



THE FOREST FUN BOOK

A Forest Fun Book

**Stew, Ward, Chip and Doris Learn About
Stewardship in the Forest**

Produced For You by the South Carolina Forestry Commission



THE FOREST

A FUN WAY TO LEARN

about Forestry
and
the Forest Stewardship Program in South Carolina



To the teacher or activity coordinator:

THE FOREST - A fun way to learn about forestry is a book designed for elementary grade level beginning about 2.5 through grade 7.

•This book has two purposes. The primary one is to acquaint students with good forestry practices and principles. At the same time, each activity serves to give additional practice in the educational skills for elementary school students. Older students have worked through the book and enjoyed it.

The book may be used as a unit in forest conservation.

We would appreciate your comments on the book and any suggestions you might have for making it a better tool for teaching forestry to students.

Special thanks to the team of teachers, students and forestry professionals who worked with us to make the book fun and accurate. They are: JoEtta Barnett, S.C. Department of Education - Linda Sinclair, S.C. Department of Education - Paul Morris, student - Ms. Phyllis Durham, K-6 teacher - Wendi Freeman, student - Lauren Mette, student - Wendy Motte, student - Tiffany Johnson, student - Bradley Johnson, student - Justin Rodgers, student - Christopher McFadden, student - Brenda Brown, K-6 teacher - Beth Kyle, K-6 teacher - Dr. Susan Baumann, H.S. teacher - Barry Grayden, Bowaters Inc. forester - Gloria Freeman, S.C.F.C. editor - Jonnie Morris, S.C.F.C. supervisor/editor - Joe Mills, S.C.F.C. forester, David Hoge, US Forest Service forester - Judy Barnes, S.C. Department of Natural Resources biologist.

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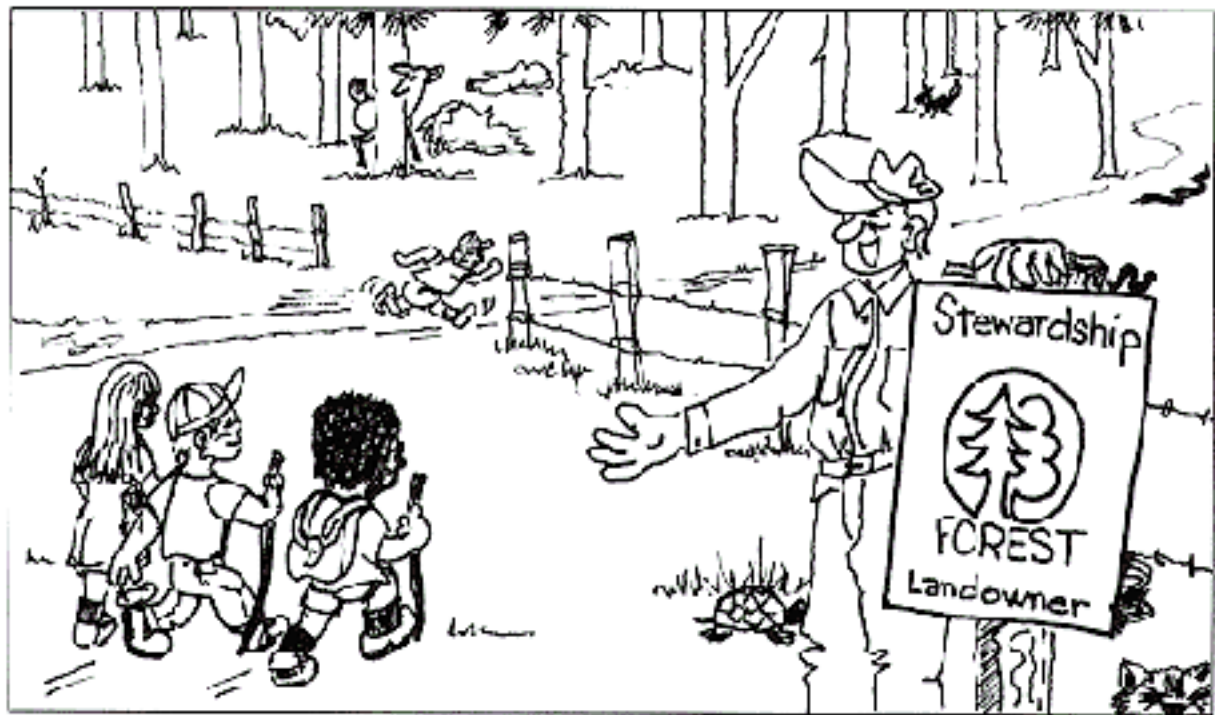
Produced in cooperation with
the Stewardship Forest Program
PO Box 21707
Columbia, SC 29221

First Printing - March, 1996
Second Printing - May, 1996
Third Printing - August, 1998

A FOREST ADVENTURE

What is a Stewardship Forest Anyway?

Directions: Read the story. Darken the circle next to your answer. Then find the seven creatures in the picture.



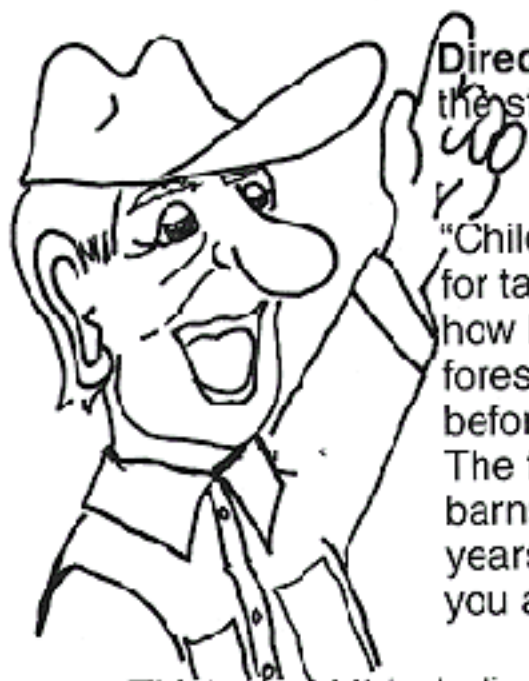
Hello. I'm Stew. This is my best friend Ward, my little brother Chip and my sister Doris. We are the stewardship forest kids. We are going exploring in my grandpa and granma's forest.

See that sign on the fence post? It says Stewardship Forest Landowner. My grandpa and grandma are forest stewards. That means they take care of their forest. They care for the trees, plants and wildlife that live in their forest. Guess who helps them? We do. My dad and mom also help. A forester comes to give grandpa good advice and help.

What is the story about?

- A Stewardship Forest Landowner cares for their forest.
- Be careful with sticks.
- Don't play on fence posts.

A TALL TALE that's true!

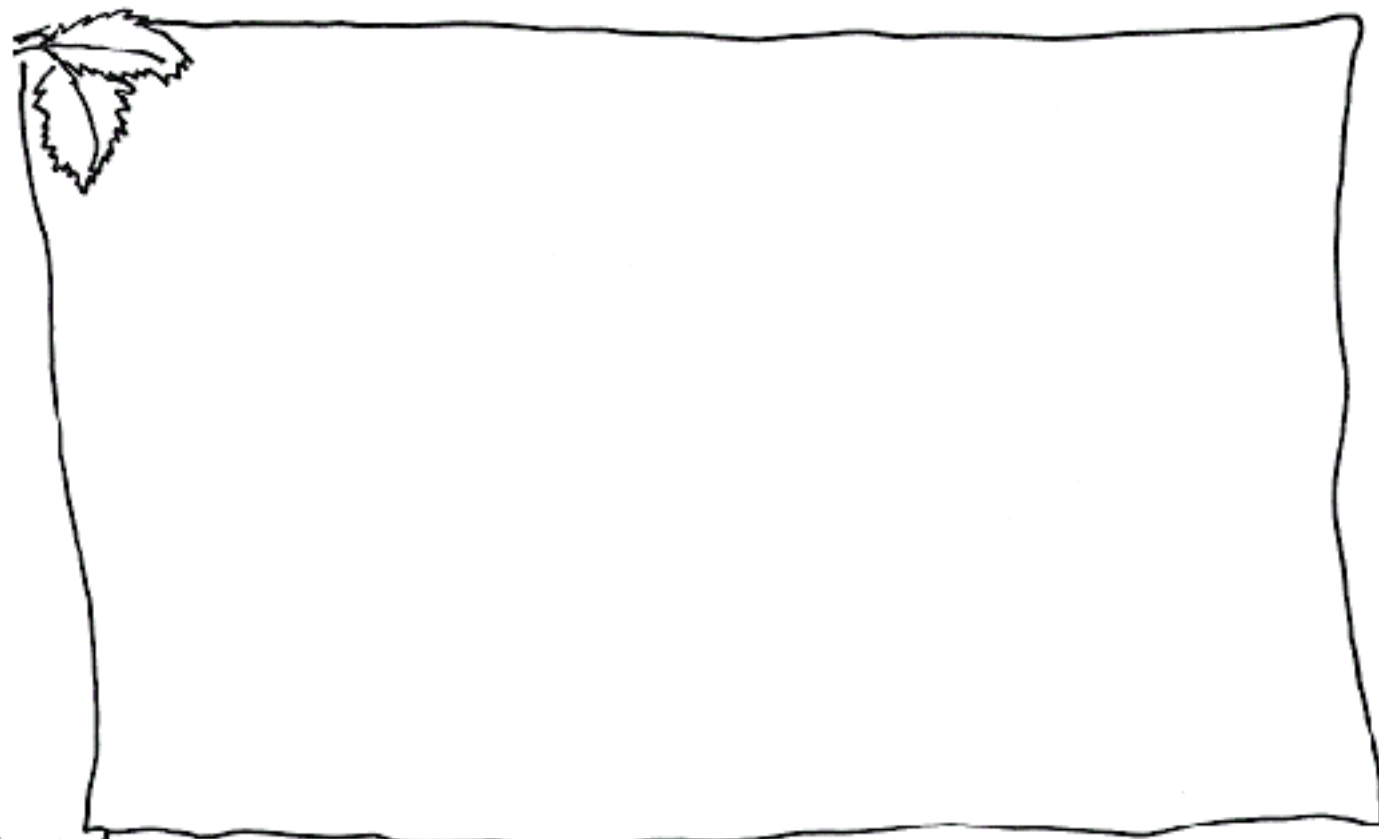


Directions: Read the story. Then draw a picture of the story.

Grandpa Tells a Story.

"Children, that sign **Stewardship Forest** is a reward for taking care of our forest. Would you like to know how long we have been caring for this forest? This forest belonged to my dad and mom and his daddy before him. It has been in our family for a long time. The forest has given us lumber for our house and barns. It has also been a home for animals for many years. If you care for the forest it never stops giving to you and your children.

Think about this. Indians ran through this forest. Soldiers camped on the forest. Lots of wild animals live in it. There might have been a mountain lion or a bobcat living right here on this spot not long ago."



HELP, HELP, Who Can Help?

What does a forester do?

Directions: Read the story and answer the questions below in complete sentences.



Every year grandpa and grandma ask a forester to come help them in the forest. Foresters study the forest. They inspect the trees to see how old they are and if they are sick or dying. A forester can tell how old a tree is without cutting it down. Sometimes foresters thin out the trees so that the good ones have more room to grow. When trees have more room they can get more sunlight and water too. Foresters like to plant new trees.

Foresters can tell grandpa how to grow plants that are food for wildlife like turkey, quail, and deer.

Sometimes a forester uses prescribed burning to prevent a wildfire from destroying the forest. Prescribed burning can also help the forest grow tender young plants for animals to eat. A forester can help!

- 1.** Who helps grandpa and grandma in the forest? _____

- 2.** How do foresters help healthy trees grow? _____

- 3.** Why do foresters thin out the trees? _____

- 4.** What kind of animals eat the plants you can grow in the forest?

- 5.** What can destroy the forest? _____

TREES, TREES Everywhere!

Are they all alike?

Doris says, "Tell me about trees."

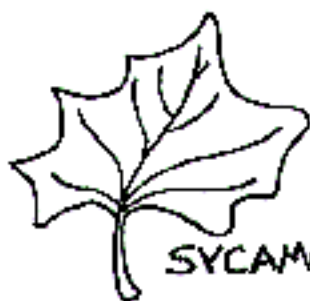
Trees are the largest plant growing in the forest. There are lots of different kinds of trees. Most trees are hardwoods or evergreens. Hardwood trees have leaves that fall off in winter. Most evergreen trees have needles that stay on their branches all year long. Each tree has its own leafprint you might say. The bark, leaves or needles are different on each tree.

Directions: 10 trees are hidden in the "Forest" of alphabet letters. Find the name of each tree and circle the name.

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



PINE



SYCAMORE



HOLLY



ELM



SWEETGUM



BIRCH



CYPRESS



REDBUD



ASH



MAGNOLIA

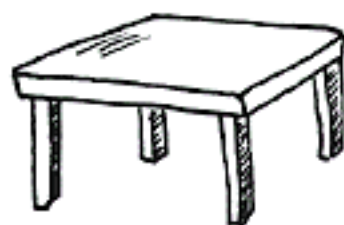
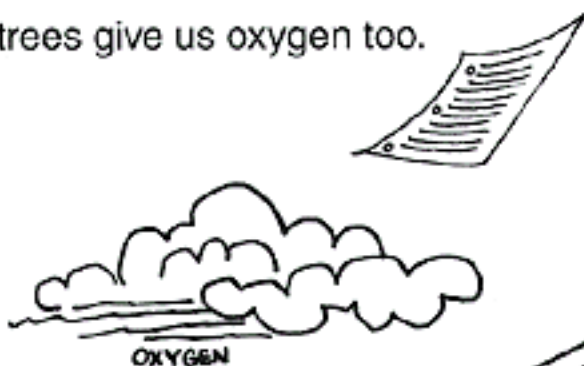
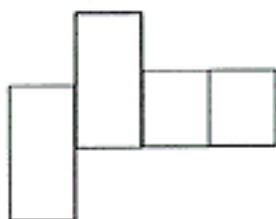
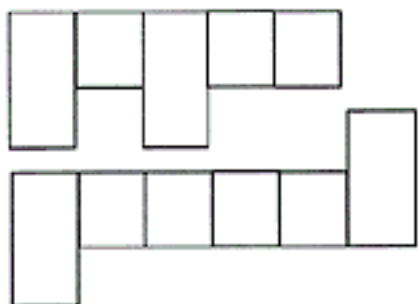
TREES GIVE US THINGS.

Trees keep giving and giving and giving and never stop.

DIRECTIONS: Look at the picture. Draw a line from each picture to the blocks shaped like its name. Write the name in the blocks.

Stew and Ward play a game and see how many products they can think of that come from trees. Here are some of the things they name: baseball bats, pencils, paper, lumber, maple syrup, guitars, tables, chairs, toys, and big ship masts. Also medicines, gum and glue come from trees. There are thousands of products that can be made from trees in the forest.

What about oxygen? Yes, trees give us oxygen too.



WHAT IS A FOREST?

Discovering what makes up a forest

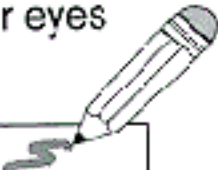
Directions: Put in alphabetical order the seven things that make up a forest.

LIST

plants
animals
air
water
rocks
sunlight
soil

Draw a picture of each of the parts of the forest. Close your eyes and see if you can remember them. Good!

1	2	3
4	5	6
7		



WHAT LIVES IN A FOREST?

Directions: Read the story about what lives in the forest. Choose the best word to complete the sentences and the puzzle below.

A healthy forest is a home for so many different animals and plants that you could not count them all. When you explore in the forest you can see different kinds of living creatures and plants. You can see trees, spiders, snakes, birds, and deer if you're quiet.

The largest living thing is a tree. Some trees are so big, they seem to touch the sky. The forest plants and animals depend on each other for shelter and food.

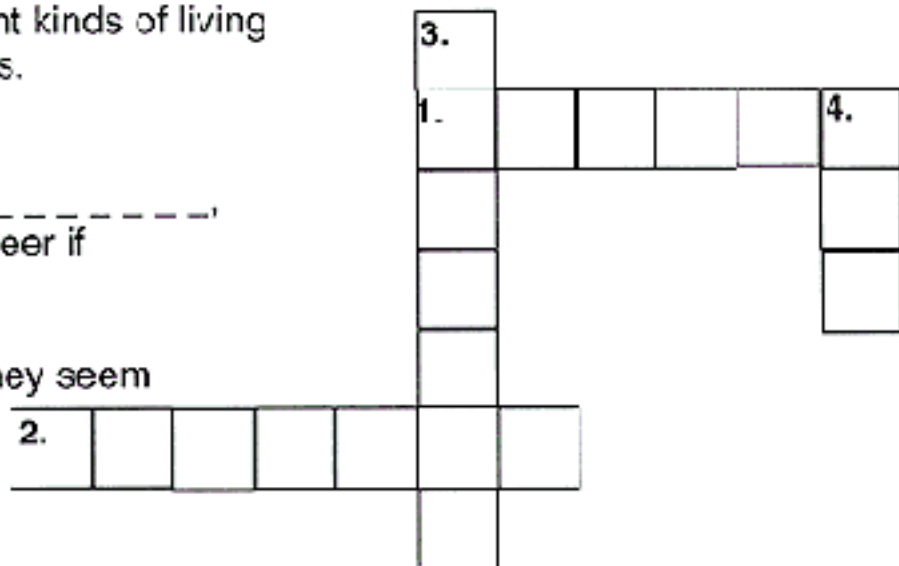
Use these words to finish the sentences and the crossword puzzle.

ACROSS

1. A healthy forest is a home for so many different creatures and _____ that you could not count them.
2. When you _____ in the forest you can see different kinds of living creatures and plants.

DOWN

3. You can see trees, _____, snakes, birds and deer if you're quiet.
4. Trees are so big; they seem to touch the _____.



WHERE the WILD THINGS GROW!

Exploring in the forest is fun! "Watch out," cries Ward. "Something is wiggling through the bushes!" Ward is beginning to understand there is more to a forest than meets the eye. Slew tells Ward and Chip to close their eyes and listen. "What do you hear?" he asks. "Chirping, crowing, screeching, fluttering, and rustling," they answer.

The forest is a place where lots of wild things grow. Different plants, animals, insects, reptiles and bugs are born in the forest. They grow up in their forest homes.

Directions: Draw a line from the forest animal to its home in the forest.

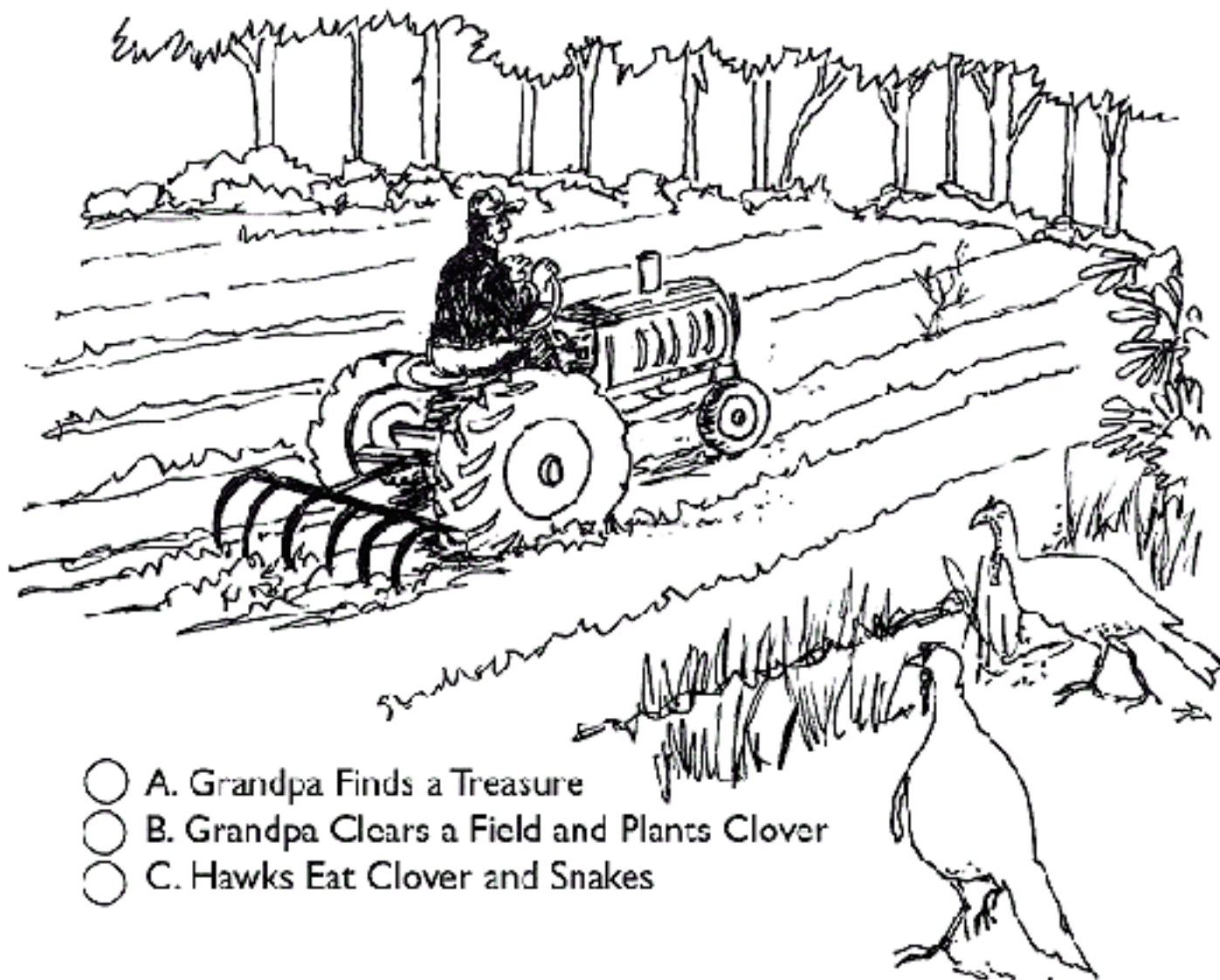


HERE COME THE ANIMALS

Planting Food for Wildlife

Directions: Read the story. Pick the best title for the story and fill in the circle next to your answer.

Grandpa hikes the children to an open field in the forest. "See this field," says Grandpa. "I cleared it and planted clover so that the turkey would come in to feed. You can also plant food for quail and deer. Hawks like open fields because they can see the mice running through the field. Hawks eat mice and snakes. I like to have wildlife in our forest."



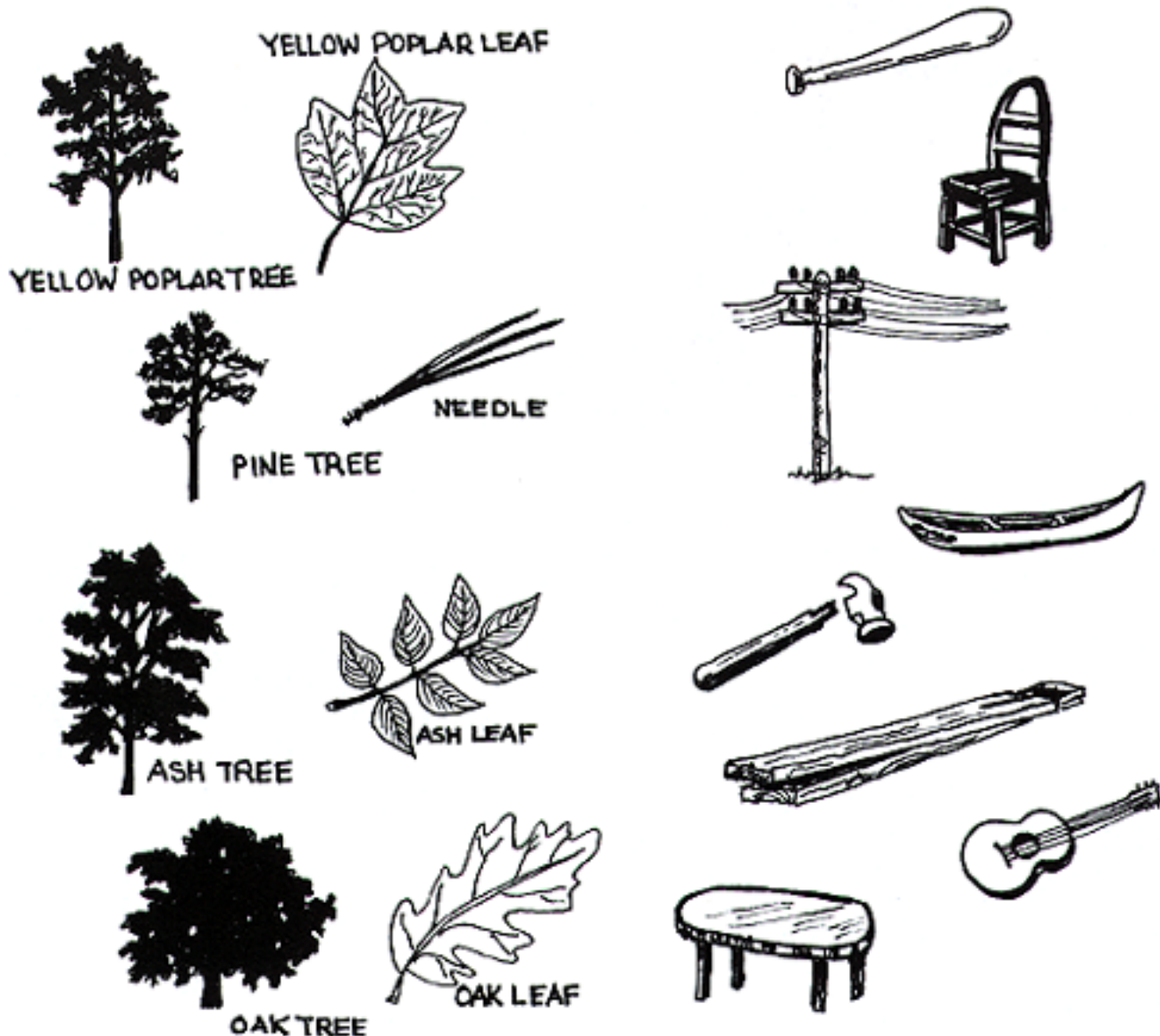
- A. Grandpa Finds a Treasure
- B. Grandpa Clears a Field and Plants Clover
- C. Hawks Eat Clover and Snakes

WOOD is TREES.

Wow, imagine what can be made from trees.

Directions: Read the story. Draw a line to match the tree and its products. You may use each tree more than once.

Many useful things are made from trees. Pine trees are sawed into lumber to build houses. Straight tall pines are made into power line poles. Tool handles and baseball bats are made from the hard wood of ash trees. Furniture is made from many kinds of trees. Oak is one of the favorites. Canoes are made from yellow poplar. Musical instruments and toys also come from yellow poplar.



FOOD IN THE FOREST

Can you find food in the forest?

Directions: Read the story. Draw a line from the food to the animal or insect that eats it. You can draw more than one line from the animal or insect to the food.

Almost everything in the forest is food for something to eat. Tiny bugs eat leaves, bark and twigs. Snakes eat mice. Birds eat berries and seeds. Deer eat fruit and nuts. Rabbits eat fruit and leaves. People eat some berries, fruit and nuts.



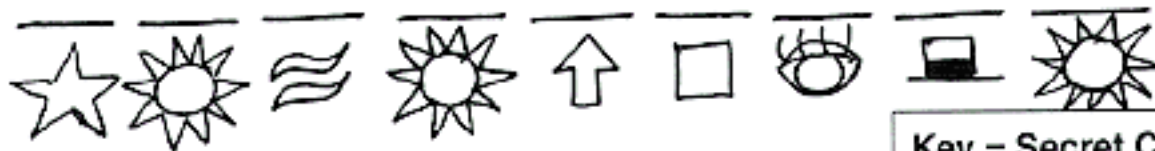
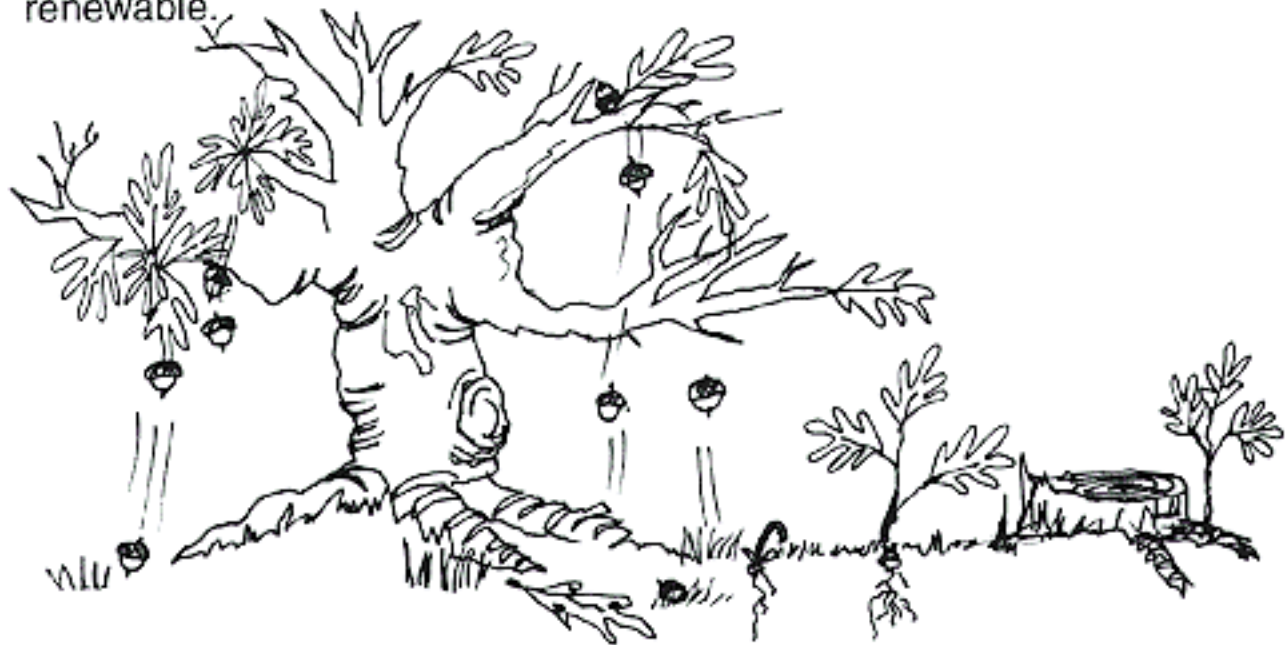
DO TREES LIVE FOREVER?

RENEWABLE, What does that mean?

Directions: Read the story. Use the secret code key to find the letters that will spell the secret word.

Grandpa wants the stewardship kids to learn a new word. The word is **renewable**. **Renewable** means to begin again. That is what the trees in the forest do. They begin again by producing new trees.

Trees do not live forever. Some kinds of trees live longer than others. But most trees in South Carolina only live about 85 years. Then they die from old age or disease or storms or even little insects. But trees produce the seeds or sprouts necessary to begin again. That's called renewable.



Key = Secret Code

L =		N =	
E =		R =	
A =		B =	
W =			

WHAT'S KILLING THE TREES?

Forest tree enemies

Directions: Read the story. Connect the dots to see what can kill the trees in the forest.

Foresters examine the forest to see if it is healthy. Sometimes they find trees that are dead or dying. What can be killing the trees?

Storms, like Hurricane Hugo, and tornadoes can kill trees in the forest. Insects like the tiny pine beetle kill lots of trees. Lightning can kill the trees. Some trees die from old age.

Wildfires kill trees. Most wildfires are started by people who are careless with campfires, fireworks or burning trash.



CREEKS and STREAMS

Fresh Water from the Trees?

Directions: Read the story. Describe how fresh water comes from the forest by numbering the sentences in correct order.

"I'm thirsty," says Chip, "I need a drink of water."
Grandpa replies, "Did you know that the forest gives us fresh water? Yes it does. Most of our clean drinking water comes from the forest."



Here is what happens: It rains in the forest. The rain water falls on the leaves and soil and roots of the forest floor. As the water travels down deep in the earth, all of the dirty particles in the water are filtered out. The clean water flows underground and comes out into creeks and streams.

Grandpa says a good forest steward helps keep the water clean by protecting the creeks and streams. He makes sure nothing gets into the water that would pollute it. When the loggers help grandpa cut some wood, they are careful too. They leave trees along the banks of the creeks.

- _____ Dirty particles are filtered out as the water travels deep in the earth.
- _____ Rain falls on leaves and roots and travels deep down in the earth.
- _____ Clean water from under ground flows into creeks and streams.
- _____ It rains in the forest.

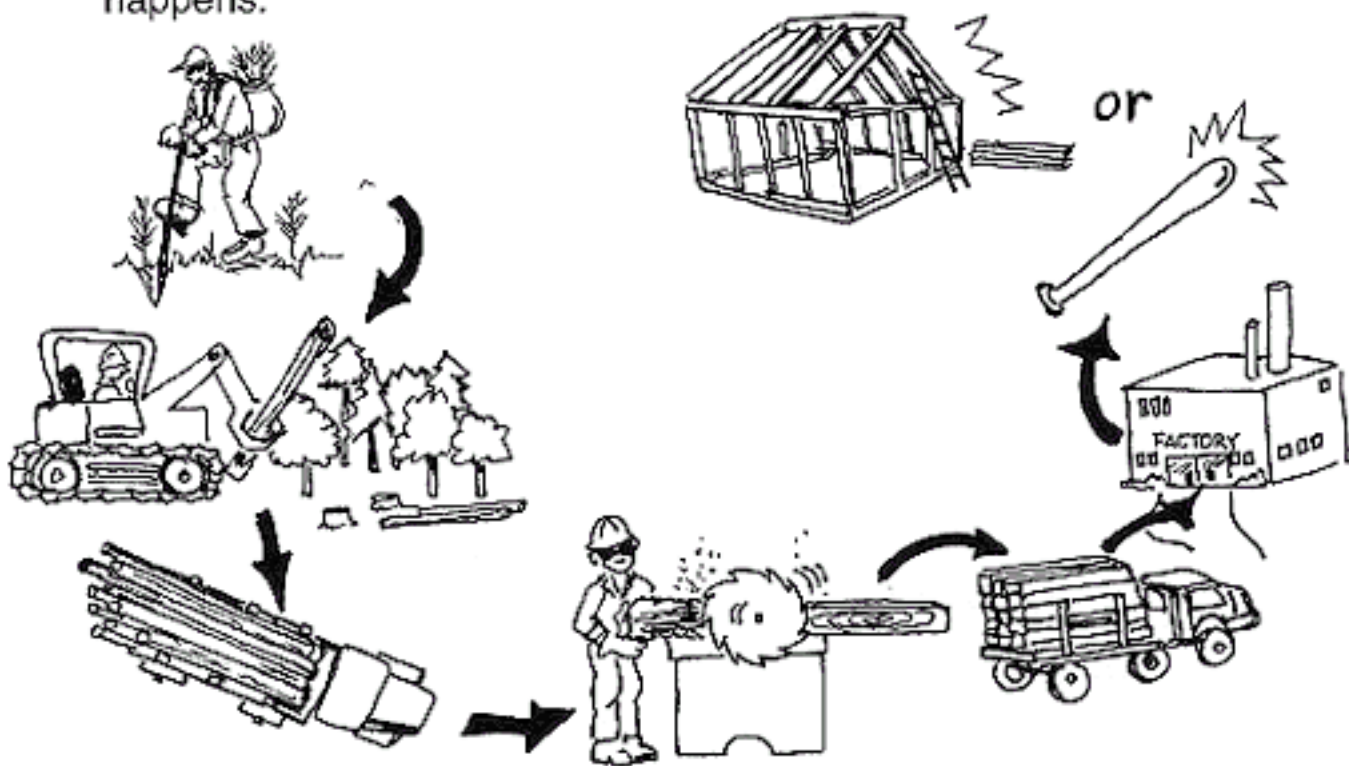


TO MARKET, TO MARKET to make me a house.

Products from Grandpa's forest

Stew, Ward, Chip and Doris want to know how a tree becomes a house or a baseball bat.

Trees can be made into lumber for all kinds of products. Here is what happens.



Directions: Write "T" by each sentence that is TRUE about how a tree becomes a house.

- _____ 1. Loggers cut down trees and carry them to the mill.
_____ 2. Lumber is made from leaves and needles off the forest floor.
_____ 3. Lumber can be made into houses or baseball bats.

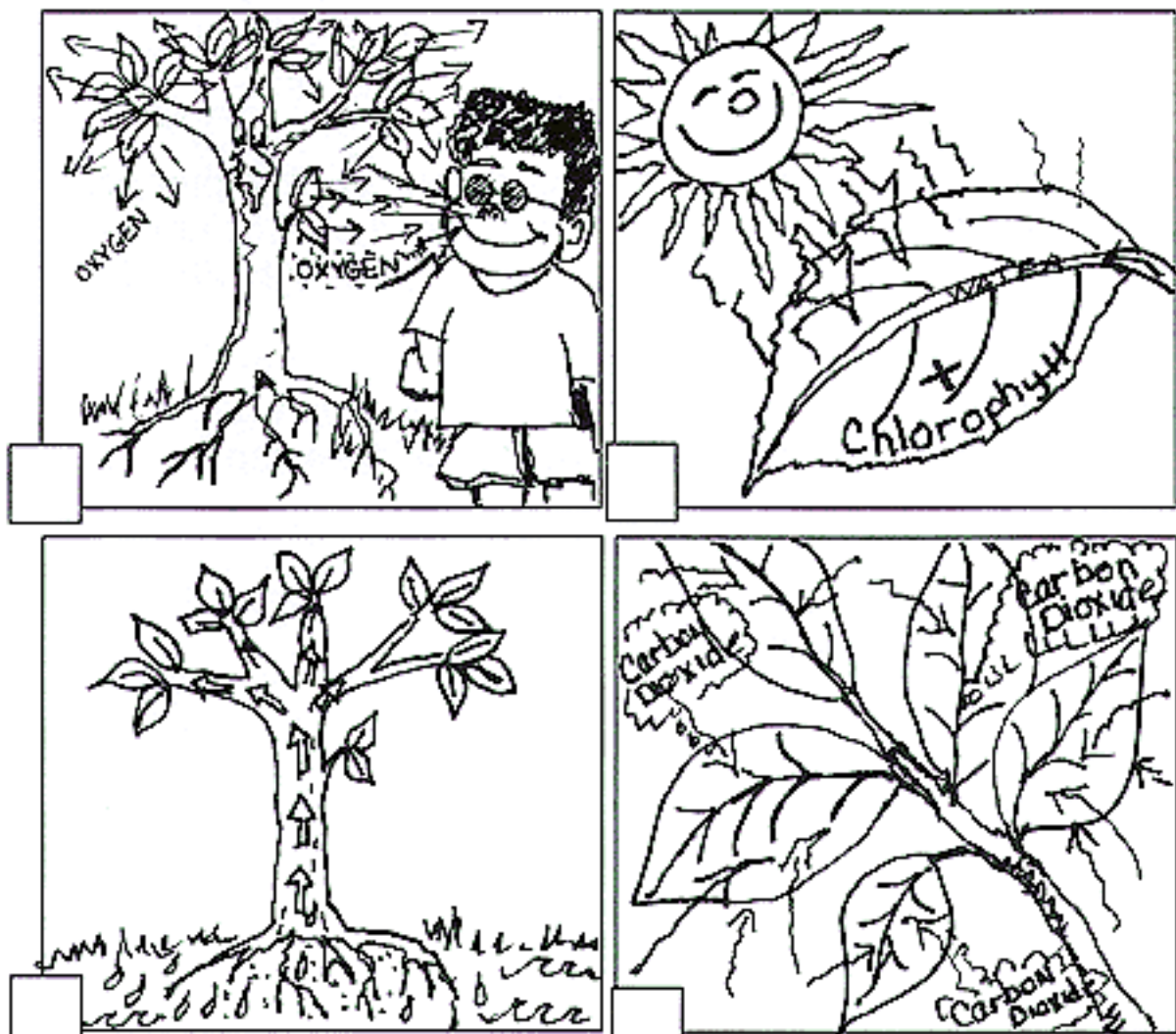
BREATHE IN, BREATHE OUT

Oxygen from our healthy forest

Directions: Read the story. Number the pictures below in the correct order according to the story.

You can't see it but healthy trees are producing oxygen for us to breathe. Here is how.

Green leaves are like a little food factory. First, the leaves breathe in carbon dioxide. Second, carbon dioxide is mixed with water from the soil and a chemical called chlorophyll. Third, the leaves use the sun's light as the energy that mixes everything together. This makes food for the tree. Fourth, while the tree is making food, oxygen is released into the air. That is what we breathe.





A TREE IS MORE THAN LEAVES AND BARK

What is inside a tree?

Directions: Read the parts of the tree. Which part of the tree is not growing anymore and gives the tree strength to stand up? _____

Look at a tree. You can see the bark and leaves but there is something else amazing inside the tree.

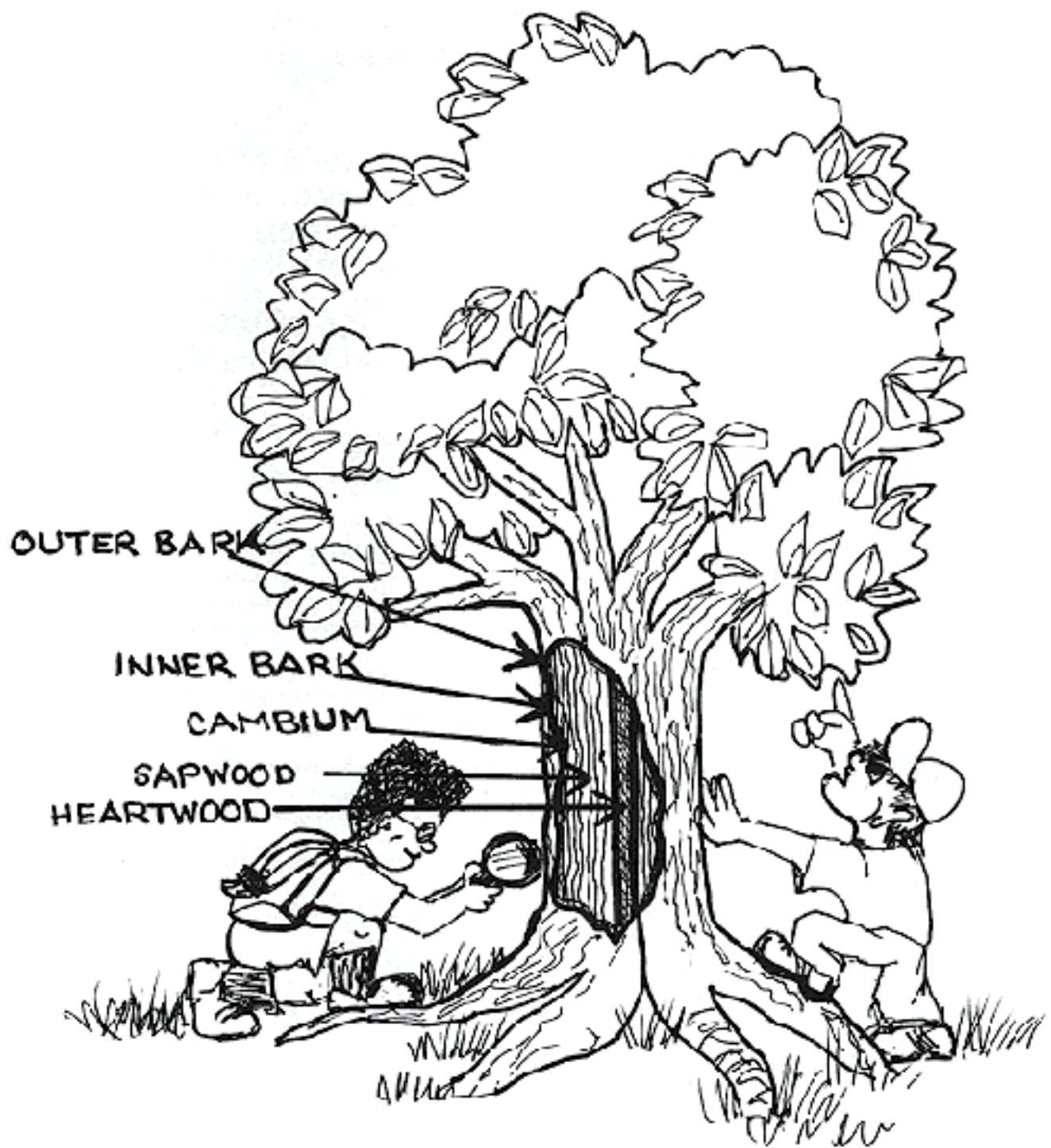
The outer bark is like the tree's skin. It protects the tree from weather, insects, disease, fire, and animals.

The inner bark carries food down from the leaves to the branches, the trunk, and roots for growth and storage.

The **cambium** is a layer of cells that divide and grow to produce new layers of bark and wood each year. Thanks to the cambium, you can count the annual rings of a tree to know its age. A light and dark ring make up one year.

Sapwood, which is next to the cambium, transports water and minerals up the tree from the roots. The chemicals in the sap determine the color of the leaves in fall. Amazing!

Heartwood is the hard center of the tree. It is not growing anymore. This gives the tree strength so it can stand up.



PAPER, PLEASE!

How to make your own paper

"Write this down," grandpa said to Stew. "But I don't have any paper, grandpa," replied Stew. "Well, well," says Grandpa. "Guess I will just have to tell you how to make your own."

Paper is made at the paper mill from the trees we cut down from the forest. The trees are chipped into tiny pieces and made into pulp. The pulp is rolled through huge rollers and comes out paper. Did you know that every American uses about 600 pounds of paper each year?

To make paper you'll need:

- A large square pan about 3 inches deep
- 3 cups of water
- 1 and 1/2 single sheets of newspaper
- A piece of fine window screen that will fit into the pan
- A whole section of a newspaper
- A rolling pin or piece of pipe
- A blender will make the job easier, but you'll need an adult's help.



1. Tear the newspaper into tiny pieces no larger than 1 inch.
2. If you have a blender, drop the paper into the blender and add all 3 cups of water. (With an adult's help!) Cover the blender and turn it on medium speed for 5 seconds. Now you have paper pulp! If you don't have a blender, drop the paper into a bowl and add all 3 cups of water. Continue to tear and shred and squeeze the paper until it looks like mashed potatoes.
3. Place the screen on the bottom of the pan and cover it with about 1 inch of water.
4. Pour about 1 cup of the blended paper pulp over the screen and spread it around evenly with your fingers.
5. Lift the screen and let the water drain.
6. Now place the screen with the paper pulp into the middle of the newspaper section. Close the newspaper and carefully flip it over so that the screen is on top of the paper.
7. Take the rolling pin or pipe and roll out all the excess water. Open the newspaper and take out the screen.
8. Leave the newspaper open and let it dry overnight. When you are sure it is dry, peel the "recycled paper" away from the newspaper and cut to any size you want.
9. Now you are ready to write or draw a picture or cut a design with your new paper.



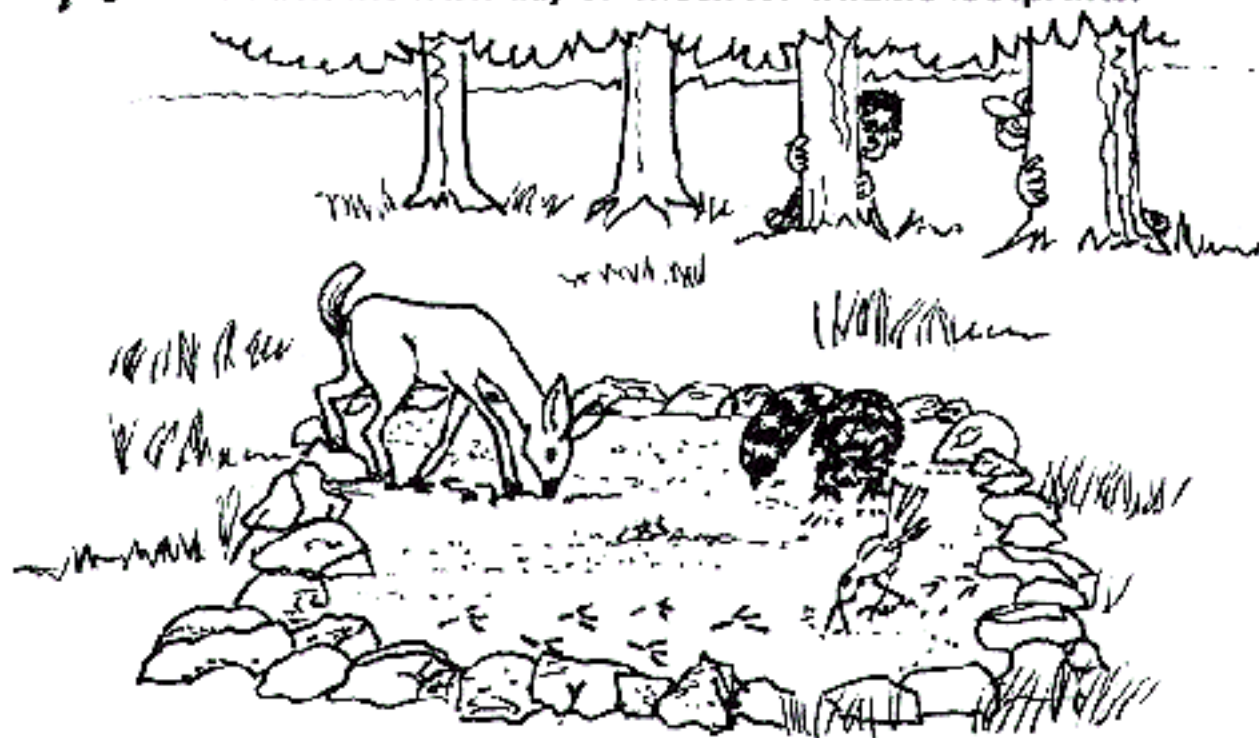
Would you like to see ANIMAL TRACKS

To make your own Wildlife Footprint Bed

You will need:

- ✓ sand, or fine dirt
- ✓ wood or rocks to make a frame
- ✓ bird seed, corn, nuts and crumbs

1. Spread the sand out smoothly over a level area where wildlife might come.
2. Put boards or rocks around the edges.
3. Carefully toss the birdseed, corn, nuts and crumbs into the sand or fine dirt.
4. Come back the next day to check for wildlife footprints.



STEW, WARD and CHIP

The stewardship kids and grandpa hike back to the house.
They want to know what they can do to help keep the forest healthy
and beautiful.

How can you help keep the forest healthy and beautiful?





Draw Yourself
here
Looking at the kids

Your Name