

Welcome to the world of Serge and Kim!

A Wild Forest Adventure is an activities-based companion booklet especially designed for use with State Forests' website. Our website has an entire section dedicated to children at www.forest.nsw.gov.au/sfkids/. The 'Kids and Schools' section has a unique, interactive comic book format that explores complicated issues in a fun and imaginative way.

Walking through a State forest is a pleasurable experience to be enjoyed by the whole family. *A Wild Forest Adventure* opens your eyes to issues that you may not have considered before as part of the day-to-day management of State forests.

Serge and Kim, two comic book characters, take you on a wild forest adventure where you choose the forest signpost you wish to follow. There are three adventures from which to select:

- *Woodwork* is about the management of State forests and the timber products that result. Harvesting plans, tree profiles and forest management are explored.
- *Poo* investigates the making and using of biosolids, a valuable resource used by State Forests to boost wood production.
- *Ferals* follows the forest fiends; pig, fox, rabbit, goat and cat. Information on the origin of each animal, the environmental problems they cause, their numbers and control methods are included.

So come along on a wild forest adventure. Whatever path you take, this booklet will challenge you and allow you to keep a record of your journey. If you get really stuck on an activity or just want to check out how you are going, have a look in the answers section on p31. Enjoy!

Teachers please note:

Log onto our website for more information about State Forests' education services. Start your quest in 'a Note to Teachers' of www.forest.nsw.gov.au/sfkids/ to find:

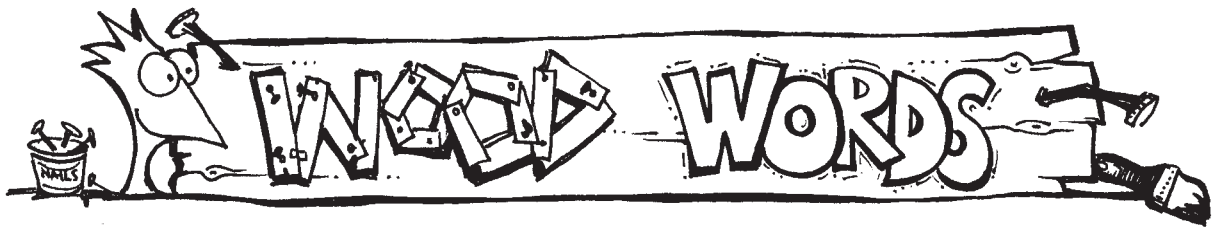
- how the activities relate to NSW Department of Education syllabus documents •
- additional activities for use in the field or classroom •
- professional development days •
- useful publications •
- our education personnel •
- forest excursions.





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The 29 words below appear in the *Woodwork* adventure. Try to find them hidden in the puzzle below:

most valuable timber new *south wales wood eucalypts
 spotted gum *southern bendable blackbutt northern
 strength building uses native white cypress western
 resists decay introduced radiata pine tableland grows fast



*Hint: the words 'south' and 'southern' appear separately in the puzzle

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

Mark off the wood words as you find them in either a vertical or horizontal direction, forwards or backwards. Circle the 11 remaining letters. Copy them into the spaces below in order from left to right moving down the puzzle to find out the name that these trees are given on the website.

_____ / _____



Why do you think the trees are called this?

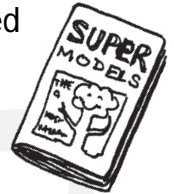
Use the information in the 'supermodels' section of the *Woodwork* adventure to help you match the timber type to its use.

- | | |
|------------------|--|
| 1) radiata pine | a) regrowth is used for plywood. |
| 2) spotted gum | b) bark used to make adhesive. |
| 3) blackbutt | c) sandarac is used in confectionary making. |
| 4) white cypress | d) used to make axe handles. |



HARDWOODS

Wood is sometimes referred to as softwood or hardwood. A hardwood has leaves, flowers and fruit. Spotted gum and blackbutt are examples of hardwoods that are managed in State forests for their value as timber species. They are also examples of native eucalypts. Not all hardwoods have really hard wood.



Write one interesting fact about spotted gum that you found out on the website:

Write one interesting fact about blackbutt that you found out on the website:

DID YOU KNOW?
Balsa is the softest wood in the world, but is a type of hardwood.

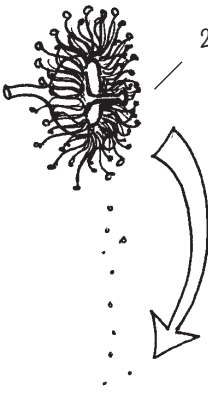
Seeds are found inside the fruit

In most hardwood forests in NSW the trees are "self sown". But where are the seeds found and how are the seeds spread?

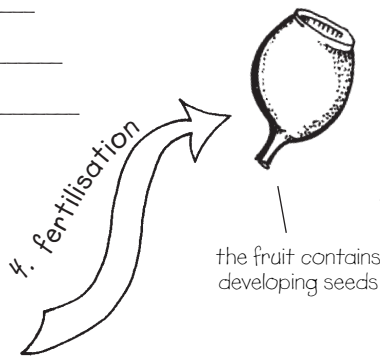
Referring to the website, fill in the missing information to complete the life cycle below. Use a dictionary to find the meaning of any unfamiliar words.

1. Mature trees produce flowers.

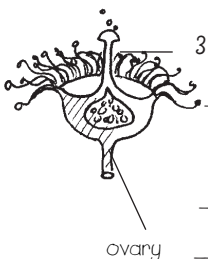
5. _____



2. _____



6. _____



3. _____

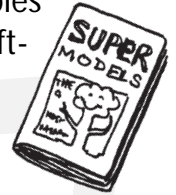
7. Most seeds fall to the ground.

The germinated seeds develop into seedlings. Over time, the seedling grows into a mature tree and the cycle begins again.



SOFTWOODS

Wood is sometimes referred to as softwood or hardwood. White cypress and radiata pine are examples of softwoods that are managed in State forests. They are also examples of cone bearing trees (conifers), which are commonly called pine trees. Not all softwoods have really soft wood but all softwoods have needle-like leaves and cones.



Write one interesting fact about white cypress that you found out on the website:

Write one interesting fact about radiata pine that you found out on the website:

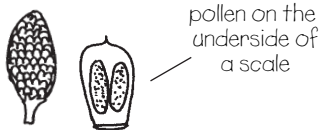
Softwood forests in NSW are often planted. But first, the seeds are collected from pine cones and grown as seedlings in nurseries. How do the seeds get inside the cone?

DID YOU KNOW?
Radiata pine is not a native tree in Australia, but does grow well on the southern tablelands.

Referring to the website, fill in the missing information to complete the diagram below. Use a dictionary to find the meaning of any unfamiliar words.

1. Mature pine trees produce cones. All pine trees have separate female & male cones.

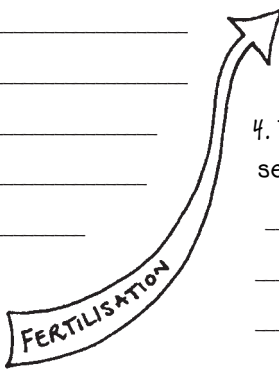
male cone



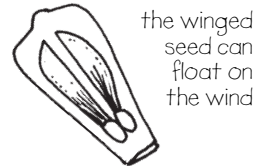
2. _____



ovule on upper side of a scale



open mature female cone



the winged seed can float on the wind

3. _____

4. The seeds are collected and planted in pots or seedbeds in nurseries. _____

Over time, the seedling grows into a mature tree.



A BUDDING CAREER

When choosing a career it is always best to pick something you are suited to. Everybody has certain talents and these can help you achieve great success in your career. Just like people, trees can have different careers. On the website you will find six types of careers for trees. Click on the letters in 'careers for trees' of the *Woodwork* adventure to answer the following puzzling questions.




S is for _____
What important job are seedlings doing while they grow?

D is for _____
What three products do these make?

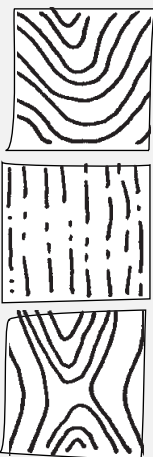
H is for _____
Why is this budding career of particular importance for future generations?

P is for _____
Why can you never burn this wood?

T is for _____
What type of sawing takes high quality timber from faulty logs?



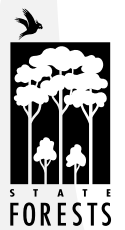
V is for _____
Why is this like a piece of fruit?



Veneer allows more people to enjoy the beauty of the highest quality timbers because only a thin layer is used on top of other timber layers.

What changes the way a particular grain looks?

What is the difference between coreboard and plywood?



CAREER CHOICE

Different trees are suited to different jobs depending on their natural qualities and how they have developed in their surrounding environment. Generally a tree can be seen to have a particular career based on its most valuable product, and the remainder is used for the next most valuable product, and so on. Every tree is unique and must be individually assessed.



Look at the key and then look at trees 1, 2, or 3. Decide which career choice each tree should make.

HTSVDP

KEY

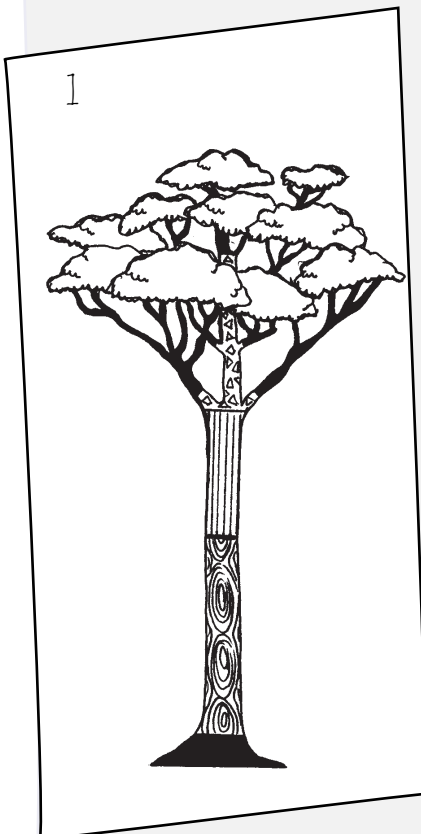


veneer (ply and coreboard)

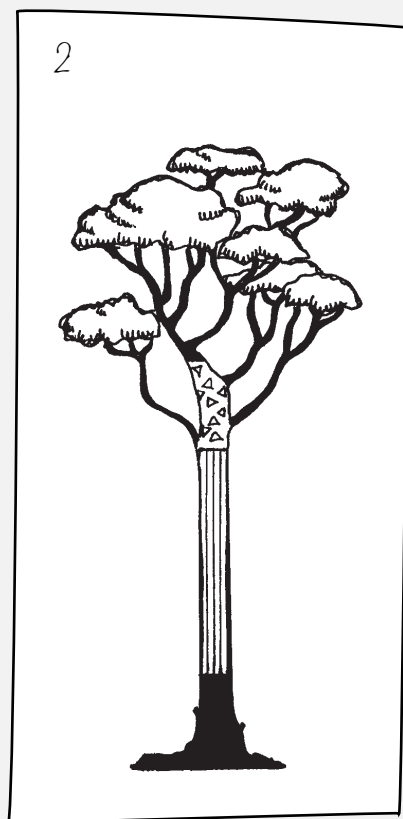
sawlog (timber)

pulpwood and woodchip

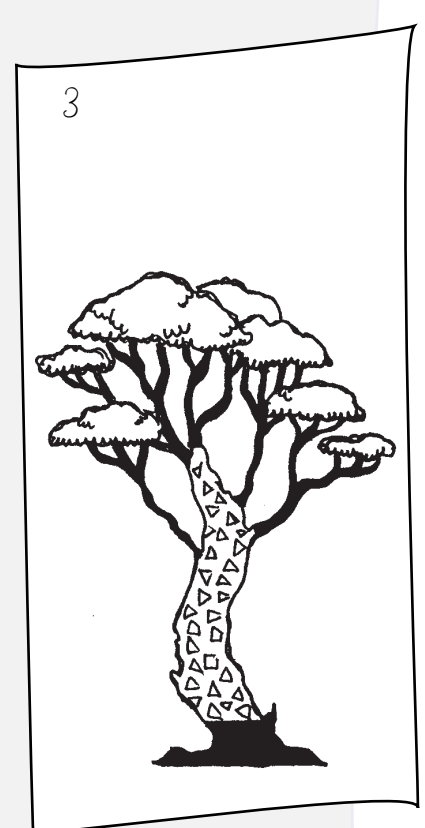
stump (waste)



Tree 1
Career
Choice



Tree 2
Career
Choice



Tree 3
Career
Choice

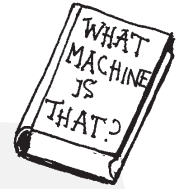
It takes a lot of skill to be able to choose a particular tree for a particular job. Insect attack and diseased wood can be difficult to detect before a tree is felled, so trees must be carefully selected for harvesting.



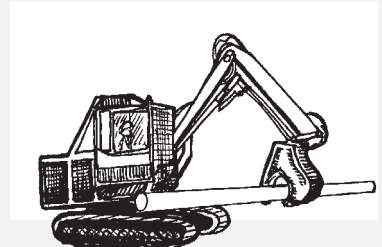
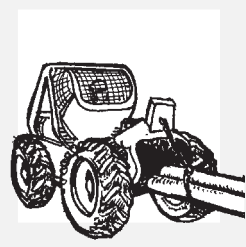
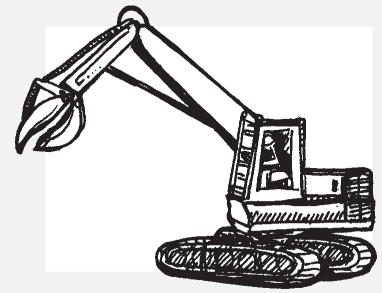
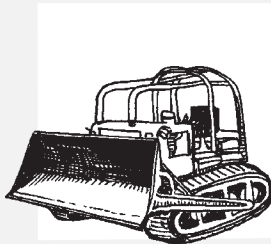
WHAT MACHINE IS THAT?



Several different machines are used in State forests, each designed and built with a particular job in mind. These purpose built machines increase safety for the tree fellers and reduce the impact on the surrounding environment. Some machines are only used in plantations while others are used in areas for more selective logging. Look in 'What Machine is That' in the *Woodwork* adventure to find the answers to the clues below.



1			2							
3						4				
			5							
			6							



Clues:

Across

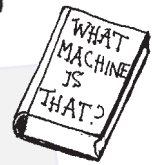
- 2. Carries logs to the log landing.
- 3. _____ logging equipment is used in difficult to access areas.
- 5. Drags logs to the log landing for sorting.
- 6. Takes the bark off the logs and loads them.

Down

- 1. Trims branches and cuts logs into lengths.
- 2. Cuts trees and gathers them into piles.
- 4. The job of this vehicle is similar to your answer for 5. It also drags logs to the log landing.



MACHINE MATCH



Many different machines are used in State forests. Each machine has been designed and built with a particular job in mind.

Look up each of the machines in 'what machine is that?' and write 3 adjectives for each machine in the boxes below. Then connect the parts listed on the right hand side of this page with the machine by drawing a different coloured line for each machine.

FELLER
BUNCHER

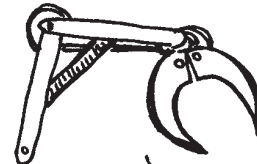
FORWARDER

CABLE
LOGGING
EQUIPMENT

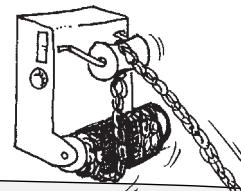
BULLDOZER

EXCAVATOR

Grapple (holding)



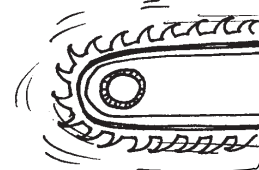
Winch (pulling)



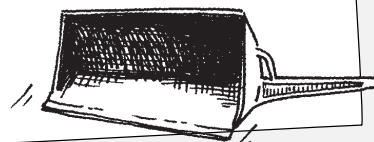
Tracks (gripping)



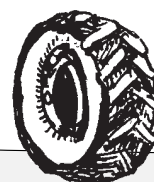
Chainsaw (cutting/felling)



Blade (scraping)

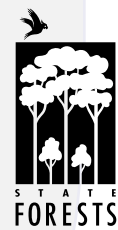


Rubber
tyres



Complete these sentences below by filling in the blanks:

1. A skidder is similar to a _____. It can have either _____ or rubber tyres depending on how _____ the land is.
2. A processor picks up trees left by the feller buncher. It removes the _____ and cuts the log into different _____.



PLANNING WITH PURPOSE

Before any activities such as road building or harvesting can take place in a State forest, detailed investigations into the area occur. This could take some years. The information from this research is simplified and put together into a map called a harvesting plan. The harvesting plans are used for the management of an area, for decisions such as which areas are to be preserved and from where selected trees can be harvested.

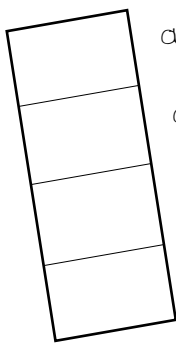


THE FIVE MINUTE CHALLENGE:

Click on the harvesting plan in the **Woodwork** adventure to answer the following questions in less than five minutes.



2. What is the symbol on the KEY for:



- a temporary dry log landing
- a research plot
- flora and fauna protection
- a State forest boundary

1. What is one of the rare forest types reserved from logging that is shown on the map?

3. What is the name of the sealed or gravelled road?

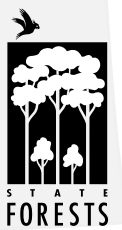
4. Look at the scale to see how wide the area shown on the map is.

metres

5. What is the buffer zone near?



How long did you take?



Looking after THE FOREST



State forests are more than just a source of timber. State forests today are important recreation areas, research areas, homes for native animals, and a source of clean water and forest products such as honey, seeds and bushfood. Foresters make sure that all of the values and uses of the forest are looked after and will be around in the future.

The foresters who manage State forests today are highly trained in forest management.



Click on this cartoon in the **Woodwork** section to find out some of the tasks that a forester might do. Choose **two** that you think sound interesting and then write why you chose them.

TASK:

This sounds interesting because:

TASK:

This sounds interesting because:





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<http://www.dpi.nsw.gov.au/forests/education/excursions-k-2/cfa-booklet>