



# HOW ONE TREE MAKES COPY PAPER

## LESSON

### Teacher Overview

Students will learn about Australian plantation forests, the advantages/disadvantages of these types of forests (environmentally and commercially) and the characteristics of hardwood and softwood trees.

### Learning Objectives

Students will:

- Describe the characteristics of hardwood and softwood trees
- Understand the benefits (environmentally and commercially) of plantation forests
- Interpret data from a map
- Create recycled paper

### Background

Australia's plantation forests are designated areas planted with specific varieties of trees for the purpose of timber production. They are a major source of commercial wood products.

The aim of Plantation forests is to increase Australia's long-term wood supply while contributing significant social, economic and environmental benefits to regional Australia. Increasing the plantation timber resource to expand Australia's forest industries and offset the reduced access to native forest resource is a key forest policy objective.

About half of Australia's plantations are exotic softwood (predominantly *Pinus radiata*), while the other half are hardwood (predominantly eucalypt species). A softwood is a tree that bears cones. Hardwood is a tree that bears flowers, irrespective of hardness.

Plantation forests (whether exotic or native) simplify ecosystems. They contain far fewer species of plants and animals than native forests. Plantation forests can also be more vulnerable to pests and disease.

### The Activities

There are three activities to select from in this lesson. You may choose to undertake all of them or alternately, choose those relevant to the objectives you wish to achieve.



## Activity 1 – Our Plantation Forests

This activity describes the characteristics of softwood and hardwood trees and the distribution of plantation forests in Australia.

1. Individually, students undertake online research to find information on the characteristics of hardwood and softwood trees then draw and describe the typical characteristics of each in the spaces provided on the worksheet.
2. Using the 'Australian plantation forest distribution' map, students answer the related questions in the spaces provided.
3. Students look around classroom and in the space provided on the worksheet, draw four objects possibly made from Australian plantation forest timber.
4. Working in pairs, research objects that might be found in the home or elsewhere that are made from Australian plantation forest timber.
5. Students present and discuss their answers to the questions

## Activity 2 – Making Photocopy Paper

This activity allows students to see how a tree is processed to make paper.

1. Watch 'Going Bush – Residue from the one tree goes to making fine copy paper'. And answer the questions in the spaces provided.
2. Discuss their answers.

## Activity 3 – How to make paper at home or in the classroom

This activity encourages students to research and make their own home made paper.

1. Students research methods for creating their own paper from recycled paper.
2. In the spaces provided students record the ingredients required to make paper at home
3. Students make paper either at school or at home and record their answers to 'Your thoughts...' in the spaces provided.
4. Students present and discuss the making of their paper.



## Sources

For definition of Australian forest types:

<http://www.agriculture.gov.au/forestry/australias-forests>

For Australia's plantation forests:

<http://www.forestrycorporation.com.au/management/our-forests>

<http://www.fao.org/docrep/ARTICLE/WFC/XII/0891-C5.HTM>

<http://www.agriculture.gov.au/forestry/australias-forests/plantation-farm-forestry>

<http://www.environmentforbeginners.com/content/view/52/49/>

[http://www.intad.asn.au/materials/wd\\_hrd.asp](http://www.intad.asn.au/materials/wd_hrd.asp)

For Australian plantation forest distribution map:

[http://www.agriculture.gov.au/abares/forestsaustralia/Documents/mpi\\_regions\\_24\\_02\\_2014.pdf](http://www.agriculture.gov.au/abares/forestsaustralia/Documents/mpi_regions_24_02_2014.pdf)

For advantages/disadvantages of plantation forests:

[http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1370.0~2010~Chapter~Plantation%20forests%20\(6.2.4.3\)](http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/1370.0~2010~Chapter~Plantation%20forests%20(6.2.4.3))

For home made paper recipe

[http://www.ecokids.ca/pub/fun\\_n\\_games/printables/activities/assets/science\\_nature/paper\\_making.pdf](http://www.ecokids.ca/pub/fun_n_games/printables/activities/assets/science_nature/paper_making.pdf)

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