees.

Economic Importance of New York's Forestry:

The economic importance of New York's forests is significant. The forest provides important jobs and payroll for thousands of people in rural parts of the state, and significant source of income for forest landowners. The sale of forest products adds over $7.4 billion to the state's economy. Additionally, the forest attracts millions of visitors to the state for recreation and tourism activities, contributing $1.6 billion. Altogether, the contribution of forest-based manufacturing and forest-related tourism and recreation to the New York economy is over $9 billion annually.

New York State Trees:

Rank	Species
1	Sugar Maple
2	Red Maple
3	Eastern Hemlock
4	White Pine
5	White Ash
6	American Beech
7	Northern Red Oak
8	Black Cherry
9	Aspen
10	Spruces

Rank	County	Acres of Forestland (1,000ac)
1	St. Lawrence	1274.2
2	Hamilton	1079.1
3	Essex	1033.8
4	Franklin	826.5
5	Herkimer	686.0
6	Delaware	669.2
7	Lewis	617.1
8	Ulster	582.8
9	Cattaraugus	572.1
10	Warren	533.5

What is Tree Farming?

The term "tree farming" was first used in the 1940's to introduce the public to sustainable forestry terminology they could easily understand. Farming implies continual stewardship and production of goods year after year. By linking the term "farming" with trees, foresters could communicate the concept of sustainable production of forest products over time. Tree Farming implies commitment to the land and was the philosophical opposite of the "cut-out and get-out" philosophy of the early 20th century.

Tree Farms are more than pine plantations or Christmas tree farms. Tree Farms are varied in nature and contain many different habitats and stages of forest regeneration, from seedlings to mature timber. Biodiversity is a critical component of a certified Tree Farm. Tree Farmers must maintain natural forest buffers and other aspects of conservation techniques.

Goods from the Woods Lesson

Estimated Time: 1 Hour

Materials Needed: Goods from the Woods product cards (downloadable at www.nyaged.org/aitc/literacy.htm), "Tree Detectives" worksheet (1 per student), "The Tree Farmer" by Chuck Leavell & Nicholas Cravotta

Vocabulary: Agriculture, Roots, Stumps, Bark, Gums, Trunk, Branches, Foliage, Fruit, Pollutant, By-Product, Sap, Manufacture

Standards:
NYS Standard 1—Language for information & Understanding: Elementary 1
NYS Standard 4—The Living Environment: Elementary 3 & 6
Food & Fiber Literacy 1– Understanding Food & Fiber Systems: A & B, K-1

VOLUNTEER READERS - *Please* make sure to read through this lesson as well as the book, a few times before your presentation to the class.

If you only have a 1/2 hour in the classroom you can complete the introduction, book reading, & conclusion.

Introduction (10 Minutes):
**Have students sit at desks or in reading area.*

1. Introduce yourself and ask the class if they know the meaning of the word "Agriculture". Provide them with a simple definition of the word such as *"Agriculture -the production of food and fiber through farming & forestry".*
2. Discuss briefly your relationship to agriculture and why it is important.
3. Explain that they will be learning about the products that trees provide to us.
4. Review the parts of the tree and their functions by having students stand and "become" trees. Their fingers are leaves, their arms are branches, the body is the trunk, their toes are roots and their skin is bark You can mention that a trees sap is similar to our blood.

Book Reading (15 Minutes): Read students "The Tree Farmer" by Chuck Leavell and Nicholas Cravotta. After reading the story spend a few minutes discussing how trees can be used in many different ways and how tree farmers must care for their trees just as other farmers care for their livestock and/or crops.

Follow-up Activity (30 Minutes):
**Have students move to their desks*

1. Pass out the *"Goods From the Woods - Tree Detectives"* worksheet to each student.
2. Show students each of the product cards (or use actual examples) and have them record which items they believe are made from trees on their sheet. Use check marks (yes) and "X's" (no).
3. After you have showed the item, hand it to a student (there will not be enough for all students).
4. After you have shown each item, ask the class through a show of hands how many of them think none of the products come from trees, how many think 1/2 and how many think all of the products come from trees. In fact all of the items on the list are made from some part of a tree.
5. Discuss with the students the parts of the tree that each item is derived from (Information provided on the "*Goods from the Woods: Information Sheet" Page 7*). Call them up in teams based on the part of the tree that their item is derived from. For example: Call the **crayons** and **lipstick** up and explain how they each contain the wax contained in the **leaves**..
6. You can have the students recall what part of their body represented the various parts of the tree and the function of that part of the tree.

Conclusion (5 Minutes):
As a conclusion ask the students:

- Which product surprised them the most to find out that it came from a tree.
- Which items do they think New York State makes the most of?
    - Maple Syrup - NY is ranked 3rd
    - Christmas Trees - NY is ranked 11th
- What would happen if we didn't have trees?
- What would happen if we didn't have farmers?

Then you can pass out tree ID worksheets for the students to complete as you pack up.

Make sure to give the Teacher Resource Guide & survey to teacher. The book should be given to the school Librarian.

Materials and Lesson Provided by:
Beth Bubacz Nichols, Extension Educator
University of Maryland Extension - Washington County

Goods from the Woods - Information Sheet

Fruits & Nuts
The fruits, nuts, berries and seeds of many trees are an important source of food for wildlife and people. Some of the most common of these are **apples**, peaches, pecans, walnuts, **coffee** and **s**pices such as mace and nutmeg. Other fruits and nuts: Oranges, pears, chestnuts.

Foliage
While growing on a tree, leaves produce oxygen, help filter pollutants from the air, provide shelter for many wildlife species, and provide shade to help keep us cool. When harvested, leaves of the carnauba tree are used to produce furniture polish, car wax, **crayons**, **lipstick** and the coating on many medicine tablets. Whole leaves from some trees, such as bay, are used in cooking, while the oils of other leaves, such as the eucalyptus, are extracted for fragrances and flavorings. Other products made from foliage: garden mulch.

Branches
The branches of large trees and the trunks of smaller trees are used to make thousands of paper products, including writing paper, **tissues** and boxes. Chemical by-products of the paper-making process are used in producing cleaning compounds, skin lotions, artificial vanilla flavoring, photographic film and many molded plastic products such as eyeglass frames, football helmets, **toothbrushes** and buttons. Other products made from branches: carpeting and upholstery backing, rayon, plastic twines, computer casings, luggage, cellophane, newspapers, cereal, colognes.

Bark
Bark is used for a variety of purposes ranging from medicine to garden mulch, and to seasoning for foods. The willow tree, for example, provides the essential elements of aspirin, while the Cinnamon tree provides **cinnamon** used to flavor many foods. Cork for wine bottles and fishing tackle comes from the cork oak tree. Barks also burned to produce energy and used as a dye for fabrics, **shoe polishes** and other products. Other products made from bark: cosmetics, poultry bedding, oil spill control agents, and the cancer-fighting drug taxol.

Trunk
The trunks of trees which support the tree and serve as a food highway are primarily used to make solid wood products such as furniture, musical instruments lumber and handles for tools and sporting equipment. Trunks also are peeled into thick sheets and used as veneer for plywood and furniture. Other products made from trunks: **pencils**, baseball bats, charcoal, canoe paddles, guitars, **swing sets**, birdhouses, crutches, fences, sleds.

Sap & Gums
Sap, which provides nourishment to the trees is collected and boiled to down to produce **Maple Syrup.**
Gums, which are found in the sap of trees, are used in the manufacturing of a variety of products including food, adhesives, paints and medicines. In foods, gums serve as thickening agents, provide a creamy texture, act as binders to keep ingredients from separating, and help retain moisture. In ice cream and other frozen desserts, gums prevent the formation of crystals. The gums of some trees are used to make adhesives such as glue and hair spray, and antiseptic properties and are used in making soaps and cough syrups. Other products made from gums: chewing gum, cough drops, **shampoo**, dish washing liquid, adhesive bandages.

Stumps
Pine stumps provide the wood rosin and liquid terpenes used in making many products, including **orange-flavored soft drinks**, pine cleaners and laundry detergents. Hardwood stumps readily produce sprouts that grow into new trees, assuring that we have plentiful hardwood forests for the future. Other products made from stumps: sport drinks.

Roots
In addition to providing food for the tree, roots play an important role in keeping our waters free of excess nutrients. They stabilize the soil to prevent erosion and sedimentation, and by absorbing nutrients to feed the tree, they prevent these nutrients from entering our rivers and streams. Other products made from roots: sassafras tea, **root beer**.

Whole Trees
Trees are also utilized in their whole state as well due to their beauty and beneficial effects on the environment (erosion control, reduction in pollution.) A variety of trees are grown for landscaping purposes, evergreens are most commonly grown for sale as **Christmas Trees** and holiday wreaths.

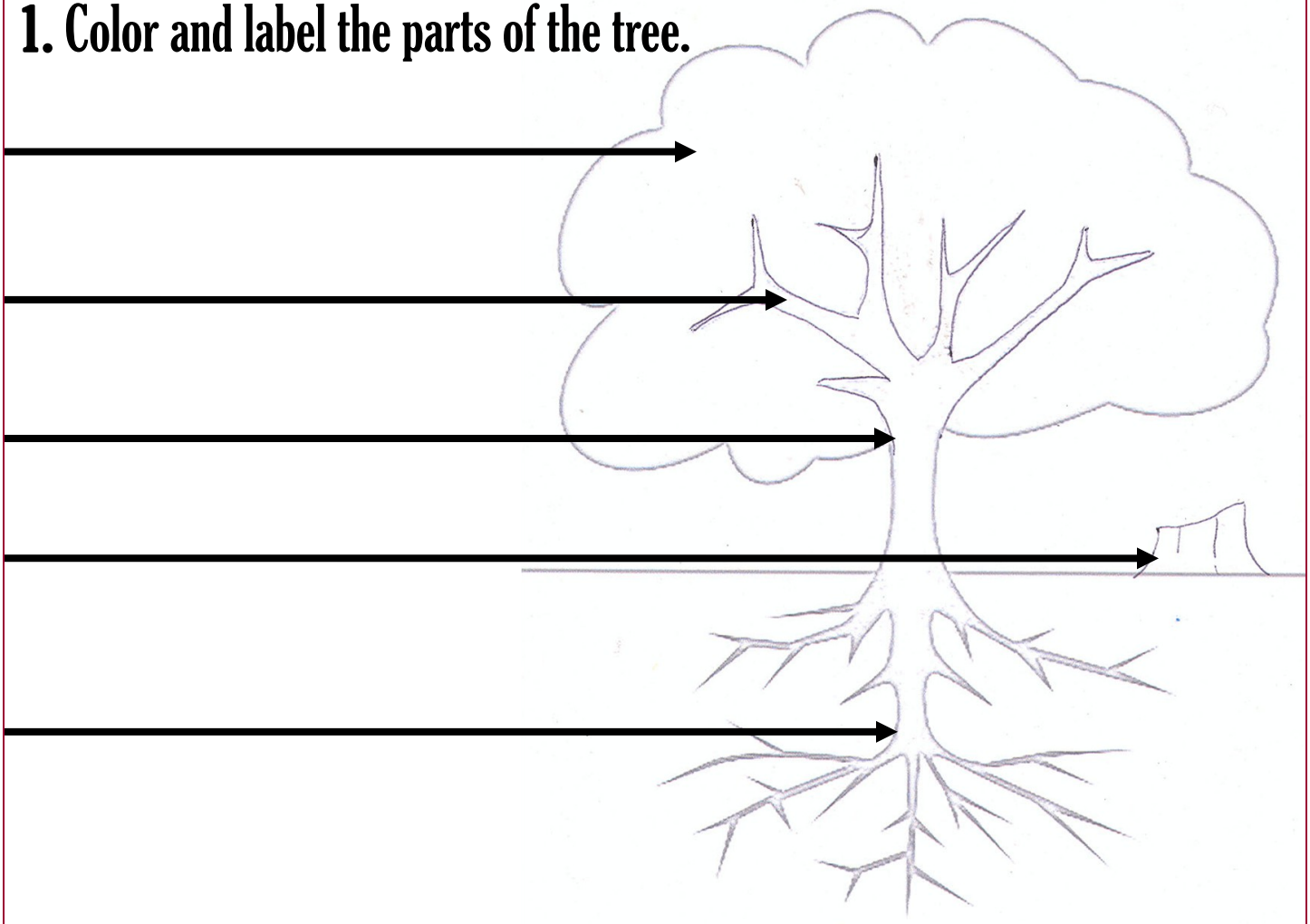
Goods from the Woods - Tree Detectives

Put a ✓ next to the products that you think are made from a tree and a X next to the products that are not made from trees.

	✓	X
Lipstick		
Apple		
Orange Soda		
Crayons		
Christmas Trees		
Kleenex Tissue		
Toothbrush		
Cinnamon		
Shoe Polish		
Shampoo		
Swing set		
Pencil		
Coffee		
Root Beer		
Maple Syrup		
Rubber Bands		
Post-it Notes		

Goods from the Woods

1. Color and label the parts of the tree.



2. Please write a sentence about a product that trees give to us.

_____

_____

_____

_____.

Tree Activities - Math

Just How High?

Materials: Measuring tape, Paper, Pencil, Stick

Bring students to an area with some tall trees. Have them work in groups of two. The teams should choose a tree and write down an estimate of how tall they think the tree is.

Student A: Measure student B's height and write it down. Have Student B stand at the base of the tree to be measured. With a pencil in one hand, hold out the stick at arm's length in the other hand, lining up the top with student B's head. With the pencil, make a mark on the stick that lines up with their feet.

Still standing at the same place, move the stick upward so that the top lines up with the tree top.

Make another mark on the stick, this time in line with the bottom of the tree.

The two marks on the stick show how much taller the tree is than student B. Suppose it is 20 times as tall. If student B is 4 feet, 11 inches (1.5m), the tree must be 98 feet (30m) tall. How close was your estimate?

Waste Not, Want Not

Consumers around the world use hundreds of millions of tons of paper each year. Americans have already eliminated 95 percent of all the virgin forests that originally covered the continental United States. How effective is recycling in saving trees? Recycling just one four-foot stack of newspapers saves a 35-40 foot tree! It also saves water and reduces pollution.

Help your students determine how much Paper is wasted in the classroom and develop solutions to reduce the amount of paper waste. Direct your class to throw used paper into a box labeled recycling. At the end of every day, weigh the box to see how much paper has been discarded. At the end of the week, have each student calculate the total amount of paper thrown out (in pounds) and determine a daily average. Brainstorm with you class a list of ways they can preserve paper. The following week put the conservation list into action. Continue to collect recyclable paper, weigh it on a daily basis, and compute the average at the end of the week. After judging the results determine if more stringent conservation methods are needed, or if your class has become conservation-wise.

Tree Activities - English Language Arts

Encyclopedia Bound

Have your class brainstorm a list of topics to include in an encyclopedia entry on trees. Suggested topics include: The importance of trees, types of trees, how trees grow, parts of trees, and tree products. Once the class has established a list of topics, group students into pairs, then assign each pair a topic. Have each pair gather information and take notes on its topic. After students complete their research, instruct each pair to write an encyclopedia entry for its topic on the computer. Organize the entries on the computer and use them as a class reference. Encourage students to add new entries as they learn more about trees throughout the year. Another option is to send your entries into cyberspace by publishing them on "Kidopedia Vose." This Internet Web site is an encyclopedia written for kids by kids. The address is http://199.2.210.97/kidopedia.html. Encourage students to add new entries as they learn more about trees throughout the year.

Something to talk about

Give trees the opportunity to speak through the voices of your students. To introduce this idea, read *The Big Tree* by Bruce Hiscock (Simon and Schuster Children's Books, 1994). After reading and discussing the story, have students work in pairs to write a skit about an old tree and an interviewer. Tell each pair that the tree is over 100 years old and has seen many things in its life. Have partners decide what type of tree to interview and where it lives. Instruct each pair to create a list of questions to ask the tree that will reveal its life story. For example, have the students ask the tree about people, historical events, other plants and animals, and changes in the environment that have affected the tree's life. After the skits have been written, give each pair the opportunity to practice skit parts with props or costumes. Have each pair perform their kit for the rest of the class.

Tree Activities - Social Studies

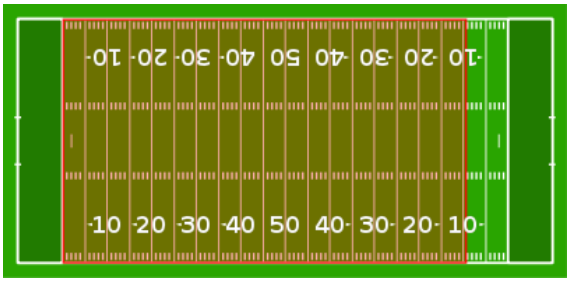
State Your Tree

What's one thing that makes NYS great? Our state tree, of course! New York is lucky to have the Sugar maple as our state tree. Have your students research to find when the tree was selected, why it was chosen, and other interesting facts. If possible, take your class to see a nearby Sugar Maple and during late winter visit a sugar shack to see how maple syrup is made. Have students research other states trees and make posters to display in your classroom.

Top Tree Counties in NYS

Start by demonstrating to students how big an acre is (1 acre is 43,560 square feet). This can be done by going outside and having students measure out the length (208.71 feet × 208.71 feet (a square), or by taking a picture of a foot ball field and showing the percentage that a acre would cover

(One acre is 90.75 percent of a 53.33-yard-wide American Football field. The full field, including the end zones, covers approximately 1.32 acres). Once students have an understanding of the size of acre have them find the counties listed on Page 5 (Top Counties in amount of forest land) on a NYS map and have students color them and write their rank inside the county. Make sure that they also mark the county the they live in as well as the any other significant details: State Capital, NYC, etc.



The area of one acre (red) overlaid on an American football field

Tree Activities - Art

Leaf Stained Glass

Materials: Waxed paper, Pressed leaves, Scissors, Iron, Newspapers

1. Tear off two pieces of waxed paper a little larger than you want your finished piece to look like.
2. Lay one piece of waxed paper on top of several sections of newspaper.
3. Arrange the leaves on the waxed paper.
4. Put the second piece of waxed paper on top of the leaves.
5. With the iron set on low, gently press the waxed paper sandwich. You will see the pieces of paper joining together. Keep moving the iron in circles until the whole top piece of paper is fused to the leaves and to the bottom paper.
6. Trim the edges of the waxed paper to make them straight.
7. Hang your stained glass in a window.

In the spring, you can trick a twig into growing leaves early. Take one twig from a maple tree which has many to spare. Put the twig in a jar of water and place it in a warm, light place. Watch the leaves appear from the buds. During spring the strong sunlight helps trees make sugar in the leaves by photosynthesis.

The seeds in broadleaf trees grow inside fruits, nuts, pods, or berries. Look for evergreen or conifer trees with needles as a comparison. Look at the seeds inside the cones.

Leaf Printing

Mix powder paints to a fairly thick consistency and brush it on to the veined underside of a maple leaf. Place the painted side on the paper.
Place tissue or newspaper over the leaf and carefully smooth it down lightly. After a few seconds, lift the tissue and gently peel off the leaf. Repeat the process with other leaves and different colors.

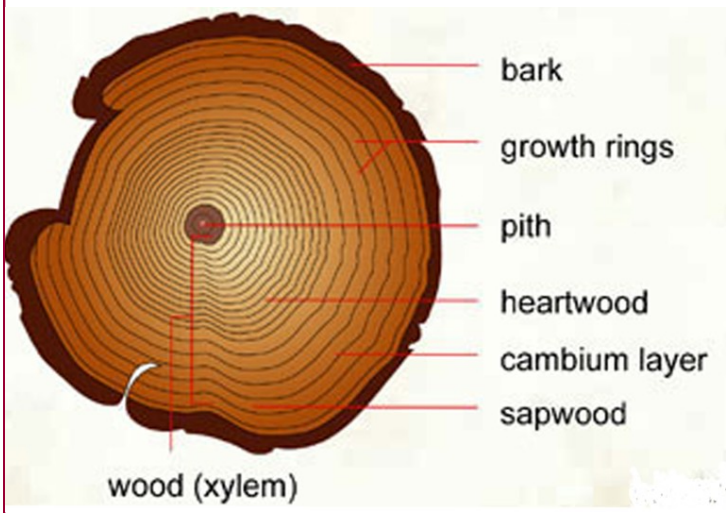
Try painting leaf shadows by holding a leaf firmly on a clean sheet of paper. Dip a brush in paint and make brush strokes out onto the paper from the center of the leaf. When you have painted all around the leaf, lift it off. A white shadow of your leaf remains. Make several leaf shadows on the same piece of paper and compare them.

Tree Activities - Science

My Life as a Tree

Materials: Crayons (green, red, brown), pencils, paper plates, sticky labels, tree cookie poster, real tree cookie

Begin the lesson by asking students if they know the purpose of the bark on a tree? Does anyone know what the words cambium and heartwood mean? Has anyone ever seen the "rings" inside of a tree? Does anyone know what the tree's "rings" represent? Today we will learn the meaning and importance of these parts of the a tree.



Instruction:
Explain the significance of the bark (protects tree), cambium (helps tree make new bark), and the heartwood (supports tree on the inside). Utilize a poster or diagram to show these 3 layers. Ask and answer any questions to check for comprehension. Explain one significance of the annual rings on a tree. (tell its age) and show the students how to properly count a tree's rings in order to calculate its age. (Count only the dark or the light shades not all shades). Have students count the number of rings on a cross section of a tree (can find by asking any local lumber mill or they are available online).
Give each student a paper plate, and brown, red and green crayons and instruct the students to:

- color the bumpy outside of the plate brown, just like the bark on a tree.
- draw a green circle around the plate to represent the cambium.
- draw a red heart symbol in the center of the plate to represent the heartwood.

Ask and answer any questions to check for comprehension then give each child a pencil and 2 sticky labels. Each student should place the label beside at least two important events in their life i.e.. Birth, when they started school, learned to ride a bike etc. They should then share their life as a tree with their classmates.

Closure:
What did we learn today? What are the three parts of a tree? What do these parts do for a tree? What do the rings inside of a tree tell us?

Remove the Chlorophyll from a Leaf

This experiment has been used with first grade and older students. The special cells in the center of a leaf contain tiny bodies called chloroplasts -- within them are molecules of chlorophyll, which is the green food-making pigment (coloring agent)

Soak leaf in very hot to boiling water.
Place leaf in a beaker of rubbing alcohol, place beaker into a larger container of warm water for an hour. During this time, the alcohol solution will gradually turn green as the chlorophyll is drawn out of the leaf.

Chlorophyll absorbs sunlight to produce the energy that breaks down and then combines molecules of water and carbon dioxide. The results of this synthesis are two new substances -- oxygen and a form of sugar known as glucose, the basic food of a plant.

Leaf Skeletons

Leaves contain thousands of tubes to move water and food around. These tubes are easiest to see in old, fallen leaves in the autumn. However, you can speed up the process of decay by putting summer leaves in a bucket of water. Change the water if it starts to smell. The green part of the leaves will slowly rot away, leaving the veins behind. The pattern of veins is known as the leaf skeleton.

Tree Activities - Making Recycled Paper

Ask students: Is paper made from a renewable or non-renewable resource? Explain your reasoning. Recycling or reusing resources decreases waste in landfills and decreases the demand for that resource.

Ingredients

- Large Square Pan, about 3 inches deep
- 3 cups of water
- A whole section of newspaper
- A rolling pin, or a liter glass beverage bottle, or…
- A plastic pipe, tube, or any cylinder to roll with.

Instructions:

1. Tear 1-2 pages of newspaper into small pieces of 1 inch or less
2. Put the paper chips into a large bowl and add all the water to it. Keep adding paper, tearing it and squeezing it, until the mixture looks like thick oatmeal.
3. With the pan turned UPSIDE DOWN, place about 1 cup of the blended pulp over the bottom of the pan. Spread it with your fingers evenly across the entire area.
4. Lay several sheets of newspaper over the pulp, then carefully turn the pan over. Removed the pan. Your pulp "square" is now sitting on the newspaper
5. Close the newspaper over the pulp. Using the rolling pin, roll over the newspaper to blot out the extra water.
6. Uncover and let the new "paper" dry COMPLETELY. When it is thoroughly dry, peel your new "recycled paper" away from the newspaper. It can now be cut to any size and used to make a variety of things!

CELEBRATE ARBOR DAY!

Friday April 30th, 2010

The National Arbor Day Foundation provides educators with free materials & trees to help them create a memorable and educational Arbor Day event at their schools.

Go to:
http://www.arborday.org

Tree Resources - Websites & Books

Websites

www.arborday.org-
The National Arbor Day Foundation Trees Are Terrific Lesson plans Arbor Day contest guidelines.

http://clubs.ca4h.org/sanmateo/milliontrees - the 4-H million Trees Project 's goal is to mobilize the approximately 7 million 4-H youth across the U.S. and Canada to participate in this project to plant 1,000,000 tress across the continent.

www.calforestfoundation.org-
FREE forest curriculum for K-8!

http://www.arborday.org/kids/carly/treevialpursuit/treevial_pursuit.cfm-
fun interactive game set in trivial pursuit style.

www.plt.org-
Project Learning Tree. Resources on tree cookies

http://www.dec.ny.gov/lands/33310html - information on The Economic Importance of New York's Forests.

http://www.forestinfo.org/Teachers?FAQ-teachers.htm-
Tree Source Room form the Temperate Forest Foundation

www.invasivespeciesinfo.gov-
invasive and exotic Species

www.catskillforest.org-
Catskill Forest Foundation. Information on Tree Planting, Backyard Sugaring, Woodland Wildlife

http://www.esfpa.org-
Empire State forest Products Association. The people behind New York's healthy Forests and Quality Wood Products

www.nacdnet.org-
National Association of Conservation districts.

www.earthsbirthday.org -
Resources to educate students about the earth.

Books

Have You Seen Trees?- by Joanne Oppenheim

The Seasons of Arnold's Apple Tree- by Gail Gibbons

Arbor Day- by Diane Burns

Red Leaf, Yellow Leaf- by Lois Ehlert

The Giving Tree-by Shel Silverstein

The Trunk Traffic- by Bianca Lavies.

A Busy Year- by Leo Lionni

Once There Was a Tree- Natalia Romanova

The Big Tree- by Bruce Hiscock

The Man Who Talked to a Tree- by Byrd Baylor

Tree Flowers- by Millicent E. Salsam

Oak and Company- by Richard Mabey

Treetures by Judith Hope Blau

Picture Books

The Tree Farmer –by Chuck Leavell and Nicholas Craotta

Are Trees Alive? - by Debbie S. Miller

Tree Bear's Adventures In Learning- by June A. Bradlaw

The Lorax- by Dr. Seuss

The Tree- by Judy Hindley

A Tree is Nice- by Janice May Udry

Tree Resources - Books

Farewell To Shady Glade- by Bill Peet

The Wump World- by Bill Peet.

Where Once There Was a Wood -by Denise Fleming

The Great Kapok Tree- by Lynne Cherry

One Day in the Woods by Jean Craighead George

Night Tree- by Eve Bunting

A B Cedar: An Alphabet of Trees – by George Ella Lyon

The Tree in the Moon – by Rosalind Kerven

The Grandpa Tree – by Mike Donahue

Flute's Journey: The Life Of A Wood Thrush – by Lynne Cherry

Be A Friend to Trees- by Patricia Lauber

The Apartment House Tree - by Bette Killion

Ten Tall Oak Trees – by Richard Edwards

A Possible Tree – by Josephine Haskell Aldridge

The Birthday Tree - by Paul Fleischman

Maya and the Town That Loved a Tree – by Kiki and Kathryn Shaw

Old Elm Speaks: Tree Poems – by Kristine O'Connell George

The People who Hugged Trees: An Environmental Folktale – adapted by Deborah Lee Rose

Novels/Chapter Books

Song of the Trees – by Mildred Taylor

The Chocolate Tree - by Allen M. Young

The Man Who Planted Trees - by Jean Giono

Informational Books

The Tree – by Pascale De Bourgoing & Gillimard Jeunesse

Outside and Inside Trees – by Sandra Markle

Eyewitness Books: Tree – by David Burnie

It Could Still Be A Tree – by Allan Fowler

Trees – by Rena K. Kirkpatrick

My Life, My Trees – by Richard St. Barbe Baker

A Tree Is Growing – by Arthur Dorros

Sky Tree – by Thomas Locker

The Blossom On the Bough: A Book of Trees – by Anne Ophelia Dowden

Guess What Trees Do? – by Barbara Rinkoff

Trees – by Ivan M. Anatta.

Trees – by Fandex Family Guides

Autumn Leaves – by Ken Robbins

Rand McNally Forests – by Chris Arvetis

Take-Along Guide Trees, Leaves, and Bark- by Diane L. Burns

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