



What's Growing On In Virginia?
Virginia Foundation for Agriculture in the Classroom
P.O. Box 27552, Richmond, Virginia 23261

NON-PROFIT ORG.
U.S. POSTAGE PAID
RICHMOND, VA
PERMIT NO. 2162

What's Growing On In Virginia?

The Virginia Foundation for AGRICULTURE IN THE CLASSROOM

FALL 2007 / VOLUME 18 NO. 2

THIS ISSUE

- 2 Online Resources
- 7 Literary Corner
- 6 Program highlights



Christmas in July, August, September...

Q: Who works 365 days a year getting ready for Christmas?

A: If you guessed "Christmas tree farmers," you're right!

Virginia's 750 Christmas tree farmers work year-round to produce trees that will be sold in a six-week period in November and December. Like all farmers, Christmas tree growers have to work throughout the year to be ready for harvest.

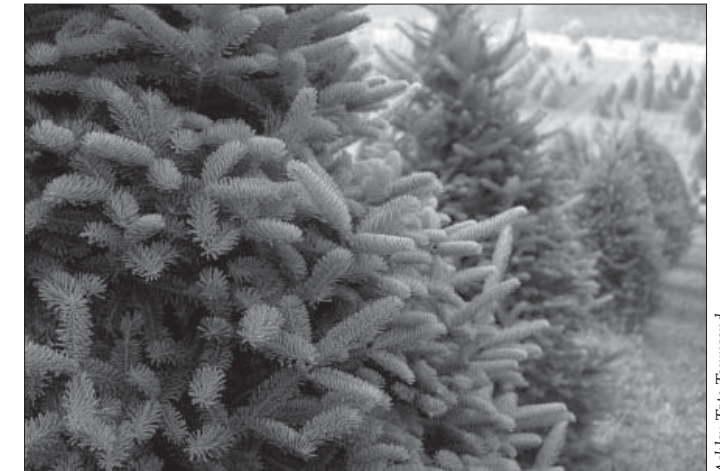
Grower Sue Bostic, who owns Joe's Trees in Craig County, thinks about Christmas every day. She recently sat down with AITC to explain how a Christmas tree farmer's year unfolds.

On December 26, when many families are relaxing around their Christmas trees, growers start walking the fields to see where they need to plant new trees. After a winter of taking inventory, ordering extra trees, spraying pests and weeds and repairing equipment, March arrives and it's time to plant new seedlings and spread fertilizer. Two to three trees get planted for every tree sold in the previous season.

Mowing begins in April and continues through the fall to keep the weeds down in between the trees. Bostic said mowing is one of the most gratifying jobs on a tree farm, because it provides instant results.

Tree growth, on the other hand, progresses slowly. It takes an average of seven years, and as many as 15, to grow a tree that's ready for sale at a height of 6 to 7 feet. Bostic said the most challenging part of her job is finishing all the work in time, because Mother Nature doesn't follow schedules. A late spring might force a grower to push back planting, or lack of rain might kill promising seedlings.

Supplies for Christmas tree farm gift shops get ordered in May. When summer arrives, growers and their staff shape each tree individually with mechanical shears or by hand to get that perfect cone shape. They also prune each tree's base to give it a strong trunk.



Ashley Tate Townsend

In August, growers begin to flag the trees they will sell in November. August is also when the Virginia Christmas Tree Growers Association holds its annual meeting, where growers catch up on professional news and compete in the association's Virginia Christmas Tree Contest. The grower of each year's Grand Champion tree gets an opportunity to provide a tree for Virginia's Executive Mansion.

"Usually (the governor and his family) like a 10- to 12-foot tree, and most of the time they pick a fir because the fir holds the heavy ornaments," Bostic said. She produced a Grand Champion tree in 2006.

After the excitement of each year's conference, it's back to work in September, planting new trees to replace any spring seedlings that didn't survive the summer, and ordering more seedlings.

October is time to get ready for customers, making sure the

continued on the next page

"Two to three trees get planted for every tree sold in the previous season."

AITC Program Highlights

AITC spins more Web

The Virginia Foundation for Agriculture in the Classroom recently wove more content into its Web site at www.agintheclass.org, including program highlights and information on awards programs. You'll find an updated schedule of workshop opportunities as well.

AITC offers gardening and literacy grants

The Virginia Foundation for Agriculture in the Classroom offers two grants to help teachers make the most of their AITC training.

To grow school gardens, teams of teachers can apply for Instructional Garden Grants. Recipients will get \$500 to purchase non-consumable supplies.

Community organizations interested in supporting educational literacy will want to apply for a Book Partnership grant. The grants provide volunteer organizations with funds to purchase and provide ag-themed books for school libraries.

For applications and details, including a list of the partnership grant books, visit www.agintheclass.org today.

Become an AITC-certified teacher

To schedule a professional development workshop for your school staff, contact the AITC staff at 804-290-1141 or through the foundation's Web site at www.agintheclass.org.

Workshops are free teacher training programs at which participants receive Standards of Learning-aligned teaching materials. Each school represented at a workshop receives a school kits of resources, and every teacher who attends receives a resource kit valued at more than \$100.

Three regional teacher workshops, open to all public and private school classroom teachers in Virginia, have been scheduled:

- Nov. 29 - for teachers of K-5, at Virginia State University. To register, call Sylvia Montgomery at 804-524-6967 by Nov. 19.
- Nov. 30 - for teachers of grades 6-8, at VSU. To register, call Sylvia Montgomery at 804-524-6967 by Nov. 19.
- Jan. 11 - Garden in the Classroom Workshop for teachers of K-8, at Lewis Ginter Botanical Garden. To register, call 804-262-9887, ext. 322, by Jan. 1, 2008.

continued from the front page

grounds are safe, manicuring fields, preparing the gift shop and tuning up harvesting equipment.

Starting in mid-November, most growers focus on cutting and baling—binding trees with twine to make them easy to move—and shipping to tree lots in time for sales starting on Thanksgiving. November is also an important time for wreath-making. Most tree farms save some “Charlie Brown” trees for customers, but most of the trees with obvious flaws are cut into smaller sections and made into fresh wreaths, garland and centerpieces.

Mid-November brings the rush for which growers work all year: a constant stream of customers through Christmas Eve. Many flagged trees stay on the farm and await the arrival of a different kind of customer: those who choose their trees on the farms where they were grown. It’s called “choose-and-cut” business, because the trees are cut on the spot for customers. The cutting season is a busy time of the year, but Christmas tree farmers don’t go into hibernation when it’s over. They take a few days off and then start all over again.

Buying a fresh Christmas tree is more than buying a seasonal decoration; it’s supporting a tree farmer and taking home a part of that farmer’s story. For Bostic, that story began as when she was a child helping her late father, Joe Sublett, with his tree farm. She has proudly carried on his dream since 1993.

“I’m here doing what my dad taught me to do when I was growing up,” she said.



Ashley Tate Townsend

TOP 5 REASONS to buy a fresh Christmas tree:

1. Preservation of green space

Farmers who make a profit can keep their farms, but loss of business can create a situation where their best option is to sell land to developers. That’s a loss of scenic landscapes and habitat for wildlife that could be lost. As Sue Bostic of Joe’s Trees in Craig County said, “Once something is put into asphalt, it never goes back to farmland.”

2. Buying local

Fresh local trees are grown by Virginia farmers, while 85 percent of artificial trees come from China.

3. Real trees are a renewable, recyclable resource

The non-biodegradable metals and plastics in fake trees will end up in a landfill. Real trees decompose and return to the soil like any other dead tree. They can be placed in ponds to provide habitat for fish or used for mulch or as a bird feeder. Customers also can purchase balled and burlapped trees—whole trees with the roots still attached—and then plant them after the holiday to enjoy for years to come.

4. Breathing room

One acre of Christmas trees provides the daily oxygen requirements for 18 people. There are about 500,000 acres of Christmas trees in the United States, enough to supply 9 million people with clean air. Christmas tree farmers often plant two to three seedlings for every tree they harvest, and as those trees grow they absorb carbon dioxide.

5. Non-toxic tradition

Ask many people who celebrate Christmas what the holiday season smells like, and the answer will probably have to do with fresh-cut trees, garland or other decorations made from evergreens. Going to a Christmas tree farm to choose a tree is often a family tradition. While fresh trees give off a lovely aroma, artificial trees can be a source of hazardous lead.

Sources: *National Christmas Tree Association, Virginia Christmas Tree Growers Association*

Online resources

The National Christmas Tree Association’s educational Web site at www.realtrees4kids.org offers pages tailored to grades 3-5, 6-8 and 9-12. Students can learn about conifer biology, farming, tree species and more. The site also includes printable

teaching guides, hands-on activities and book lists.

Visit the NCTA home page at www.christmastree.org for other teacher resources.

To learn about Virginia’s Christmas tree

industry or find a local tree farm, visit the Virginia Christmas Tree Growers Association Web site at www.virginiachristmastrees.org.

Visit a virtual tree farm, set up by the Christmas Tree Growers of Ontario, at www.christmastrees.on.ca/vtfsite/vtfmain.html.

LESSON PLAN >> ELEMENTARY SCHOOL

Classify and Create a Tree

Background knowledge

Two basic types of trees are deciduous and coniferous. Deciduous trees have larger leaves, which they lose in the fall or winter. Coniferous trees have narrow needles, which drop continually, not all at once. This is why coniferous trees are sometimes referred to as evergreens. Furthermore, coniferous trees have cones, which produce seeds. Examples of coniferous trees are pine, spruce and fir trees. Maple, oak and elm are examples of deciduous trees.

Procedure

1. Ask students to describe the different types of trees that they can see outside. Prompt students by asking them to describe the various types of leaves. Point out the difference between trees with large leaves and those with needles.
2. Ask students to describe what happens to some trees in the fall (Their leaves fall off). Remind students that not all trees lose their leaves in the fall.
3. Explain that deciduous trees drop their leaves in the fall or winter, while coniferous trees drop needles continually, but not all at once. Tell students that coniferous trees have cones, which produce seeds.
4. Hold up a branch from a deciduous tree. Ask students to describe it. Depending on grade level they may respond orally or in writing.
5. Hold up a branch from a coniferous tree. Ask students to describe it. Depending on grade level they may respond orally or in writing.
6. Record student answers in two columns on the board.
7. Discuss the similarities and differences of the two columns.
8. Show students a pinecone. Ask them, “In which group does the pinecone belong?”
9. Tell students that they will be using a pinecone to make their own holiday tree.
10. Pass out a large pinecone, cotton balls, glue and glitter to each student.
11. Have students glue a few cotton balls to the bottom of the pinecone to resemble a snowy ground.
12. Place a small amount of glue on the tips of the pinecone and sprinkle with glitter.
13. Let “trees” dry and place around the room as a holiday decoration!

Extension

- After students have learned about the different types of trees, take them outside to collect twigs / leaves / branches and then classify them.
- Tie ribbon around your pinecone tree for use as an ornament.

References

www.enchantedlearning.com/crafts/Pineconetree.shtml
www.christmastrees.on.ca/ednet/lesson5.html

- **SOL:**
Science 1.1a, c; K.1a, K.8b; 2.1c; 3.1b; 4.4a

Objective:

The student will:

- use observations to classify types of trees;
- identify basic properties / structure / attributes of trees; and
- create a pinecone tree decoration.

Materials:

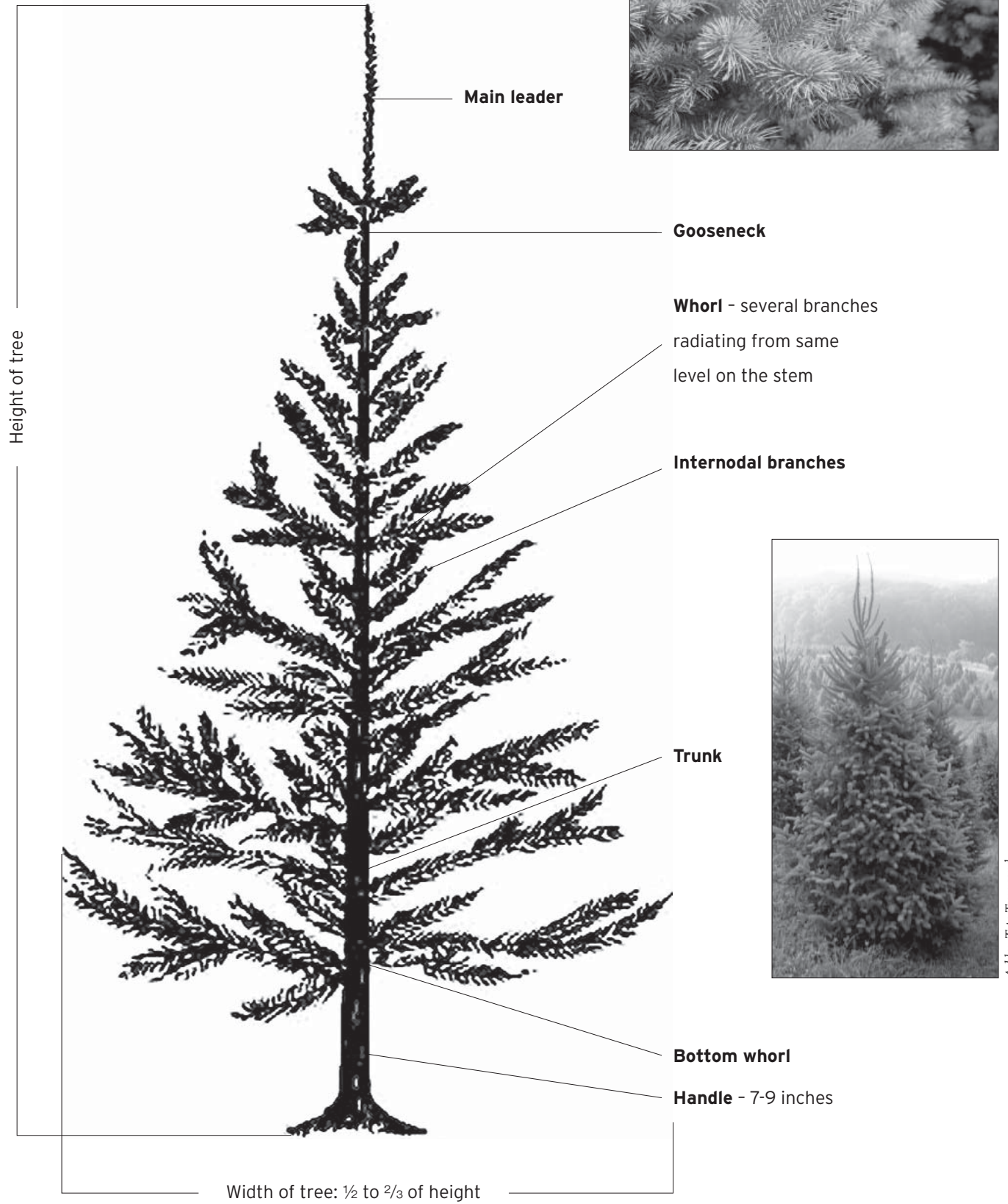
- various twigs/ branches from deciduous trees and coniferous trees
- large pinecones (enough for the entire class)
- glitter
- cotton balls
- school glue



Reproduction of AITC™ material by organizations or individuals other than those who have received the materials from Virginia AITC staff at an AITC training program is prohibited. For more information on Virginia agriculture, visit our Web site at www.agintheclass.org.

The Virginia Foundation for AGRICULTURE IN THE CLASSROOM™

Christmas tree terms



Ashley Tate Townsend

LESSON PLAN >> MIDDLE SCHOOL

Inspecting Virginia Pines

Background knowledge

Virginia's soil and climate create ideal growth conditions for certain varieties of conifers. These evergreens are used as cut Christmas trees as well as planted in yards and used to create wind breaks.

The Christmas tree industry is becoming a major aspect of Virginia agriculture. These evergreens can be found throughout the state, as well as in your region. Some popular species grown in Virginia include:

COSTAL PLAIN	PIEDMONT	MOUNTAINS
White Pine	White Pine	White Pine
Scotch Pine	Scotch Pine	Scotch Pine
Virginia Pine	Virginia Pine	Norway Spruce
Blue Spruce	Norway Spruce	Fraser Fir
	Blue Spruce	Blue Spruce

*information found at www.ext.vt.edu/pubs/forestry/420-082/table1.html

Procedure

1. Take a nature walk with students, and make observations about the trees and plants around the school.
2. Have students record observations and make sketches in their science journals about the types of trees and plants, leaves, size, etc.
3. Students should collect samples of leaves from the ground around the plants.
4. In the classroom, make slides with the leaf and needle samples.
 - a. Place leaf or needle sample on slide.
 - b. Cover sample with a drop of water.
 - c. Place a slide cover over the sample.
5. Use microscopes to view the slides.
6. Have students record observations in their science journals and compare microscope observations with "naked eye" observations from outside.
7. Have students rotate around the room to different microscopes to compare a variety of leaves and needles.
8. Discuss how trees are important to Virginia agriculture-forestry, Christmas trees, plant products, etc.

Extension

- Discuss the structures of the trees, plants and leaves.
- Observe the plant cells.
- Research the types of trees grown in Virginia and locally in your region.
- Research the use of trees in agriculture, including the products created from trees and plants.

References

- www.ext.vt.edu/pubs/forestry/420-082/table2.html
- www.evergreen.ca

SOL:

Science 6.1, LS.1, LS.5, LS.11

Objective:

The student will:

- make observations of plants, trees and leaves around the school;
- apply knowledge of microscope use;
- make slides with Virginia pines using the wet mount method;
- observe leaf sample slides under a microscope;
- record and compare observations;
- identify plants and trees in the area; and
- recognize the importance of trees to Virginia agriculture.

Materials:

- various leaves (including conifers [evergreen]); use at least one type of Virginia-grown pine
- slides and covers
- water
- eye dropper
- microscope



Reproduction of AITC™ material by organizations or individuals other than those who have received the materials from Virginia AITC staff at an AITC training program is prohibited. For more information on Virginia agriculture, visit our Web site at www.agintheclass.org.

The Virginia Foundation for AGRICULTURE IN THE CLASSROOM™

Pines, spruces and firs— Oh my!

Christmas trees are gymnosperms, or plants that do not produce flowers but have seeds. They are also evergreen conifers. Evergreen trees do not lose their leaves in the winter, making them “forever” green. Most coniferous trees are evergreens. Coniferous trees produce cones that contain their seeds, and they have needle- or scale-like leaves.

Like all living things, trees are classified into different groups based on their similarities and differences. Virginia Christmas tree farmers mainly grow three major types of trees: spruce, pine and fir. Spruces have stiff, prickly needles and cones with thin scales. Pines have long, narrow needles and cones with thick, tough scales. True firs have soft, flexible needles, and their cones sit upright on top of their branches (Most cones hang down below branches). The scales on a fir cone fall off when the seeds inside ripen.

There are several species of pines, spruces and firs that people use for Christmas trees. Each has specific characteristics. For example, a Colorado blue spruce is bluish-gray in color, so it stands out from the rest of the spruces.

More information on common Christmas tree species is available on the National Christmas Tree Association's Web site for teachers and kids at www.realtrees4kids.org.

Growers are a ready resource

These generous supporters of the Virginia Foundation for Agriculture in the Classroom are available to serve as a resource for you. Contact them individually regarding the potential for field trips, guest speakers and other possibilities.

Bedford Evergreens – Dan Young

1893 Robertson Road in Bedford County
540-580-4613
dayoung0115@yahoo.com • www.bedfordevergreens.com

Joe's Trees – Sue Bostic

5110 Cumberland Gap Road in Craig County
540-544-7303
joestrees@pentel.net • www.joestrees.com

Spruce Ridge Tree Farm – David & Dreama Huffman

655 Spruce Run Road in Giles County
540-874-8733 • d_huffman@pentel.net

The Huffmans live in Roanoke County and would be willing to work with schools in the Roanoke area as well as in Giles County.

Swinging Bridge Christmas Tree Farm – Raymond & Page Scott

12171 Roebuck Road in Washington County
703-525-3732 or 276-628-8214 • raycott22@juno.com

The Scotts live in Arlington until Thanksgiving, when they return to their tree farm in Abington for the remainder of the year.

AITC Program Highlights

William and Mary student wins teaching award

Three lesson plans earned Meghann Dailey of Forest \$300 in teaching supplies. The Virginia Foundation for Agriculture in the Classroom presented Dailey with its 2007 Excellence in Teaching Award in May. She won the award based on agriculture-related, SOL-correlated lesson plans she prepared in the content areas of math, social studies and language arts. The foundation will use her lesson plans to enhance the AITC curriculum.

Dailey is completing her master's degree in elementary education at the College of William and Mary.

The Excellence in Teaching Award is co-sponsored by Virginia Farm Credits Association and recognizes students who are working toward their teaching licenses and have shown a commitment to teaching about agriculture.

Snyder joins AITC staff



Lynn Snyder

In June the Virginia Foundation for Agriculture in the Classroom welcomed Lynn Snyder as its new elementary education program coordinator. Snyder most recently served as the gifted and talented coordinator for Chickahominy Middle School in Hanover County.

Willow Springs Tree Farm – Greg Miller

3000 Peppers Ferry Road in Radford (Montgomery County)
540-731-3300
gwmiller@aol.com • www.willowsprings.com

Virginia Christmas Tree Growers Association

www.virginiachristmastrees.org
VCTGA members are listed in the site's Tree Farm Directory.

About the Newsletter

What's Growing On In Virginia? is a semiannual publication for Virginia elementary and middle school teachers, published by the Virginia Foundation for Agriculture in the Classroom

Program Coordinator: Tammy Maxey

Editor: Pam Wiley

Graphic Designers: Maria La Lima and Bill Altice

For additional information and activities, visit our Web site at www.agintheclass.org or call 804-290-1141

DID YOU KNOW?

Christmas tree facts

- Ninety-eight percent of all fresh Christmas trees are grown on farms.
- About 73 million new Christmas trees are planted each year.
- Virginia Christmas tree farms produce these tree varieties: Douglas fir, Fraser fir, white fir, Austrian pine, scotch pine, white pine, Virginia pine, blue spruce, Norway spruce and white spruce.
- Christmas trees have been sold commercially in the United States since about 1850.
- There are more than 21,000 Christmas tree growers and more than 12,000 choose-and-cut Christmas tree farms in the United States.
- The U.S. Christmas tree industry employs about 100,000 people.
- Christmas trees are grown in all 50 states including Hawaii and Alaska.
- The first known decorated Christmas tree was trimmed in Riga, Latvia, in 1510.
- Growing Christmas trees provides a habitat for wildlife.
- Christmas trees are baled to protect the branches from damage during shipping.
- Ninety-three percent of fresh Christmas tree consumers recycle their trees in community recycling programs or their gardens and back yards.
- Recycled trees have been used to make sand and soil erosion barriers and placed in ponds for fish shelter.
- Christmas trees take an average of 7 to 10 years to mature.
- Christmas trees remove dust and pollen from the air.
- An acre of Christmas trees provides the daily oxygen requirements of 18 people.
- Artificial trees will last for about six years in your home but last for centuries in a landfill.

LITERARY CORNER

Books about christmas tree farming

Christmas Tree Farm, Ann Purmell,
Holiday House, ISBN 10: 0823418863

Where Would I be in an Evergreen Tree?

Jennifer Blomgren, Sasquatch Books,
ISBN 10: 1570614148

The Year of the Perfect Christmas Tree:

An Appalachian Story, Gloria Houston,
Puffin, ISBN 10: 0140558772

Christmas Tree Farm, Sandra Jordan,

Orchard Books, ISBN 10: 0531070786

A Wish to be A Christmas Tree,

Colleen Monroe, Sleeping Bear Press,
ISBN 10: 1585360023

Legend of the Christmas Tree, Rick Osbourn,

Zonderkidz, ISBN 10: 0310700434

Why Christmas Trees Aren't Perfect,

Richard Schneider, Abingdon Press,
ISBN 10: 0687453631

