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!

In 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 tree, 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.

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.

AITC Program Highlights

The Virginia Foundation for Agriculture in the Classroom offers two grants to help teachers 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.
TOP 5 REASONS to buy a fresh Christmas tree:

1. Preservation of green space
Farmers who make a profit by keeping 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

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, but 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 pines, 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.

Materials:
• Various twigs/branches from deciduous trees and coniferous trees
• Large pinecones enough for the entire class
• Glitter
• Cotton balls
• School glue

SOL:
Science 1.3a, c; K.1a, K.8b; 2.3c; 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.

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/vftsite/vftmain.html.
**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:

*information found at [www.ext.vt.edu/pubs/forestry/420-082/table1.html](http://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 Virginia pines using the wet mount method.
5. Have students record observations in their science journals and compare microscope observations with "naked eye" observations from outside.
6. Have students rotate around the room to different microscopes to compare a variety of leaves and needles.
7. 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](http://www.ext.vt.edu/pubs/forestry/420-082/table2.html)
- [www.evergreen.ca](http://www.evergreen.ca)

*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](http://www.agintheclass.org).*

**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

**COSTAL PLAIN**
- White Pine

**PIEDMONT**
- Scotch Pine
- Virginia Pine
- Norway Spruce

**MOUNTAINS**
- Blue Spruce

<table>
<thead>
<tr>
<th>COSTAL PLAIN</th>
<th>PIEDMONT</th>
<th>MOUNTAINS</th>
</tr>
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<td>White Pine</td>
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<tr>
<td>Scotch Pine</td>
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<td>Scotch Pine</td>
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<tr>
<td>Virginia Pine</td>
<td>Norway Spruce</td>
<td>Fraser Fir</td>
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<tr>
<td>Blue Spruce</td>
<td>Norway Spruce</td>
<td>Blue Spruce</td>
</tr>
</tbody>
</table>

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 evergreen. 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](http://www.realtrees4kids.org).

### 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.

#### Snyder joins AITC staff

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.

#### Celebrating a tradition

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### 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  
dayoun8105@yahoo.com • [www.bedfordevergreens.com](http://www.bedfordevergreens.com)

#### Joe’s Trees – Sue Bostic

5100 Cumberland Gap Road in Craig County  
540-544-7303  
joestrees@pentel.net • [www.joestrees.com](http://www.joestrees.com)

#### Spruce Ridge Tree Farm – David & Dreama Huffman

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

#### Willow Springs Tree Farm – Greg Miller

3000 Peppers Ferry Road in Radford (Montgomery County)  
540-733-3300  
gwmillerr@aol.com • [www.willowsprings.com](http://www.willowsprings.com)

#### Virginia Christmas Tree Growers Association

[www.virginiachristmastrees.org](http://www.virginiachristmastrees.org)

VCTGA members are listed in the site’s Tree Farm Directory.

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**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 Massy  
**Editor:** Pam Wiley  
**Graphic Designers:** Maria Le Lima and Bill Alice

For additional information and activities, visit our Web site at [www.agintheclass.org](http://www.agintheclass.org) or call 804-290-1141.

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### 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.
- Ninety-three percent of fresh Christmas tree consumers buy a tree from a tree farm. 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](http://www.realtrees4kids.org).

### LITERARY CORNER

#### Books about Christmas tree farming


*The Year of the Perfect Christmas Tree: An Appalachian Story*, Gloria Houston, Puffin, ISBN 10: 0140558772


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#### Christmas Tree Farm – Raymond & Page Scott

12171 Roebuck Road in Washington County  
703-525-3732 or 276-628-8214 • rayscott22@juno.com

The Scotts 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 & Paige Scott

12171 Roebuck Road in Washington County  
703-525-3732 or 276-628-8214 • rayscott22@juno.com

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