

Tertiary

Forest Management



Tertiary Forest Management

Name: _____

A field investigation to Toolangi State Forest provides the ideal environment for you to learn about the sustainable management of Victoria's State forests. You can explore different forestry issues and analyse current management strategies in order to plan for the forests of the future.

Of Victoria's 7.8 million hectares of public land, which is more than one third of the State, 3.4 million hectares is State forest managed by the Department of Sustainability and Environment. State forests are managed to balance a variety of values. These values include the conservation of flora and fauna, protection of water catchments and water quality, the provision of timber and other forest products on a sustainable basis, the protection of landscape, archaeological and historic values, and the provision of recreational and educational opportunities.

Student Objective:

As the human population grows the demand on our natural resources is increasing placing more pressure on forests.

Students will look at the question: "How should we sustainably manage our valuable forest resources for future generations?"

Student will:

- Investigate the guidelines and strategies for managing State forests.
- Investigate the values and uses State forests.
- Design a management map and plan for a State forest including justifications for the different management decisions that have been made.



Heavenly State Forest

Heavenly State Forest is a 20,000 hectare area of forest in eastern Victoria. Mountain Ash forest covers 16,000 hectares of area and the remaining 4,000 hectares is mixed species forest. There are several patches of cool temperate rainforest that are found in gullies within the Mountain Ash forest areas.

Project

You are a forest manager and must decide how to manage the forest to meet the following five management goals:

1. Production of 10,000 cubic meters of sawn timber each year. There is approximately 500 cubic metres of timber per hectare.
2. Conservation of water quality.
3. Conservation of protected plant and animal species. Notably the Leadbeater's Possum.
4. Facilities for around 15,000 recreational visits per year. The visitors take part in such activities as camping, bushwalking, forest drives and mountain bike riding.
5. Protection of the forest from fire and development of facilities for fire fighting.

What to Do:

1. Develop a management map for Heavenly State Forest. The map will show where different forest types are located and what forest uses are permitted in specific areas.

Your map needs to include:

- Roads, car parks and other facilities for vehicles including buses and logging trucks.
- Fire fighting facilities
- Recreational areas including visitor facilities.
- Timber harvesting areas
- Conservation areas

2. Write a brief management plan that explains the decisions that you have made about the management of Heavenly State Forest. Make sure you address all five management goals and how any potential areas of conflict of forest uses may be resolved.

Management Map Key

Develop a key for your management map. Create symbols to represent to the following:

Forest types:

Mountain Ash forest (16,000h)

Messmate (3,990h)

Rainforest (10h)

Recreation:

Camping

Horse riding

Hunting

Trail bike riding

4 wheel driving

Infrastructure:

Car parks

Main Road

Dirt Road

Toilet

Campsite

Timber Harvesting:

Coupes (20h)

Buffers

Fire Facilities

Water collection point

Fire tower

Zoning:

Special Protection Zone

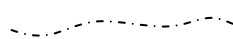
Features:



Elevation <600m

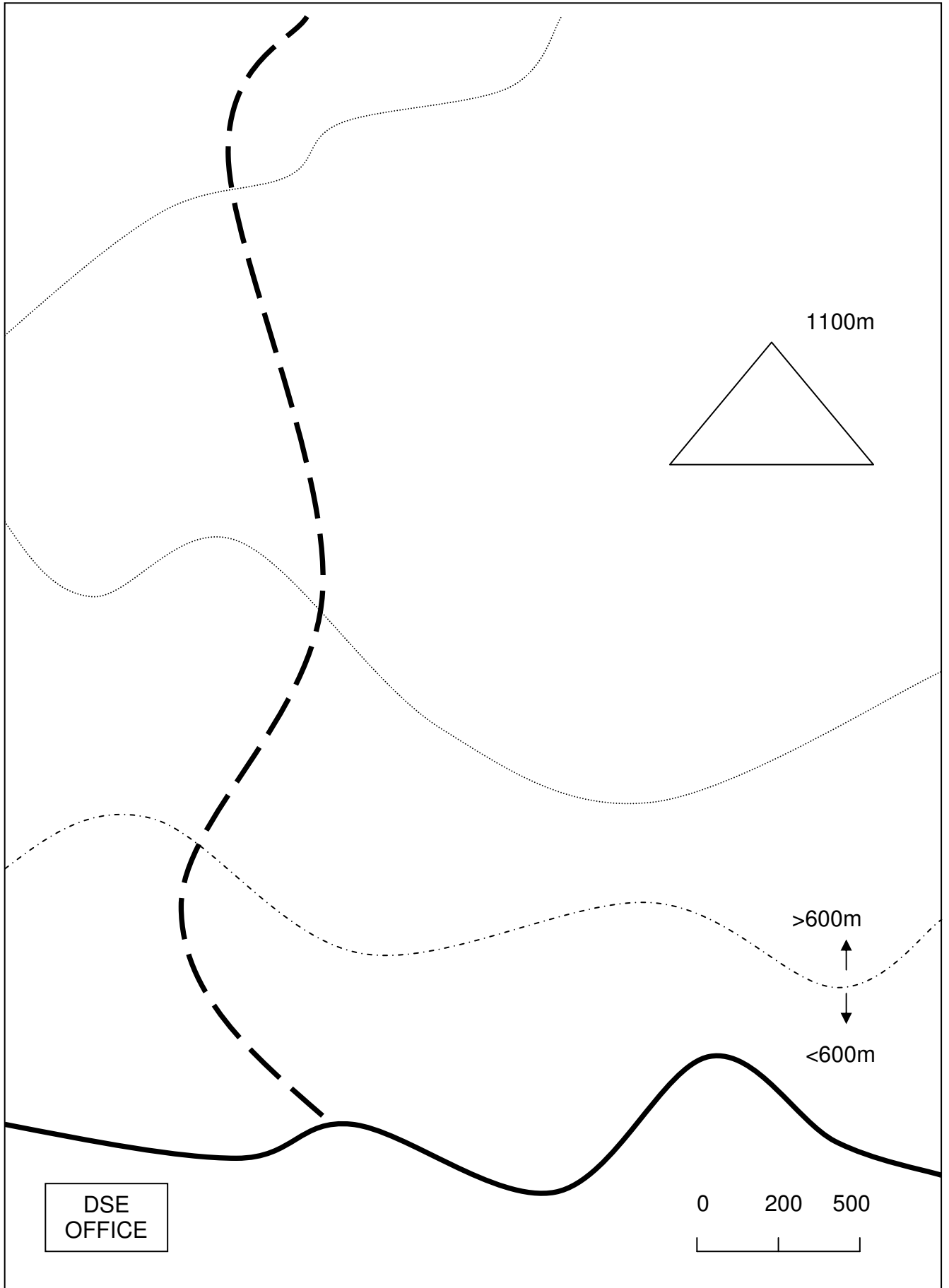


Mountain



Stream

HEAVENLY STATE FOREST



Forest Management

1. Toolangi is a State forest. What does this mean in terms of how the area is managed and what activities are permitted in it?

2. Other forest areas in Victoria are classified as 'national parks'. What does this mean in terms of the way they are managed and the activities permitted?

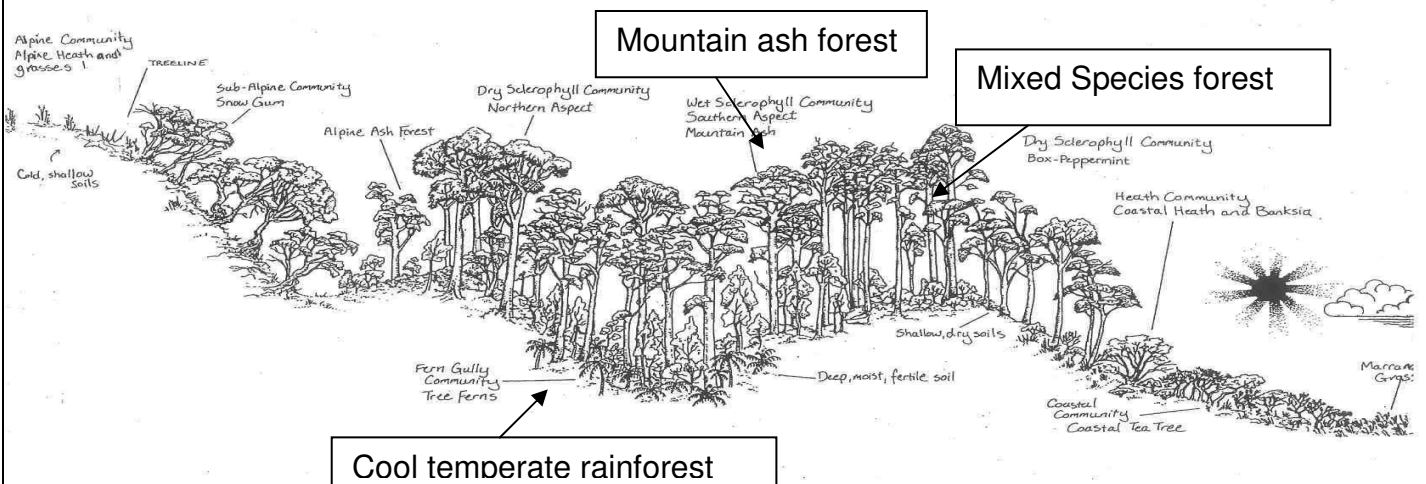
3. What does the term sustainability mean?

Forest Ecology

Below is a picture of a forest profile. Note the different plant communities and the elevations these plants communities naturally occur in.

FOREST PROFILE

Plant Communities, from Coast to Alpine Regions



3. Fill in the characteristics of the following tree species:

	Elevation	Rainfall
Mountain Ash	200-800m	800-1600mm pa
Messmate	<1000m	500-2400mm pa
Myrtle Beech	<1500m	>1350mm pa

Forest Recreation

4. State forests are managed to allow a diverse range of uses and values. However, not all activities which occur in the forest are compatible. List some of the different activities that may result in conflict.

5. What management strategies could be implemented to manage these uses and reduce conflict?

6. Forest management encourages camping in Toolangi State Forest at a central location called Murrindindi Scenic Reserve. What are the advantages of this strategy?

Fire Prevention and Management

The Department of Sustainability and Environment are responsible for fire management and prevention in State Forests.

7. Explain the three ways in which Department of Sustainability and Environment use fire on public land.

Ecological Burns for habitat management: _____

Planned Burns: _____

Regeneration Burns for timber harvesting: _____

Timber Harvesting

8. The Mountain Ash tree is a very valuable timber resource. List some of the properties that make the Mountain Ash a highly sought after resource.

- 1) _____ 2) _____
3) _____ 4) _____

9. What percentage of Victorian State forest is harvested each year? _____

The *Code of Forest Practices for Timber Production*, provides the Statewide goals and guidelines for commercial timber growing and harvesting of public and private native forests and of softwood and hardwood plantations.

10. What are some of the guidelines contained in the *Code of Forest Practices for Timber Production* that need to be considered when selecting an area for timber harvesting?

- a) _____ b) _____
c) _____ d) _____

11. What management strategies are put in place to protect sensitive areas near to coupes?

12. Why is a clear felled Mountain Ash coupe burnt after timber harvesting has taken place?

13. When can the regenerated forest be logged again? _____

Toolangi Special Protection Zones

Wirrawilla is a Cool Temperate Rainforest that is classified as a Special Protection Zone. These areas are managed for low impact activities only. A buffer is placed around the special protection zone which excludes high impact activities such as timber harvesting and high impact recreation.

14. How would timber harvesting in the adjacent Mountain Ash forest affect the rainforest?

Hints for Your Management Map and Plan

- Think about the conflicts that may result if certain activities are grouped together.
- Roads cannot lead into dead-ends, they must loop around for fire access.
- Firefighters need access to water points.
- Tourists will need carparks and toilet facilities.
- Watch the topography of the land – Mt Angel is around 1100m above sea level. Remember the slope gradients and shapes best suited for your coupes. Remember that different species of trees are found at different elevations.
- Don't forget that the Leadbeater's Possum is endangered and needs a lot of assistance to ensure its survival.

Good luck!

Additional Resources

For more information please refer to the following web sites:

- The Department of Sustainability and Environment
www.dse.vic.gov.au
This web site offers current policy, legislation and regulations for Victoria's natural resources. There is also an extensive database of maps.
- Victorian Association of Forest Industries
www.vafi.org.au
VAFI is the peak industry body for Victoria's native hardwood timber industry. They provide a range of information, advice and referral services as well as advocating on behalf of our members at State and Federal government levels.
- VicForests
www.vicforests.com.au
A Victorian Government owned enterprise responsible for the sustainable harvest and commercial sale of timber from State forests in Victoria.
- Farm Forestry – trees at work
www.dpi.vic.gov.au/privateforestry/schoolsed
Farm forestry has the potential to produce timber resources whilst going some way to controlling salinity, erosion, stream water quality, improving biodiversity and reducing greenhouse gases
- Plantations 2020
<http://www.plantations2020.com.au/>
Plantations for Australia: The 2020 Vision is a strategic partnership between the Commonwealth, State and Territory Governments and the plantation timber growing and processing industry.

Post Visit Activity

- Victorian State forests are managed for multiple uses, of which timber harvesting is one of the more controversial forest uses. Investigate if there are any viable alternatives to timber harvesting in Victorian State forests. Is it possible that timber plantations can supply enough timber to meet consumer needs? Are all timbers that are imported from other countries sustainably harvested? What does your vision for the future management of Victorian State forests look like?

**Department of Sustainability and Environment web site: www.dse.vic.gov.au
Customer Service Centre: Phone 136 186**