

## FUN FACES OF WISCONSIN AGRICULTURE

### FREDDY FIR'S CHRISTMAS TREE FAST FACTS



#### Production Information

Coniferous trees have cones that are made of scales. The scales are actually specialized leaves. Most coniferous trees have both male and female cones. Male cones are soft, small and produce pollen. Female cones produce eggs, are larger and woody. Pollen is transported by the wind.

Producers must continue to replant trees in order to have an adequate supply for consumers and to make up for trees lost to disease, poor growth and competition from other plants. Growers will often plant one to three new seedlings for every tree they harvest. Seedlings are grown in nurseries and are often 3-5 years old when they are planted in the field on tree farms. More than 2,000 trees are usually planted per acre. On an average 1,000-1,500 of these trees will survive. In the North, perhaps 750 trees will remain. Almost all trees require shearing to attain the Christmas tree shape. Pruning must be done annually to give trees the more even shape and denser look people prefer to see in their natural Christmas trees. Mice and meadow voles can kill entire stands of young trees by eating the bark under the winter snow cover. This is called girdling. Regular mowing and weed control helps to keep a rodent population exposed to natural predators. At six to seven feet, trees are ready for harvest. It takes six to ten years of fighting heavy rain, wind, hail and drought to get a mature tree.

#### Wisconsin Production

There are 1387 Christmas tree farms in Wisconsin with over 36,000 acres of trees. About 1.8 million Christmas trees are harvested annually in Wisconsin and over 600,000 wreaths and garland made each year. The economic impact of the Christmas tree industry is over \$50 million annually. Wisconsin ranks #5 in the number of trees harvested. The principal trees grown in Wisconsin include: Balsam Fir, Fraser Fir, Scotch Pine, White Pine, and Spruce (White, Black Hills and Colorado).

#### Career Information

Seasonal work includes tree planters in the spring, shearing crews to prune the branches, harvesting crews in the fall, and people to help in tree sales from Thanksgiving until Christmas. People also are needed to make wreaths and other decorations from trees. Crop consultants can help with soil and foliage tests, pest and animal control, and disease prevention and treatment. Growers may specialize in seedlings that are sold to tree producers.

#### Trivia

- In 2003, 21% of Christmas trees sold were from chain stores, 15% by non-profit groups. 13% from retail lots and 35% from choose and cut farms.
- An acre of Christmas trees provides for the daily oxygen requirements of 18 people.
- All 50 states grow Christmas trees.

#### Other Information

To get trees ready for harvest, each tree is cut, shaken to remove dead needles, and then baled using a machine which presses the branches against the trunk, holding them in place with netting or twine. This protects the tree and makes it easier to handle for shipping. As many as 800 baled trees can be loaded in a big tractor trailer heading for a large retail location.

Some farmers plant small trees into pots. These are for people who want to buy a "living" tree which can be planted in their garden in the spring.

Real Christmas trees are renewable and help to stabilize soil, protect water supplies and provide refuge for wildlife. They are often grown on soils that won't support other crops.



6. Using a compass and protractor, create a pie graph to show the following Christmas Tree Farm information (be sure to label your graph):

- 39% of farms are less than 10 acres
- 24% of farms are 10-19 acres
- 24% of farms are 20-49 acres
- 13% of farms are more than 50 acres

7. Using the information from the above problem, If there are 1,387 Christmas tree farms, approximately how many of each size are there?

## ANSWER KEY

1. Your Christmas tree farm has 250 trees and your aunt is growing 125 trees on her farm. How many trees will you have altogether?

$$250 + 125 = 375 \text{ trees}$$

2. A White pine tree has needles in groups of five. If there are 20 groups of needles on one branch, how many needles are there?

$$5 \times 20 = 100 \text{ needles on one branch}$$

3. The average Christmas tree is harvested at 7 years. The first tree is planted when you were born. If one tree must be harvested before another tree is planted and you are 11 years old, how many Christmas trees have been grown and harvested in your lifetime?

*Only one tree. A second one has been planted, but has not been harvested*

4. In Wisconsin, there are 1,387 Christmas tree farms. If each of those Christmas tree farms grew 50 trees to be harvested each year, how many homes could have real Wisconsin Christmas trees for Christmas this year?

$$1,387 \text{ Farms} \times 50 \text{ trees on each farm} = 69,350 \text{ real Wisconsin Christmas trees}$$

5. If one tree can be used to make 3 wreaths, how many trees would you need to make 540,000 wreaths?

$$540,000/3 = 180,000 \text{ trees}$$

6. Using a compass and protractor create a pie graph to show the following Christmas Tree Farm information (be sure to label your graph):

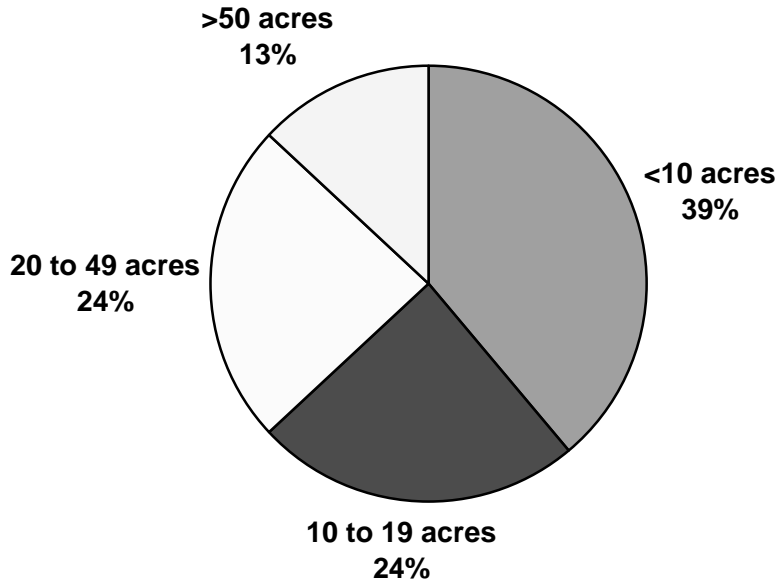
39% of farms are less than 10 acres

24% of farms are 10-19 acres

24% of farms are 20-49 acres

13% of farms are more than 50 acres

## Size of Wisconsin Christmas Tree Farms



7. Using the information from the above problem; If there are 1,387 Christmas tree farms, approximately how many of each size are there?

$1387 \times .39 = 541$  farms with less than 10 acres

$1387 \times .24 = 333$  farms with 10-19 acres

$1387 \times .24 = 333$  farms with 20-49 acres

$1387 \times .13 = 180$  farms with more than 50 acres

## FUN FACES OF WISCONSIN AGRICULTURE RING AROUND THE TREE



### **Activity Length:**

This Business Called Agriculture Activity- 20 minutes

How does your tree grow? – 30 minutes

Tree Ring and Student Timeline Comparison – 20 minutes

Christmas Tree Research Worksheet- 60 minutes (30 interviewing, 30 compiling data)

Christmas Tree Math Lesson – 30 minutes

### **Student Objectives:**

1. Learn the steps necessary in Christmas tree production
2. Explore the way trees grow and how to tell the age of a tree by its rings
3. Create a “tree-ring timeline” of the student’s life

### **Wisconsin Model Academic Standards:**

English	A.4.4	C.4.1	C.4.2	D.4.1
Math	A.4.1	B.4.5	D.4.2	
Science	A.4.1	C.4.1	E.4.8	
Social Studies	B4.2			

### **Introduction: Freddy Fir’s Christmas Tree Fast Facts**

### **Additional Information available at:**

Wisconsin Christmas Tree Producers Association ([www.christmastrees-wi.org](http://www.christmastrees-wi.org))

National Christmas Tree Association (<http://www.christmastree.org/home.cfm>)

University of Illinois Extension (<http://www.urbanext.uiuc.edu/trees/education.html>)

Real Trees 4 Kids – ([www.realtrees4kids.org](http://www.realtrees4kids.org))

### **Important Terms:**

- **Tree ring:** A growth ring produced annually which assists in giving an indication of the environment and growing conditions the tree has experienced.
- **Dendrochronologist:** Scientist who studies the growth of rings in trees
- **Stem:** Young stems are made of xylem, phloem and cambium layers. The stem gives support and is also called the trunk.
- **Phloem:** Carry dissolved food and nutrients throughout the plant. Conducting tissue for photosynthesis.
- **Cambium:** Place of growth in the tree stem located between the inner bark and the wood of the tree.
- **Xylem:** New cells are produced each year. Gives support and transports water and nutrients upward in the plant. As xylem clog up over time, they become heartwood and help make up the cells we see as rings.
- **Conifer:** A gymnosperm which bears cones.

- Gymnosperm: Identifies trees usually known as softwoods or evergreens. Christmas trees are normally gymnosperms.
- Cone: seed bearing structure of certain gymnosperms.
- Evergreen: Retains at least some leaves through the fall and winter.

**Materials for this activity:**

- This Business Called Agriculture – from the Wisconsin Agribusiness Council
- Several cross sections of cut trees for students to view. Ask students who may have parents that cut wood for samples.
- Paper or poster board

**Lesson Outline:**

This Business Called Agriculture Activity

*Students will be able to create a timeline for Christmas tree production utilizing This Business Called Agriculture.*

1. Have students read page 27 (Wisconsin Crops) and individually complete the timeline at the bottom of the page.
2. When all students are finished, go over the correct timeline as a class discussing the importance of each step.

***Answers to the activity on page 27***

January-March: Planning, Ordering

April-June: Prepare Field for Planting; Dig trees to put in people's lawns

July-September: Fertilized; Protected from weeds, insects and animals; Shearing; Irrigate

September-December: Tagged; Cut; Shook; Baled; shipped and sold

**How does your tree grow?**

*Students will explore the signs about tree growth that are shown in a tree ring*

1. Visit (<http://www.realtrees4kids.org/sixeight/stemsrings.htm>) for background information.
2. Review the parts of a tree's stems and rings. Discuss differences in a young tree cross-section to an older tree cross-section. Identify the stem, phloem, cambium, xylem and any other parts of the cross-section.
3. Ask how many students have seen the inside of a tree trunk. Show a picture or the actual tree trunk cross section to the class. Try to determine the age of a tree by counting them and discuss variation in the rings.
4. Reasons for larger rings: longer growing season year, adequate fertilizer, abundant rainfall, and other good growing conditions.
5. Reasons for smaller rings: little rain, poor care, lower springtime temperature, shorter growing season, crowding from neighboring trees, and other poor growing conditions.

6. Reasons for variation in rings: Different shaped rings may show when something was pressed against the tree, dips in the rings show when something was inserted into the tree (maple sap spigot), different species react differently to growing conditions, narrow on one side and wide on the other indicates crowding of the tree on the narrow side, narrow rings followed by large rings indicate that an encroaching tree died and then the affected tree had a growth spurt, and climate changes. Trees also can show fires and floods by changing the way that the rings grow.

### Tree Ring and Student Timeline Comparison

*This activity will allow students to create their own version of a tree ring timeline compared to events in their lives.*

1. Distribute large pieces of paper to students and instruct them to create their own tree ring timeline of their life.
2. Remind them that the counting starts at the middle ring when the tree was youngest. Encourage them to vary their rings on years when they grew the most or to have dips on years that they broke a bone...
3. Require that they mark at least five important events from their life (moving to a new house, birth of a sibling, fun family vacation...) on their tree ring and then encourage them to decorate it creatively (use real bark or ripped paper for the outside of the tree, put leaves on the paper to decorate...)
4. Share with a partner their tree-ring timeline and then display the class timelines around the room.

### Christmas Tree Research Project

*This activity will give students an opportunity to interview people, collect data, and use the data to calculate percentages and make various types of graphs.*

1. Distribute copies of the Christmas Tree Research Worksheet to students.
2. They can survey other students, family members, school staff or friends. They should interview 25 people.
3. Review how to calculate percentages and the various types of graphs.
4. Students will analyze their data and complete the worksheet.
5. Students can give summaries of their data to the class.

### Christmas Tree Math Lesson

1. Distribute Christmas Tree Math Worksheet as a classroom activity or a homework assignment

### **Suggested Reading Materials:**

- "O Christmas Tree" listing of recommended Christmas tree children's books. List can be found at ([www.christmastrees-wi.org](http://www.christmastrees-wi.org)) and click on Teachers.

- *The Wonderful World of Christmas Tree*. Mid-Prairie Books

**Additional Worksheets:**

Careers Guide related to Christmas Trees  
Christmas Tree Research Worksheet

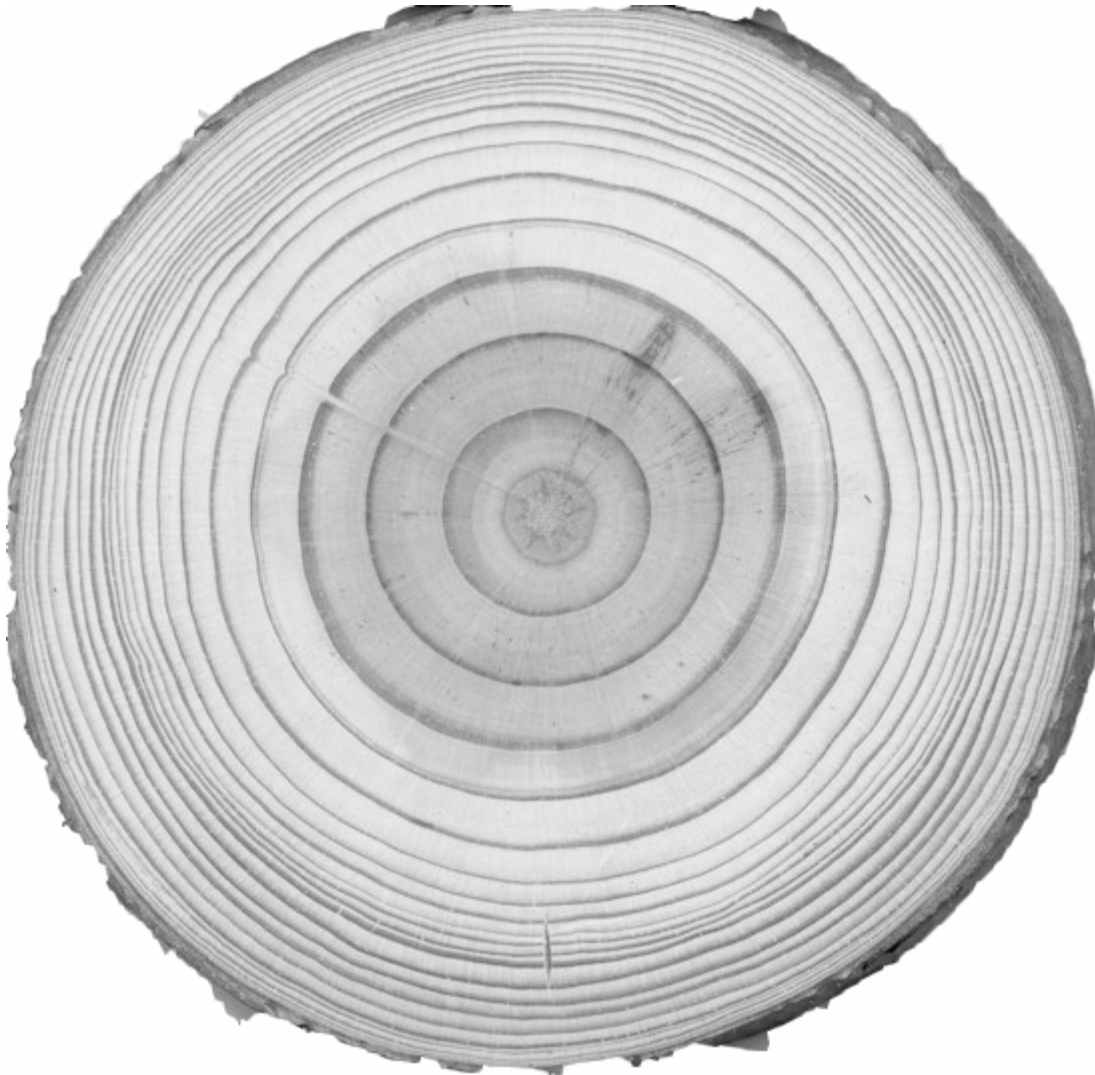
**Related activities:**

- For an extended project, encourage students to research one of the following five kinds of Christmas Trees that are grown in Wisconsin (Balsam Fir, Fraser Fir, Scotch Pine, White Pine and Spruce including White, Black Hills, and Colorado Blue.) Students can create a poster with needles, pictures and information to use as a “sales brochure”.
- Grow Your Own “Tree” in a Pine Cone Activity (page 12) in the Christmas Tree Fun For Children- available from Wisconsin Christmas Tree Producers Association ([www.christmastrees-wi.org](http://www.christmastrees-wi.org)).

**FUN FACES OF WISCONSIN AGRICULTURE**  
***TREE RING EXAMPLE***



**Tree Ring Example**



**FUN FACES OF WISCONSIN AGRICULTURE**  
***TREE RING-STUDENT'S TIMELINE EXAMPLE***



← I was born

← My sister was born

← My brother was born

← My sister was born

← I won Grand Champion at the fair

← I got my driver's license

← I graduated from  
High School

## FUN FACES OF WISCONSIN AGRICULTURE TREES GIVE ME WHAT?



### **Activity Length:**

A Brainstorm of tree products – 20 minutes

The air that we breathe and the soil we stand on - 20 minutes

Creating my own paper - 60 minutes and 15 minutes the next day

Christmas Tree Math Lesson – 30 minutes

### **Student Objectives:**

1. Become familiar with the products that originate from trees
2. Understand the environmental benefits of trees in providing clean air and preventing soil erosion
3. Using used paper, create recycled paper to take home to remember the importance of trees both from the products you get from them and in recycling

### **Wisconsin Model Academic Standards:**

English	A.4.4	C.4.1	C.4.2	D.4.1
Math	A.4.1	B.4.5	D.4.2	
Science	A.4.1	C.4.1	E.4.8	
Social Studies	E.4.14			

### **Introduction: Freddy Fir's Christmas Tree Fast Facts**

#### **Important Terms:**

- Recycle: To reuse something for another purpose
- Erosion: Loss of soil – usually by water or wind
- Root System: Fibrous or tap, anchor plants or trees. Help absorb water and nutrients from the soil.
- Biodegradable: Broken down naturally with the help of bacteria
- Mulch: Ground cover that is used to reduce erosion, evaporation and to control weeds
- By-products: Products that are made from a source. There are over 5000 products made from trees.
- Soil: The top layer of the earth's surface. It is made of rock, mineral particles and organic matter.
- Humus: Organic material that is formed by the decomposition of plant and animal matter.
- Pulp: Fibrous materials made from wood or recovered waste paper for use in manufacturing paper.
- Slurry: A liquid mixture made up of fibers and fillers used in papermaking

#### **Materials for this activity:**

- Sponge
- Paper mold (made by tightly stapling window screen over an old picture frame)

- Plastic Basin or tub (big enough to immerse the frame)
- Paper, toilet paper, newspaper or paper related products (not glossy)
- Blender or food processor to be used to make the paper pulp
- White felt or flannel fabric the size of the paper mold

### **Lesson Outline:**

#### A brainstorm of tree products

*This activity will create a broadened realization of the uses for trees so the students can begin this project with an equal understanding*

1. Create a simple drawing of a tree on the board with lots of branches coming from it.
2. Ask students to write in the branches the names of products that come from trees. Encourage students to give a specific product rather than “paper”. Some products include:

BATS	GUM
PADDLES	PLACEMATS
PLYWOOD	SHINGLES
SOLVENTS	TILES
TURPENTINE	WOODEN
TOOTHPASTE	BLOCKS
CANOE	CHARCOAL
CHEWING	COSMETICS
DEODORANTS	FLOOR
FURNITURE	GUITARS

3. When the tree is filled, discuss the ways that these products are processed and produced and how that has changed from in the past (i.e. lumberjacks transporting trees by river to logging mills). Refer to Department of Wood Science and Forest Products, Virginia Tech (<http://www.woodmagic.vt.edu/kids/Products/index.htm>) for processing information.
4. Complete the worksheet It Starts as a Tree

#### The air that we breathe and the soil we stand on

*Students will discuss the importance to the environment provided by trees*

1. Refer to the worksheet Christmas Trees and the Environment
2. What do trees do for us when they are living? How can trees serve as air filters? Trees provide shade and shelter for wildlife (i.e. birds, deer, rabbits, woodchucks, fox, mice, coyotes, turkeys, quail and grouse). Trees use carbon dioxide that humans exhale and water from the soil to produce its own food, and release clean air (oxygen) that humans need to survive.

Photosynthesis: Carbon dioxide absorbed from the air combines with water taken in by the plants’ roots from the soil to form food materials known as carbohydrates. Plants use the visible light rays from the sun as the energy source to accomplish this. An

important by-product of this reaction is the oxygen the plant releases into the atmosphere.

3. How can trees help the soil they are growing in? Trees provide a place for animals to live amongst the roots. Trees protect the soil and keep it from washing away in rain or floods by anchoring it with its roots. Each year, some needles will die and fall to the ground, decay and mix with the soil, making it more fertile.

### Creating my own paper

*This activity will give students a project to take home with them to show what they learned in the classroom.*

1. Select the pieces of paper to be recycled. Mixing different paper types will create a unique end result. You can use newspaper, scrap paper or even dryer lint!
2. Rip the paper into small bits and fill the blender half full with paper and then fill with warm water. Blend slowly and increase speed as the pulp looks smooth and blended (for about 30 seconds). If large pieces remain, blend longer.
3. Fill basin half full with water, then add three blender loads of pulp to the basin. The more pulp you add, the thicker the paper will be. Stir the mixture in the basin. (If the paper is to be used for writing on, stir two teaspoons of liquid starch into the mixture to prevent the ink from bleeding through the paper)
4. Place the mold into the pulp mixture and level it out by wiggling it side-to side to even the pulp on top of the screen.
5. Slowly lift the mold up until it is above the water level and wait until most of the water has drained from the new sheet of paper. If it appears too thick, remove some pulp from the tub, if it is thin, add more and mix.
6. When the mold stops dripping, gently place one edge of the new paper on the edge of a fabric square. With the new paper directly on the fabric, gently ease the mold down. Use a sponge to press out as much water as possible and wring the sponge into the tub.
7. Hold the fabric square and slowly lift the edge of the mold, being careful to insure that the wet sheet of paper remains on the fabric. If it sticks to the mold, you may have pulled too fast or not removed enough water. It takes a little practice, but the paper can always be put back in the tub and tried again.
8. When multiple papers are finished, stack them one on top of the other and squeeze the excess water out one last time. Gently separate the sheets and place them individually to dry. When dry, remove from the fabric.

### **\*\*Variations\*\***

- Place dried flowers on the fabric before putting the paper onto it. The flowers will become a part of the finished paper.
- Use multi-colored paper for multi-colored results

## Christmas Tree Math Lesson

1. Distribute Christmas Tree Math Worksheet as a classroom activity or homework assignment

### **Suggested Reading Materials:**

- *Wisconsin Forests Forever - Teacher's Guide*. Available from the Wisconsin Department of Natural Resources
- *Paper by Kid*. By Arnold Grummer
- *300 Years of American Papermaking*. By Helena Wright
- *A Bibliography of Delightful Children's Books for General Us*. Wisconsin Christmas Tree Producers Association ([www.christmastrees-wi.org](http://www.christmastrees-wi.org)) – click on Teachers.

### **Additional Worksheets:**

Careers Guide related to Christmas Trees  
Trees and the Environment Worksheet

### **Related activities:**

- Use this lesson shortly after lesson on potato growth and create stamps to use on your recycled paper for students to create customized stationary. Then use the stationary to write a letter telling a pen pal what they learned about potatoes and trees.
- Alternative paper-making activities in *Wisconsin Forests Forever* (Pages 57-60)
- Edible Soil activity- download from ([www.wisagclassroom.org](http://www.wisagclassroom.org)) Click on Activities
- Refer to activities on Department of Wood Science and Forest Products, Virginia Tech (<http://www.woodmagic.vt.edu/kids/index.htm>)
- Real Trees 4 Kids- free on-line curriculum at ([www.realtrees4kids.org](http://www.realtrees4kids.org))
- See ([www.christmastrees-wi.org](http://www.christmastrees-wi.org)) for any new resources that become available
- Use terms from the Trees and the Environment Worksheet for a vocabulary test

**FUN FACES OF WISCONSIN AGRICULTURE**  
**IT STARTS AS A TREE**



**It Starts as a Tree**

N I T S T E L A O C R A H C A C R T S A  
E S A T R R E E P R O D U C T S A W E G  
D E T F R U O M T R E E S B B L F N K T  
O Q A D E T S A P H T O O T M Y C H O B  
O I R H Z I Z S K E N I T N E P R U T E  
W J B A D N P A D D L E S P L Y W O O D  
H Y R J F R T T B V P Z Z W B M D Q H R  
I D W Y P U G Z L L W H N Z B O L F M D  
I D O Z Z F S M A J P Z R G Z B X G B U  
C S H E B K A C C E G V N N U R B B Z A  
N N I B A S E B A L L Z V D B M O I P T  
L X K X J M H A Z M D G F N Q H O K L G  
H V A J A K Y D E O D O R A N T S M N S  
S C I T E M S O C S E L G N I H S I E B  
B R S F K G C B T N T X Y X S H W L R L  
W L A K L Q U A X T H W Y X I E I E V Y  
H M O T R O B M F G K N E H H T A X S V  
Z P C C I R O X R O E U V C V P C R L R  
N S K O K U P R I G C C S O L V E N T S  
Z E X Y T S G N K F B M I O U Y C U X G

**Find these words of products that originate from a tree**

BATS	GUM
PADDLES	PLACEMATS
PLYWOOD	SHINGLES
SOLVENTS	TILES
TURPENTINE	WOODEN
TOOTHPASTE	BLOCKS
CANOE	CHARCOAL
CHEWING	COSMETICS
DEODORANTS	FLOOR
FURNITURE	GUITARS

## FUN FACES OF WISCONSIN AGRICULTURE CHRISTMAS TREES AND THE ENVIRONMENT



### It starts with soil – Soil Profile and Horizons

O Horizon	←	<b>O Horizon-</b> contacts living materials and humus (decaying leaves, needles, plants)
A Horizon	←	<b>A Horizon-</b> This layer is made mostly of minerals and plant roots. There is a lot of humus here so the color is often very dark.
B Horizon	←	<b>B Horizon-</b> Also known as the subsoil, this layer has less organic matter and is often lighter in color.
C Horizon	←	<b>C Horizon-</b> Contains parent material that has been slightly weathered.
R Horizon	←	<b>R Horizon-</b> The lowest horizon. It is a solid rock layer which is called bedrock.

**How it all happens:** Soil formation is a slow process! **It takes 100 years to form 1” of soil.** New soil starts from **parent material** which could be organic material, volcanic ash, sediment, or rock. The **weathering process** is caused by wind, rain, freezing and thawing, chemical activity and other factors. The **climate** of an area affects how much precipitation there is and the temperatures. The parent material is broken down into smaller particles over time which creates different layers (**horizons**). **Organic matter** (plants and animals) plays an important role in soil formation because of the **decomposition** and activity they create. **Plant roots** that move into the layers also affect the amount of **air** and **water** that mix with the layers. **Humans** cause changes in soil formation with buildings that are put up, agricultural practices, and movement of the soil. New soil is always being formed – it’s just a slow process!

### Christmas trees and recycling

- **Air** - Photosynthesis is the synthesis of sugar from light, carbon dioxide and water, with oxygen as a waste product. In other words, trees absorb carbon dioxide and send out oxygen! Every acre of Christmas trees grown produces the daily oxygen requirements for 18 people.
- **Soil** – Christmas trees help hold soil in place (by their roots), protect water supplies and provide shelter for wildlife.
- **Prevent artificial trees from going into landfills-** Artificial trees are usually made with petroleum-based products. It takes many years for the trees to breakdown in landfills. The average artificial Christmas tree is used for 6-9 years.
- **Re-use that live tree-** people use “live” trees in pots that can be planted after the holidays. Trees can also be chopped up for mulch, made into decorations or used for wildlife habitat.

**FUN FACES OF WISCONSIN AGRICULTURE  
TREES AND THE ENVIRONMENT WORKSHEET**



## Trees and the environment

P G H R O M S R D W X C T D M  
B A D L R G T E U S L E E O E  
E T R D G F N O D I H C T S T  
D E A E A E T I M I O G E U S  
R T G C N B J A R M M L O M Y  
O U D W I T T S P E C E U U S  
C R Y J C E M O N I H O N H T  
K Y P H M I S A T A D T S T O  
Z I I Q A I T R T L M V A L O  
E Q X N T A A Q P E U U I E R  
O X C I T P N W U M R O H I W  
Q E O N E G Y X O D S I Z A G  
S N J Z R F L M I N E R A L S  
J M P Z C O N W Q W M W L L G  
E L I F O R P L I O S A E R X

**Find and circle the following terms:**

BEDROCK

CLIMATE

DECOMPOSITION

HUMANS

HUMUS

MINERALS

ORGANICMATTER

OXYGEN

PARENTMATERIAL

PARTICLES

ROOTSYSTEM

SEDIMENT

SOIL

SOILPROFILE

WEATHERING

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### P H O T O S Y N T H E S I S

How many different words can you form from the word  
"photosynthesis"? For example, "his"

**FUN FACES OF WISCONSIN AGRICULTURE  
CHRISTMAS TREE RESEARCH WORKSHEET**



**Students will interview 25 people and ask the following questions:**

**Do you use a real or artificial Christmas tree?**

\_\_\_\_\_ Real                      \_\_\_\_\_ Artificial

**What date do you normally put up your Christmas tree by?**

\_\_\_\_\_ December 1              \_\_\_\_\_ December 5              \_\_\_\_\_ December 10  
\_\_\_\_\_ December 15              \_\_\_\_\_ December 20              \_\_\_\_\_ December 24

**What date do you normally take down your Christmas tree by?**

\_\_\_\_\_ December 26              \_\_\_\_\_ December 31              \_\_\_\_\_ January 2  
\_\_\_\_\_ January 5                      \_\_\_\_\_ January 10                      \_\_\_\_\_ January 15

**If you use a real tree, what species of Christmas tree do you prefer?**

\_\_\_\_\_ Balsam Fir                      \_\_\_\_\_ Fraser Fir                      \_\_\_\_\_ Scotch Pine  
\_\_\_\_\_ White Pine                      \_\_\_\_\_ Spruce                              \_\_\_\_\_ Colorado Blue Spruce  
\_\_\_\_\_ Doesn't use a real tree

**Where do you buy your real tree?**

\_\_\_\_\_ Pre-cut from a tree lot              \_\_\_\_\_ Cut a tree from your own property  
\_\_\_\_\_ Cut-your-own at a tree farm              \_\_\_\_\_ Doesn't use a real tree

**After compiling the data, complete the following:**

1. Calculate the percentage of people who buy an artificial tree and those buying real trees.
2. Create a bar graph comparing when people put up their Christmas trees.
3. Create a pie chart comparing when people take down their Christmas trees.
4. Calculate the percentage of people purchasing the various species of trees.
5. Create a pie chart comparing where people purchase their trees.
6. Send data collected to Wisconsin Christmas Tree Producers Association ([www.christmastrees-wi.org](http://www.christmastrees-wi.org))