

**History of Selling Christmas Trees**

Did you ever wonder how selling Christmas trees began? A story tells about a farmer, who in 1851, brought two sleds pulled by oxen of evergreen trees into New York City and sold them all. At this time, many people went into the woods and cut down their own trees. These trees grew wild and were not carefully trimmed and cared for like the trees we buy today from a tree farm. By the 1920s, nearly every American family had a Christmas tree. When the Great Depression began, nurserymen couldn't sell their trees for landscaping so they cut them and sold them as Christmas trees. Americans liked these trees because they were better shaped than the wild ones. Christmas tree farming as a business began.

**Growing Christmas Trees**

Just like any other crop a farmer might raise, Christmas tree farmers need to make sure their trees have the proper nutrients, good soil and water.



Christmas tree farming takes a lot of hard work. Soil needs to be tilled before the tree seedlings can be planted. After the trees are planted, tree farmers must monitor and control both animal pests and insects. Mammals such as deer, gophers and ground squirrels can hurt trees because of the damage they may cause to both the roots and buds. Trees need to be carefully pruned, sometimes several times a year, to maintain the Christmas tree shape. Farmers often have to mow between the rows of trees to eliminate weeds which would take water and nutrients from the trees. It can take from 6 to 10 years to grow a Christmas tree, longer for very large trees. Very cold winters and very hot or dry summers can damage the trees. Early snows can make cutting and shipping the trees difficult.

## Harvesting Christmas Trees



There are several different ways to harvest Christmas trees. One of the more popular ways is where customers are allowed to walk around a tree farm, select their tree and cut it down themselves. This is known as the **Pick-Your-Own** farm.



Some farmers grow trees that are dug up and the root ball is tied up with a fabric called burlap. Trees harvested this way are called "*balled and burlapped*" trees. Families can leave this kind of tree in their house for about a week and then replant it in their yard after Christmas. Getting a balled and burlapped tree, allows the tree to keep growing in the yard for many years.

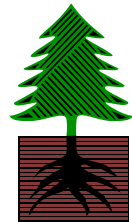
Some tree farmers cut their trees down, wrap them for shipping and sell them to organizations like Boy Scout troops. These trees are sold on parking lots and street corners.



During the 1980s, a farm in Oregon that lacked a road to the tree farm used helicopters to move the trees. What a clever way to transport trees without having to build a road!

## Christmas Trees Help the Environment

Christmas trees are good for the environment. Every acre of Christmas trees in production produces enough oxygen for 18 people. When you multiple the number of acres planted in Christmas trees across the United States that means that Christmas tree farms provide enough oxygen for 9 million people per day.



After the holidays, Christmas trees can be reused as mulch and large Christmas trees can be piled up as soil erosion barriers. Sometimes the trees are put in ponds as fish habitat or placed in the back yard and decorated with food for birds to eat over the winter.

A very special use of large, overgrown Christmas trees took place in 2002. These huge trees were used in a project to restore an eroded river bank along the Connecticut River. The trees were placed in the river with their tops pointing downstream. The trees were secured to the riverbank and plants were rooted among their branches. This helped stop the river bank from eroding.

Christmas trees are good for the environment whether they are producing oxygen, acting to prevent soil erosion or just being a special home for wildlife.



Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Christmas Tree Farms - Reading Passage

Directions: Read each question and fill in the best answer

1. What usually makes a Christmas tree from a Tree Farm better than one from the woods?

- A. its color
- B. its height
- C. its shape
- D. all of the above

2. What do Christmas trees need to grow well?

- A. nutrients
- B. deer
- C. snow
- D. dry summers

3. According to the article, which things can harm Christmas trees?

- A. helicopters
- B. good soil
- C. deer and gophers
- D. snow

4. How long does it usually take to grow a Christmas tree?

- A. 18 years
- B. 6 -10 years
- C. 2-3 years
- D. 19-20 years

5. What is not a way for you to get your Christmas tree?

- A. At a Pick Your Own Farm
- B. Balled and burlapped
- C. From a Boy Scout troop selling trees on the corner parking lot
- D. With a helicopter

6. Which are ways that Christmas trees help the environment?

- A. provide wildlife habitat
- B. produce oxygen
- C. can be reused as mulch
- D. all of the above

**Extended Response:** Choose either question.

1. What are some differences and similarities between a Christmas tree farmer and a farmer that raises corn?
2. Make a list of some of the things involved in Christmas tree farming. Which ones can the farmer control? How? Which ones can't the farmer control? Why?

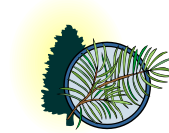


### Christmas Tree Trivia

- In the first week, a tree in your home will consume as much as a quart of water per day.
- Most Christmas trees are cut weeks before they get to a retail outlet.
- Christmas trees are grown in all 50 states including Hawaii and Alaska.
- 98 percent of all Christmas trees are grown on farms.
- 77 million that's 77,000,000 Christmas trees are planted each year.
- Thomas Edison's assistants came up with the idea of electric lights for Christmas trees.
- California, Oregon, Michigan, Washington, Wisconsin, Pennsylvania, and North Carolina are the top Christmas tree producing states.

## A Fun Science Experiment for You to TRY...

### Why do evergreens stay green all year long?



#### Science Objectives

- Plan and conduct an observational investigation that collects information about characteristics or properties.
- Explain an event or phenomena using observations as evidence. Understand how to construct a reasonable explanation using evidence.
- Understand that models represent real objects or processes. Describe reasons for using a model to investigate phenomena.
- Report the process used and results of the investigation (e.g., verbal, visual, written).

**Materials needed:** 3 paper towels to resemble leaves, 2 sheets of waxed paper, spray bottle, samples of deciduous leaves, evergreen needles and broadleaf evergreens (magnolia, rhododendron) if possible, two plastic cups, 2 pieces of plastic wrap, water

#### Experiments

1. Discuss the fall/winter season and ask what differences are usually seen in the forest between winter and summer (summer - all trees have leaves and are green; winter - evergreens are green; deciduous trees have lost their leaves). A deciduous tree loses its leaves once a year and an evergreen has leaves all year long.
2. If possible, show some large deciduous leaves (like maple), some evergreen samples and some broadleaf evergreens (like magnolia, rhododendron). What are the similarities and differences of the leaves/needles? (discuss thickness, shape, covering)
3. All plants need water, sunlight and nutrients to grow. Which sample do you think will lose water the fastest? the slowest? Why?
4. Conduct the following experiments to discover the answer.
  - a. Take three paper towels and spritz them each equally with water enough to dampen but not soak them.
  - b. Paper towel #1 is deciduous leaf model and should be laid out flat to represent a deciduous oak or maple leaf.
  - c. Paper towel #2 is rolled tightly into a tube to represent an evergreen needle.
  - d. Paper towel #3 is laid between 2 sheets of waxed paper. This represents a broadleaf evergreen such as a magnolia, cherry laurel or rhododendron leaf with its waxy coating.
  - e. Ask, "Which model do you predict will dry first, second, last?" Record your predictions and explain why.
  - f. Allow models to remain undisturbed until Model #1 is relatively dry while others are still moist (about 1/2 - 1 hour).
  - g. Record and discuss results.
  - h. Explain: Plants have adaptations to help them survive the cold of winter and heat of summer. One of these adaptations is different types of leaves.



**Deciduous plants** drop their leaves in winter as a way to prevent water loss during extreme dry cold. Deciduous leaves tend to be thinner, easier to tear. Deciduous plants tolerate the low light, cold and moisture loss of the freezes in winter by dropping their leaves and becoming dormant.

**Evergreen plants** have leaves that have adapted to help them hold water during changes in seasons. Many evergreen "*leaves*" tend to be shaped like **needles** and very compact. They are also strong and don't tear easily. Botanists discovered that the needles are regular leaves that are rolled up very tightly, an adaptation that allows evergreens to conserve water for photosynthesis during the winter.



**Broadleaf evergreen leaves** (like magnolias and rhododendrons) tend to be thick, leathery and covered with a waxy coating which acts as a blanket. This makes their leaves resistant to cold and moisture loss with winter's freezing temperatures.

**Try another experiment** to further understand the evaporation process: Place two, clear plastic cups with equal amounts of water in the sun. Cover one cup with plastic wrap and the other cup open to the air. Observe from which cup the water evaporates faster. The answer to this experiment will help you to understand how "the curled leaf (needle) of the evergreen and the waxy covering on the broadleaf evergreen leaf helps to conserve water." This is what allows evergreens to stay green in the winter and carry on the photosynthesis process since they have a water source.



Check out these books:



### **The Christmas Tree** by Julie Salamon

As the chief gardener of Rockefeller Center in New York City the narrator of our story has a colossal job ahead of him each year right after Christmas ends. Another year begins and he is already scouting out possibilities for the next years most perfect tree to decorate the prestigious Center for all to take pleasure in. It is when the perfect tree is found on the Bush Creek Convent grounds that his job gets just a little bit harder. Sister Anthony unfolds a splendid Christmas tale.

### **The Year of the Perfect Christmas Tree: An Appalachian Story**

by Gloria Houston



The town tradition is for young Ruthie's family to provide the Christmas tree to decorate the small Appalachian town. Ruthie's father however is away from home fighting in the war and although the war is over he has not yet returned. The duty falls on the shoulders of Ruthie and her mother. This story shares the trials and tribulations Ruthie and her mother face along with the joys and accomplishments.

## Christmas Tree Farm by Ann Purmell

Do you ever think about the Christmas trees that you buy every year? Do you ever think about the people who planted the tree, took care of it, and cut it down for you? Well, this is the story of a family who raise Christmas trees on a Christmas tree farm. You are going to join a little boy and his grandfather as they begin to cut down the trees in November so that they can be ready for the customers who start arriving to buy trees just after Thanksgiving.



The little boy knows that it takes hard work to grow the trees that his grandparents sell. In the spring there are little baby trees which need to be planted, lots and lots of them. Grandpa then mows between the rows of trees to keep the weeds down. Then in the summer the trees have to be trimmed into a neat triangular shape. In the fall all the trees are measured and tagged according to size. The biggest trees can take up to fifteen years to grow and they are the most expensive.

At last, on Christmas Eve, Grandpa closes the doors of his Tree Hut and he goes to join his family for their own family Christmas celebration.

(See **TEACHER'S GUIDE** Ideas for incorporating CHRISTMAS TREE FARM by Ann Purmell at the website <http://www.annpurmell.com/files/ChristmasTreeFarm-TeacherPacket.pdf> for additional ideas and activities)



## Bella's Tree by Janet Russell

Bella lives with her Nan and their dog Bruno. Nan is starting to get old and this year she cannot go out to cut down the family Christmas tree. Convinced that she can do the job because she is "big and strong and smart and well coordinated," Bella takes on the job.

Unfortunately, for Bella, she does not know that a Christmas tree is not just any old tree. First she brings home an alder tree. Then she brings home a spruce tree. Then she brings home a pine tree. By the time she gets the right tree, a fir tree, it is Christmas Eve night and Nan is in bed asleep. Bella feels bad because all the decorations have been used up to decorate the "less deserving trees," but then something special happens and Bella and Nan experience their own little Christmas miracle.