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Tree-mendous!

LEVEL: Grades 3-8
SUBJECTS: Language Arts, Science,
Social Studies
SKILLS: Analyzing, applying,
classifying, collaborating, communicating, comprehending, computing, concluding,
cooperating, describing, developing vocabulary,
identifying, inferring, listening, predicting,
recognizing relationships, sorting, thinking
creatively, valuing, writing



MATERIALS

Stopwatch or watch with second hand, dictionaries, writing materials, photocopies of attached *Tree-Mendous! Game Cards*, one set for each team of four students; and the *Tree Jeopardy* cards copied back to back with the appropriate number of point level and cut apart; tape or thumbtacks to fasten the *Tree Jeopardy* cards to the appropriate surface; Internet access to *America's Heartland* Episodes.

Optional: pictures to illustrate and clarify meaning of items listed on the Game Cards as necessary for younger students (e.g. tape measure, sander, drill, axe, and so on).

VOCABULARY

Words on the *Game Cards* that may be unfamiliar to students (e.g. carbon dioxide, cinnamon, erosion, oxygen, windbreaks).

RELATED LESSON

Nail by Nail, Board by Board

SUPPORTING INFORMATION

The tremendous importance of trees to our lives and lifestyles stands comparable to the critical nature of clean air, clean water and fertile soil. Trees, their qualities, and the products derived from them provide immeasurable daily benefits for us.

Imagining a world without trees can conjure images of a barren desert stretching endlessly and producing a society void of nature's fruits and nuts or man's paper and furniture or even the music of a piano or violin. Without trees, there also would not be photographic film to capture the image.

The beginning and end of the oft-quoted poem, *Trees*, by the late poet Sgt. Joyce Kilmer may echo in the mind of anyone pondering the seemingly infinite qualities of trees:

"I think that I shall never see A poem as lovely as a tree... Poems are made by fools like me, But only God can make a tree."

The middle portion or the other eight lines of that famous poem describe the natural wonder of the tree from its roots pressing into the earth to its branches lifting upward to the sky where they hold snow and rain and provide nesting for birds.

We all benefit from trees, their wood products, and other wood derivatives originating from the tree. The benefits of trees are invaluable. Trees provide food, prevent soil erosion, clean and cool the air, block summer and winter winds, provide habitat for wildlife, eliminate urban sounds, and offer serenity, beauty and aesthetic appeals that cross cultural lines. In addition to the tree, a second element of study is to understand the benefits of wood provided by trees and how our manipulation of wood and manufacturing of its products have advanced society's sophistication. Wood is the only 100 percent renewable, recyclable, reusable and biodegradable building product. Wood is naturally biodegradable and enriches the soil when it decomposes. By comparison, plastic

BRIEF DESCRIPTION

Students play a fastpaced word classification game that helps them gain an appreciation for the variety of ways people use and benefit from trees.

OBJECTIVES

The student will work in a group to:

- identify at least 10 characteristics and uses of trees;
- categorize at least five sets of characteristics or uses of trees:
- play a vocabularydevelopment game: and
- describe at least three kinds of benefits people receive from trees.

ESTIMATED TEACHING TIME

Session One: 30 to 45 minutes.
Session Two: 45 to 60 minutes.
Session Three: 30 to 45 minutes.

is not biodegradable and may remain in its current form for at least 500 years. Its recycling requires toxic chemicals that can be costly and dangerous. In addition to understanding the natural benefits provided by trees and the societal benefits derived from wood, perhaps the most interesting element to learn about are the byproducts we receive from trees and their woods.

From wood doors and floors to paper plates and pencils, wood products derived from trees are common, but they are not necessarily so obvious when we consider that film, cellophane and cosmetics are also among numerous wood derivatives. As products become more sophisticated, we might not know they come from trees. For examples: The plastic in telephones contains finely ground wood flour. The door liners of some cars are thin sheets of board. Chewing gum comes from the latex liquid of sapodilla trees, and pencil erasers come from the latex of rubber trees. Table-tennis balls are made of celluloid derived from cellulose. which is the major component of cell walls in most plants, including

trees. Numerous other examples exist.

Wood is composed of tiny fibers, known as cellulose, and the natural glue, known as lignin, that holds them together. Cellulose turns up in many other surprising places. Besides being used to make most of our paper, it can be mixed with certain chemicals, turned into a thick liquid, and then squeezed through small holes or slits to form fibers for carpeting, conveyor belts, rayon for clothes, and cording in car tires. Cellophane and photographic film also are made from cellulose. Ice cream, shampoo, and toothpaste all contain it. It is also added to other substances to make a variety of products from car steering wheels to toothbrush handles, and may be used to make other products ranging from explosives to thickeners in salad dressing to wallpaper paste.

The production of wood is energy efficient compared to other resources. By contrast, producing steel, aluminum, plastic or concrete requires the use of non-renewable fossil fuels. The necessary energy required to take a raw material extraction to final product is 70 times higher for a ton of aluminum than for a ton of lumber, 17 times higher for steel, and three times higher for brick or concrete blocks. The sun powers the production of trees. Non-renewable gas and petroleum power the production of steel, aluminum, plastic, and concrete. When comparing steel and wood as environmental building choices, it's important to consider the origin of the raw material. Steel making requires a tremendous amount of water and energy. It takes nine times more energy to create a steel stud than a wooden one. Steel production also negatively yields 15 times the sulphur dioxide and 27 times the nitrous oxide than processing

logs into lumber. Steel making requires 25 times more water than wood production. As building materials, buildings that are wood framed hold more heat in the winter and coolness in the summer. Steel and aluminum framing are highly heat-conductive: heat is lost through metal at a far greater rate than through wood. Wood also is a superior insulator when compared to cinder blocks, concrete or brick.

Roughly as much wood is consumed for industrial purposes each year in the United States as all metals, all plastics, and Portland and masonry cement combined. Wood consumption per capita in the United States is more than three times that of the world average, but

more non-wood materials per person than the world average. For cement, the U.S. consumption is 1.5 times higher than the world average, with consumption of steel being 3.3 times, plastics being 5.6 times, and aluminum being 6 times higher. In the past 50 years, mankind has consumed twice

the United States also consumes

as much steel and wood, four times as

much cement, five times as much plastic, and seven times more aluminum than all of humanity before us. From 1970 through 2005, the world's population increased 74 percent while the world's consumption of steel increased by 83 percent, aluminum (211 percent), cement (288 percent), plastics (659 percent) and wood (32 percent). Not only in the United States, as the world's highest consuming nation, but throughout the world, the consumption of key materials is growing not only in absolute terms, but also on a per capita basis. Among all raw materials, only wood is renewable. Sustaining wood as a resource to meet its demand is one of the nation's most important needs. A positive trend is that U.S. forests have been increasing significantly each year.

The National Resources Inventory data show that the United States increased its acres of forestland during the 20-year period between 1982 and 2003 while its number of acres of cropland, pastureland and rangeland gave way to developed lands. There were 405.6 million acres (21 percent) of forestland among the nation's total acres in 2003 compared to 402.4 million acres in 1982. More trees are growing in America's forests today than at any time since the early 1900s.

The forest industry ranks among the top 10 employers in 40 of the 50 states. Trees have meant jobs for millions of people, starting with the loggers, foresters, forest rangers, sawmill workers, furniture makers, carpenters, and other occupations that work directly with either timber or wood. Tracing a product such as your morning newspaper from the tree to the home can help us to

understand the numerous jobs linked directly or indirectly to trees. Your morning newspaper begins with the harvested timber that is transported to a manufacturing plant, where the newsprint is produced. The newsprint is delivered to a printing plant, where a process prints or photographs the news and advertising elements to each page of the newspaper. The various sections of the newspaper from the world news section to the local classifieds are packaged together, bundled, and then delivered to newsstands, businesses, and residences. From paper mill operators to fuel suppliers, many people and jobs support those who harvest the timber or transport the timber, the newsprint or the newspaper. From computer manufacturers to supermarket managers, many other jobs and people support those who report and publish the news and those who advertise in the newspaper that makes the newspaper financially feasible. As such, related jobs include everyone from the lumberjack to the leisure writer.

Wood and jobs may pale in importance to the more fundamental benefits we receive from trees. While people and other living creatures breathe in oxygen and breathe out carbon dioxide, trees do just the opposite. For every ton of wood a forest grows, scientists estimate that about 1.5 tons of carbon dioxide are removed from the atmosphere and replaced with about 1 ton of oxygen. That makes trees great air purifiers. Each day, one average-size tree produces enough oxygen to meet the daily breathing needs of a family of four.

Another tremendous benefit provided by trees is their ability to slow and prevent soil

erosion. As vegetative cover, trees shield the soil surface from the impact of falling rain and sweeping winds, hold soil particles in place, enhance the soil's capacity to absorb water, slows the velocity of runoff, and removes subsurface water through evaporation and transpiration. As

more and more sediment reaches ponds, rivers and lakes throughout the United States, with about a fourth of it reaching the oceans, pollution damage can be costly to aquatic areas. Damage from obstructions that cause flooding can be horrendous for farmlands, river communities, and municipalities. Trees also may be used to create windbreaks to prevent wind erosion that can be damaging over a long period. Used in conjunction with farm practices such as contour planting, cover crops, and crop rotation, windbreaks offer long-term strategies for protecting crops and preventing soil loss.

Certain trees in specific locations need to be protected by people because they may be endangered. However, unlike oil, trees can be renewed. In 1900, forest growth rates were a fraction of harvest. Currently, 37 percent more trees are grown than harvested each year in the United States. The standing timber volume per acre in U.S. forests is 30 percent greater today than in 1952 because of good management practices.

With our per capita consumption of wood having increased by more than 30 percent in the past 20 years, continued management of this renewable resource supports our ability to continue and to increase its use. There are many benefits to increase this renewable resource. Research to increase the productivity of forests and better management techniques to reduce impacts to the forests typically carry a significant return on investment. Also, teaching respect for the wonder of trees and for their many values to people and the planet remains critical. Actions are needed worldwide to ensure that trees are properly managed, stay healthy and are allowed to sustain themselves for generations to come. In our forests, we have a Tree-mendous thing growing!

GETTING STARTED

Gather a dictionary, watch, and writing materials for each team of four students. Photocopy the three pages of *Game Cards*, making a set for each team. You or the students can cut the cards apart. Twelve categories are offered. If you do not wish to use all the categories, copy only certain pages or remove specific cards after the cards are cut apart. Decide on a time limit

for each card, such as one to four minutes as appropriate for the age of your group. (Younger students may require up to four minutes per category card.) **Optional:** pictures to illustrate items on the cards.

PROCEDURE

SESSION ONE

1. Introduce or reinforce the idea of categorizing things with students. Categorizing is a process skill central to concept formation. For younger students, you might start by naming several names to elicit responses about what they have in common: "They are all wearing jeans." Or, "They are all in row two." Remind students

that one way people make sense of the large number of objects, events and living things in the world around us is to impose some kind of order. We look at ways in which things are similar, how they're different, and how they are related. Then we group them into systems that are useful to us. Ask:

- What are some ways the library groups or classifies books? (Dewey Decimal System)
- What are some ways the telephone company classifies business phone listings? (restaurants, theaters, and so on)
- What are some ways in which foods are classified or grouped? (fruits, vegetables, meats; foods

- eaten raw, foods eaten cooked; hot foods, cold foods; baked, fried, broiled foods; and so on)
- What are some ways in which trees can be classified or grouped? (overall shape, leaf type, where they grow, what they grow, and so on)
- 2. Divide the class into teams of four students. Ask teams to work together, using their dictionaries, to find more kinds of trees and to come up with some possible ways or categories of classifying. Students may suggest kinds of trees, trees people make things from, shade trees, trees that give something to eat, and other reasonable categories. Discuss student suggestions, asking them to explain their thinking.
- 3. Tell students they will be playing a game to learn new words, ways of thinking about trees, and tree products. It's called Tree-mendous! It has 12 cards, each with eight words or phrases that fall into a single category related to trees. Distribute a set of the *Tree-mendous! Game Cards* to each team. Ask them to read the cards and look for vocabulary words that may be unfamiliar to them. Have them write the words, look them up in their dictionaries, and record the appropriate definition. Explain that they are looking for definitions in the context of how the words relate to trees. (You may want to show students the pictures collected to illustrate some of the words for the tools category, plus others as appropriate for your group.)
- 4. Share the Supporting Information with the class to build interest in the game in Session Two. Students need to save the game cards or you can collect them.

SESSION TWO

Note: Steps 1-5 are preparation for playing the game.

1. Share the following story with your students.

Trees and the wood products derived from them are so basic to our lives that we often take them for granted. We may overlook our usages of them or their impact upon our lives. The story is told of a very wealthy man who decided to give away a million dollars. On his first attempt to give away the money, the rich gentleman selected a modest brick house in a neighborhood of brick homes. He walked down a concrete sidewalk leading to the house and then rang its bell. The man who owned the house greeted the millionaire. The millionaire introduced himself and then told the homeowner, "If you can help me, I will give you a million dollars." Excited about the opportunity and wanting to be rich himself, the homeowner said, "Sure, I'll help you. What is it that you want?" The millionaire replied, "I need a piece of wood about 3 feet wide and 7 feet long. It must be a single piece. Do you have it?" The homeowner's stomach tightened. He lived in a brick house built on a concrete



foundation. He did not have any spare lumber to fit the description or any furniture to fit the size. He considered a piano, but did not own one; and as far as anything else, the planks in the floors and the studs in the walls of his house were too narrow, and the plywood sheets in the roof were too wide. In the end, he had to tell the millionaire he couldn't help him. And the story ends with the millionaire saying, "I'm sorry," just before the homeowner closed the door. (Yes, the wood door.)

- Show America's Heartland episode #208, segment Tree Harvest at http://www.americasheartland.org/episodes/ episode_208/index.htm and episode #203, segment Hardwood Harvest at http://www. americasheartland.org/episodes/episode_203/ index.htm to depict traditional uses of trees for food and fiber.
- 3. Tell students they will have the opportunity to think about trees in new ways by playing the word game. Explain that the game involves team members giving each other short clues so teammates can guess words or phrases related to a given category on a game card. Demonstrate how to give clues. Choose a student to join you in modeling the giving and receiving of clues. Give an example such as, "The category for this card is 'Benefits of Trees'." Explain that the card shows eight words or phrases, each of which is a reason why trees are important. Say that two of a team's four members give clues and the other two team members receive clues in order to guess a word. Demonstrate by saying to the chosen student, "See if you can guess a way in which trees are beneficial from the following clues: 'summer' (pause for response), 'cool' (pause for response), 'leaves'." By now the student has probably correctly identified "shade" as the word associated with 'Benefits of Trees.'

Try another example. Say, "The category for this card is 'Wood Products'." Choose a word (pencil, for example) and demonstrate by giving other kinds

- of short clues: "Starts with p. Two syllables. First part rhymes with den. What you use to write with." (pencil) Explain that teammates can collaborate on clues to elicit the words on the category cards, always keeping in mind the category.
- 4. Have each team prepare a scoresheet and appoint a scorekeeper. The team giving the clues keeps score of the correct responses by the team receiving the clues. Students can use tally marks.
- 5. To play the game divide the class into teams of even numbers of student players (four is ideal). (For younger students you may choose to play the game as a whole-class activity in which you give the clues and students guess the words or as a twoteam activity by dividing the class in half.) On each team, half the players face the other half across a table or playing space. Teams divide each set of cards evenly between the two sides. One side of the team starts by holding one of the cards and giving clues (clue-giving players). The other side receives the clues and tries to guess the words (wordguessing players). Remind students to collaborate in cluegiving and in figuring out the words.
- 6. Explain to students that clue-giving players tell the category and give short clues for the first word on the card to the word-guessing players. When that word is correctly guessed, a clue-giving player checks the word off and the Scorekeeper puts a tally mark on the teams' scoresheet. The team goes on to the next word. Play continues until all words have been guessed and checked off, or until time is called. If a word is not guessed in about 30 seconds or sooner, players may say "pass," going to another word and coming back to the passed word, if time allows or when the game is over.
- 7. The gamekeeper (you or appointed student) will start the game by saying "GO." This person is also the timekeeper, calling out "STOP" at the end of the time limit set for each card and starting the game again with GO after teams select a new card. (Each team may have its own timekeeper if this works for your group.)
- 8. Begin the game. When the timekeeper calls STOP, teams turn the category cards face down.
- 9. Team members switch roles: now the opposite side draws a card and gives the short clues. When the timekeeper calls GO, play starts for the next category card. Again, the card is turned face down when words have all been guessed and checked off or when time is called. Teams continue to switch roles until all cards have been played to the designated time limit.

- 10. At the end of the game, each team totals its tally marks to determine a winner. Have teams complete all of the words on their cards before pulling the class together. (Checking off words as they are guessed helps here; students look through cards and focus on words without checks.)
- 11. To review concepts learned with the whole class, volunteers from the teams read the categories. one at a time, from the cards. As each category is named, students call out the words they recall from the game and add new words of their own that fit the category. Some of the stronger teams will have quick answers.

Summarize, by asking:

- Which categories were the easiest? The hardest? The most fun?
- What are some other categories we could use to describe the characteristics and uses of trees?
- What is the most interesting thing you learned about trees and wood?
- What are at least five ways you benefit from and/or are dependent upon trees?
- Why is it important to grow trees?
- What kinds of careers depend on products from trees?
- In what new ways do you now think about trees?
- What do you appreciate or enjoy about trees?
- How can learning about trees help you in the future?

SESSION THREE

1. Set up the Tree Jeopardy cards by fastening them on the wall, blackboard or bulletin board in the categories provided with the points in ascending order. Questions valued between 100 and 500 points should be used for younger students. Questions valued from 100 to 800 points are intended for older students.

2. Play Tree Jeopardy with the class in teams. Use the groups of four from the previous activity or divide the class into two or three teams. Allow 30 seconds to answer questions. Have students raise their hands to answer a question and the group that is the last to correctly answer a question selects the next category and question level.

SESSION FOUR

Challenge students: Everyone has a tree story. What's yours? Invite them to write about a favorite tree and tell why it's special. In their stories, they are to use at least five words from the game. Encourage students to illustrate their trees.

EVALUATION OPTIONS

- 1. Observe students' participation in the game and responses to Session Two, Procedure 9 to assess recall and understanding.
- 2. Have students use Extension 1 to assess their categorizing skills.
- 3. Make mobiles. Students each select a tree category from the game or create a new category. The mobile is constructed to illustrate the items in a category (things made of wood, food from trees, and so on).
- 4. Ask students to write about or express in any creative form 10 ways that trees are important to them.
- 5. Give students a set of at least 12 words pertaining to trees to study. Have them name three groups or categories about trees under which the words could be listed. Have them list the words that are a part of each group or category. Words may be listed more than once.
- Have the students add at least two of their own words to the categories on the **Tree-mendous!** Game Cards.
- 7. Have the students write a report titled "Trees: A Renewable Resource that Benefits People."

EXTENSIONS AND VARIATIONS

- 1. Reverse the **Tree-mendous! Game** and play "What's the Category?" Players are not told the category on the card. Clue givers give one-word clues about the <u>words</u> on the card. The other half of the team tries to identify the category. For example, clue givers might say, "Apples, pecans, oranges." Receiving players try to answer, "Foods from trees."
- 2. Instead of students giving the clues verbally, have them pantomime or "charade" the clues.
- 3. Have students develop their own game cards about other tree categories such as specific trees,

- favorite trees and more. Also, create games about non-tree topics.
- 4. Students investigate whether trees are a renewable or nonrenewable natural resource. (*They are renewable*.) Ask them to list ways in which we use trees (such as recreation areas, windbreaks, lumber harvest, and so on). Discuss how each is or is not a responsible use for this renewable resource. What would you need to consider for each use of trees?
- 5. Have students search reference books or interview local nursery or garden store workers to investigate how trees are propagated and grown. Invite a nursery person and/or tree farmer to explain how and why trees are raised and marketed.
- Students can look into by-products of trees.
 For example, investigate how rubber, gum, photographic film, cellophane and rayon come from trees.
- 7. Put chewing gum to use in a creative new way with gum sculptures. Explain that such sculpture started in the lands of the Mayans in the Yucatan and Guatemala, where people make gum from chicle, a latex liquid that comes from sapodilla trees. To make gum, workers cut a "v" in the bark of Sapodilla trees to collect the chicle liquid that oozes out. The latex sap is boiled and kneaded to remove excess liquid. Next, vegetable colors and spices are added to this whitish substance to make colors and flavors. Then, the gum is packaged and shipped all over the world. Start your sculptures by inviting students to chew gum of different colors. When the gum is soft and pliable, they work on waxed paper to pull, roll, weave or shape their gum into miniature sculptures. The classic toy miniature chicle sculptures in Mexico and Central America are children riding atop a crocodile. Little burros and tiny figures are popular, too. Caution students to handle only their own gum and to wash their hands when they are finished sculpting. They will enjoy sharing knowledge about tree products and by-products when they take their sculptures home.
- 8. Show America's Heartland episode #203, segment **Durable Goods** at http://www.americasheartland.org/episodes/episode_203/index.htm to depict the use of woods in cabinetmaking, episode #208, segment **Tree Harvest** at http://www.americasheartland.org/episodes/episode_218/index.htm to depict hardwoods production and making veneer, and episode #220, segment **The Almond Experience** at http://www.americasheartland.org/episodes/episode_220/index.htm.

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(User Note: The URLs for Web sites were verified in October 2008.)

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TREE-MENDOUS! GAME CARDS

(Cut cards apart.)

Category: Tools Used With Wood

hammer

axe

saw

sander



screwdriver

tape measure

chisel

drill



Category: Wood-Related Careers

logger

cabinetmaker

chemist

grower



structural engineer

carpenter

forester

sawmill worker



Category: Things You Can Do With Wood

build

float

play

walk (canes, stilts and crutches)



heat

carve

make music

sit



Category: Wood By-products

telephone cover

cellophane

turpentine

toothbrush handle



photographic film

rayon

ping-pong balls

carpet

TREE-MENDOUS! GAME CARDS

(Cut cards apart.)

Category: Kinds of Trees

oak

redwood

walnut

birch



maple

pine

apple

cottonwood



Category: Wood Products

paper

baseball bats

firewood

chewing gum



musical instruments

shingles

furniture

pencils



Category: Parts of a Tree

branch

leaf

bark

trunk



root

bud

twig

sap



Category: Toys and Games Made of Wood or That Use Wood Products

teeter-totter

bowling pins

puzzle

playing cards



board game

blocks

Scrabble[®]

baseball bat

TREE-MENDOUS! GAME CARDS

(Cut cards apart.)

Category: Benefits of Trees

provide windbreaks
prevent erosion
landscaping
give food



provide shade
give oxygen
absorb carbon dioxide
provide habitat for animals



Category: Ways People Damage Trees

chop
break branches
don't water
bend little trees



carve

pour harmful things near them $\,$

cut roots

burn



Category: Animals That Live In and Near Trees

squirrels woodpeckers chipmunks

insects



spiders

owls

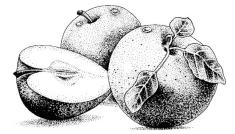
monkeys

koalas



Category: Food from Trees

apples
peaches
cinnamon
pecans

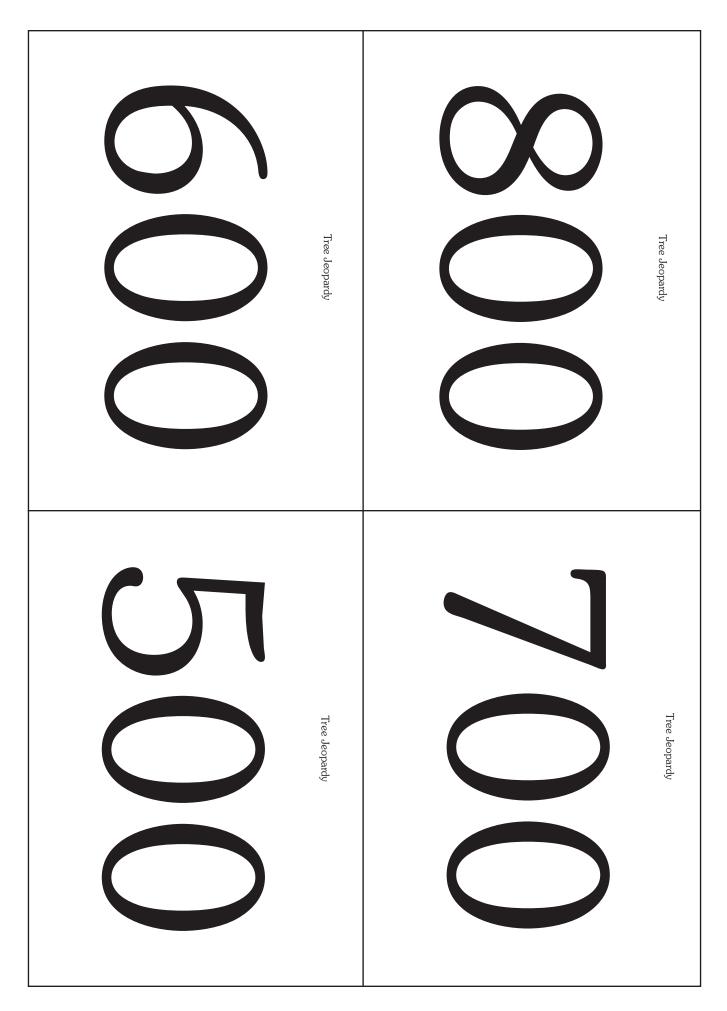


pears

cherries

grapefruit

maple syrup



Tree Jeopardy Tree Jeopardy Tree Jeopardy Tree Jeopardy

Tools Used With Wood 700	Tools Used With Wood 800
A sharp, hand-held tool used to shape wood. It may be used with a hammer or alone.	A bladed tool used to twist in items. It may be a flat-head or Phillips-head version.
Question: What is a chisel?	Question: What is a screwdriver?
Tools Used With Wood 500	Tools Used With Wood 600
A tool with sharp teeth on a long metal blade or circular blade that is used to cut	A sharp, wedge-shaped tool used to chop wood.
wood. Question: What is a saw?	Question: What is an axe?

Tools Used With Wood 300	Tools Used With Wood 400
A tool that holds spinning attachments, which bore holes or drive screws. Question: What is a drill?	A tool with a hard metal head that is used to drive nails. Question: What is a hammer?
Tools Used With Wood A tool that rotates or vibrates to smooth wood surfaces. Its use produces sawdust. Question: What is a sander?	Tools Used With Wood A long, flat, narrow tool, marked in regular intervals, that is used to determine length and width. Question: What is a ruler or tape measure?

Tree Jeopardy Wood-Related Careers 700	Tree Jeopardy Wood-Related Careers 800
A profession that scientifically applies the principles of design, construction and operation to structural systems.	A scientist that specializes in the study of atoms and molecules.
Question: What is a structural engineer?	Question: What is a chemist?
Tree Jeopardy Wood-Related Careers 500	Tree Jeopardy Wood-Related Careers 600
A person who plants, manages, cultivates and harvests trees.	A craftsman that builds fine articles of wood.
Question: Who is a grower?	Question: Who is a cabinetmaker?

Tree Jeopardy Wood-Related Careers 300	Tree Jeopardy Wood-Related Careers 400
A person who manages forests to increase production and maintain environmental	A person who builds with wood.
quality. Question: What is a forester?	Question: What is a carpenter?
Tree Jeopardy Wood-Related Careers 100	Tree Jeopardy Wood-Related Careers
A person who harvests trees, also known as a lumberjack.	A person that cuts logs into lumber.
Question: What is a logger?	Question: What is a sawmill worker?

Things You Can Do With Wood 700	Things You Can Do With Wood 800
To move on stilts or with the support of a cane.	To rest on a chair or sofa.
Question: What is to walk?	Question: What is to sit?
Things You Can Do With Wood 500	Things You Can Do With Wood 600
Creating an object or design by cutting away excess wood.	To coax pleasing melodies and harmonies from instruments or voices.
Question: What is to carve?	Question: What is to make music?

Things You Can Do With Wood 300	Things You Can Do With Wood 400
To warm an area by burning a combustible material.	To create an object by joining materials cut to a specific size. The objects may
Question: What is to heat?	be small or very large. Question: What is to build?
Things You Can Do With Wood 100	Things You Can Do With Wood 200
To rest on the surface of a liquid.	To have fun with a game, toys or competition.
Question: What is to float?	Question: What is to play?

Tree Jeopardy Wood By-products 700	Tree Jeopardy Wood By-products 800
The outer covering of a hand-held device used to speak to a person in another location electronically.	Moisture-proof wrapping made of a thin transparent cellulose material.
Question: What is a telephone cover made of plastic?	Question: What is cellophane?
Tree Jeopardy Wood By-products 500	Tree Jeopardy Wood By-products 600
Item attached to the brushes used to clean teeth.	Liquid distilled from pine trees that can be used as a
Question: What is a toothbrush handle?	paint innuer or solvent. Question: What is turpentine?

Tree Jeopardy Wood By-products 300	Tree Jeopardy Wood By-products 400
Item used in a camera to take pictures.	A synthetic textile produced from the cellulose of a tree.
Question: What is photographic film?	Question: What is rayon?
Tree Jeopardy Wood By-products 100	Tree Jeopardy Wood By-products 200
A thick, heavy covering used on a floor.	Small, hard, hollow balls used to play table tennis.
Question: What is carpet?	Question: What are ping-pong balls?

Types of Trees of Trees 700	Types of Trees Jeopardy Types of Trees
A deciduous tree whose bark can be separated from the	A type of tree that
wood in sheets. Varieties	produces the primary
include white, paper and yellow.	tood ot squirrels.
Question: What is a birch?	Question: What is oak?
Tree Jeopardy	Tree Jeopardy
Types of Trees 500	Types of Trees
A deciduous tree with lobed	An evergreen bearing cones and needle-shaped leaf
leaves whose sap is boiled down into syrup.	clusters. Varieties include scotch, white, ponderosa and
	slash.
Question: What is maple?	Question: What are pines?

Types of Trees Tree that produces a sweet, crunchy fruit used to make pies	Types of Trees Large, softwood tree
often red but may also be yellow or green. Question: What are apples?	Dearing seeds in conton-like tufts. Question: What is a cottonwood?
Types of Trees Trees Tree Jeopardy	Types of Trees Jeopardy 200
Tree that produces an edible nut used in brownies, fudge, Waldorf salad, ice cream, and chocolate chip cookies.	A very tall evergreen tree found on the west coast of the United States.
	Question: vvnat is the reamood:

Tree Jeopardy Wood Products 700	Tree Jeopardy Wood Products 800
A thin material you use daily, made of cellulose pulp.	A viscous substance from trees that is flavored and sweetened for a human confection.
Question: What is paper?	Question: What is chewing gum? (chicle)
Tree Jeopardy Wood Products 500	Tree Jeopardy Wood Products 600
A narrow, cylinder used for writing, drawing and marking.	Thin rectangles, often made of cedar, that are used to roof or side a house by laying in
Question: What are pencils?	overlapping rows. Question: What are shingles?

Tree Jeopardy Wood Products 300	Tree Jeopardy Wood Products 400
Item able to produce a melody or harmony.	Items in a home or office designed for humans to use to sit, sleep, rest, work, or eat.
Question: What are musical instruments?	Question: What is furniture?
Tree Jeopardy Wood Products 100	Tree Jeopardy Wood Products
Items stacked and/or sold in cords that are used for fuel.	Cylinder, heavier on one end, used to make hits, runs, or strikes.
Question: What is firewood?	Question: What are baseball bats?

Tree Jeopardy Parts of a Tree 700	Tree Jeopardy Parts of a Tree 800
A small swelling on a stem or branch that contains undeveloped shoot,	The main woody stem of a tree, its principal axis.
leaves or flowers. Question: What is a bud?	Question: What is the trunk?
Tree Jeopardy Parts of a Tree 500	Tree Jeopardy Parts of a Tree 600
The plant juice that carries nutrients.	A small branch or shoot.
Question: What is sap?	Question: What is a twig?

Tree Jeopardy Parts of a Tree 300	Tree Jeopardy Parts of a Tree 400
The structure of a tree that provides support; draws food and water from the soil; and stores food. Question: What are roots?	A secondary woody stem or limb growing from the trunk or another limb. Question: What is a branch?
Parts of a Tree The outer covering of woody stems, branches, roots, and trunk of a tree. Question: What is bark?	Parts of a Tree The principal organ of photosynthesis and transpiration that is a green, flattened structure attached to a stem. Question: What is a leaf?

Free Jeopardy

Tree Jeopardy

Toys and Games Made of Wood 700 or Use Wood Products

of an alley that are felled by a Ten objects placed at the end rolling ball.

Question: What are bowling pins?

Toys and Games Made of Wood 800 or Use Wood Products

balanced in the center that is A long wooden board used by two.

Question: What is a teeter-totter?

Free Jeopardy

Toys and Games Made of Wood 500 or Use Wood Products

wood or cardboard that form a picture when fitted together. Irregularly shaped pieces of

Question: What is a puzzle?

Tree Jeopardy

Toys and Games Made of Wood 600 or Use Wood Products

or thin pasteboard, printed with sometimes images in four suits. Small rectangles of stiff paper numbers, symbols and

Question: What are playing cards?

Toys and Games Made of Wood 300 or Use Wood Products	Toys and Games Made of Wood 400 or Use Wood Products
A tapered club used to hit a home run. Question: What is a baseball bat?	Type of strategic game played on a hard cardboard surface. Question: What is a board game?
Toys and Games Made of Wood 100 or Use Wood Products Small wooden cubes often painted with numbers and letters. Young children play with these. Question: What are blocks?	Toys and Games Made of Wood 200 or Use Wood Products A game that involves spelling words using letters found on wooden tiles. Question: What is Scrabble®?

Tree Jeopardy Benefits of Trees 700	Tree Jeopardy Benefits of Trees 800
The canopy of trees reduces the impact of raindrops on soil and roots hold soil in place to reduce this natural process. Question: What is soil erosion?	Wildlife depends upon forests to provide food and this. Question: What is a shelter?
Tree Jeopardy Benefits of Trees 500	Tree Jeopardy Benefits of Trees 600
Artistic arrangements of trees, shrubs and decorative plants surrounding a building is this. Question: What is landscaping?	The organic matter of trees serves to "lock up" this greenhouse gas. Question: What is carbon dioxide?

Tree Jeopardy Benefits of Trees 300	Tree Jeopardy Benefits of Trees 400
A row of trees serving to lessen the force of wind, reduce erosion and reduce the need for energy to heat a building. Question: What is a windbreak?	Item produced by plants that contains carbohydrates, protein, oils and vitamins. Question: What is food?
Tree Jeopardy Benefits of Trees 100	Tree Jeopardy Benefits of Trees 200
Cover or shelter caused by blocking or absorbing the sun's rays.	Colorless, odorless gas essential to human survival.
Question: What is shade?	Question: What is oxygen?

Tree Jeopardy Ways People Damage Trees 700	Tree Jeopardy Ways People Damage Trees 800
To bend a limb until it cracks.	This is an act of poisoning a tree from the roots up.
Question: What is to break branches?	Question: What is pouring harmful chemicals on the ground?
Tree Jeopardy Ways People Damage Trees 500	Tree Jeopardy Ways People Damage Trees 600
To sever the feeding system of the tree below the ground.	Withholding this substance will cause a tree's roots to dry out.
Question: What is to cut the roots?	Question: What is water?

Tree Jeopardy Ways People Damage Trees 300	Tree Jeopardy Ways People Damage Trees 400
To disfigure the tree trunk with a knife.	To force branches into unnatural shapes.
Question: What is to carve into the tree?	Question: What is to bend?
Tree Jeopardy Ways People Damage Trees 100	Tree Jeopardy Ways People Damage Trees 200
To set afire.	To hit with a sharpened blade in a short downward stroke.
Question: What is to burn?	Question: What is to chop?

Animals That Live in and Near 700 Trees Nocturnal bird-of-prey with a large head; short, hooked beak; and large eyes that face forward.	Animals That Live in and Near 800 Trees Eucalyptus-loving marsupial with dense gray fur.
Question: What is an owl?	Question: What is a koala?
Animals That Live in and Near 500 Trees Bird with strong claws, stiff tail, and a chisel-like beak for drilling through bark and wood. Question: What is a woodpecker?	Animals That Live in and Near 600 Trees Small invertebrates with three pairs of legs and segmented bodies. Many also have two pairs of wings. Question: What are insects?

Animals That Live in and Near 300 Trees A furry, gray or reddish brown	Animals That Live in and Near 400 Trees
arboreal rodent with a long, flexible, bushy tail.	Eight-legged animal that spins webs of silk.
Question: What is a squirrel?	Question: What is a spider?
Animals That Live in and Near 100 Trees	Animals That Live in and Near 200 Trees
A rodent smaller than a squirrel with a striped back.	A long-tailed primate.
Question: What is a chipmunk?	Question: What is a monkey?

Tree Jeopardy Food From Trees 700	Tree Jeopardy Food From Trees
This large, round, breakfast fruit has a yellow rind and acidic pulp that may be pink or yellow. Question: What is a grapefruit?	The bark of this tropical tree is peeled off, dried and sold as a spice in stick or ground form. Question: What is cinnamon?
Food From Trees These smooth, thin-shelled, oval nuts, one to one and a half inches in length grow in the South. They are used in pies, ice cream, and pralines. Question: What are pecans?	Food From Trees The sap of this northern tree is boiled down to make this sweet product that is poured on pancakes. Question: What is maple syrup?

Food From Trees This soft, juicy, sweet fruit has a yellow flesh and large pit. The fruit has a pink or red blush on its fuzzy skin. Question: What is a peach?	Food From Trees Yellow, green, or brownish in color this fruit is narrow at the top with a rounded base. The sweet flesh is juicy with many seeds. Question: What are pears?
Food From Trees A firm, crunchy, round fruit with red, yellow or green skin. It is made into pies, sauce, and place on a stick to be covered with candy. Question: What is an apple?	Food From Trees Small, round fruit that grow in clusters and has a hard seed called a pit. They may be sweet or tart. The color is most often red. Question: What are cherries?