

Manjimup Heritage Park

Education Resource

Upper Primary
Years 4, 5 and 6



SHIRE OF
MANJIMUP

Classroom links

Content within this pack may be used as part of your preparation for a visit to the Manjimup Heritage Park, or to facilitate post-excursion reflection and further learning back in the classroom.

Cover Photo
Walter Wyndham Rhodes
and Phillis Ethel Buckland,
former residents of
Manjimup. b3384174 1

The activities are provided as standalone teaching and learning ideas, designed to help students engage with the natural and cultural heritage of the south west of WA, and with issues relevant to the region. They do not follow a specific sequence, however they can be incorporated into a broader learning program.

Most of the ideas included are loosely linked to three inter-connected themes:

- *Forests and forestry*: Features of forests and their environmental, economic, cultural and spiritual value.
- *Technology through time*: How tools, equipment and scientific knowledge change, and the implications of these changes.
- *Daily life*: The way we live, work and conduct other everyday activities, both today and in the past.

All activity suggestions are linked to the WA Curriculum across a range of year levels and subject areas, as summarised in the table below.

This education kit was
produced by Alex Kopp
for the Shire of
Manjimup



Classroom links

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3	Traditional uses	Noongar food Impact of human activities on the environment	✓	✓					
4	Sleeper cutters	Timber workers from the past		✓					
6	Community together	Life in mill towns		✓					
10	Horse maths	Changing technology and costs of production in the timber industry		✓					✓
12	Looking out for fire	Community fire management Jobs in the past		✓				✓	
13	Calling on migrants	Group Settlement Scheme Using historical sources		✓					
15	If it were me	Group Settlement Scheme							
16	Wants and needs	Economic value of forests and trade-offs associated with forestry		✓					
18	Forest setting	Forests in literature						✓	
19	Playing among the trees	Safe recreational use of forests		✓			✓	✓	
20	Trees around the world	Characteristics and diversity of vegetation around the world	✓	✓					
22	From the forest to you	Changing technology and use of resources in the timber industry		✓					
23	Power poles up	Electricity transmission Technologies involved in the making of utility poles	✓			✓			
24	Electricity and agriculture	Impact of electricity on agriculture	✓			✓			
25	Electrifying the saw mills	Generation of electricity	✓						
26	Wooden art	Artworks from found (forest related) materials			✓				



Traditional uses

The name Manjimup comes from the Noongar Aboriginal word, "manjin" meaning "edible rushes near the waterhole". This reed (Typha domingensis) was once an important food source for Aboriginal people, especially in summer, as it was filled with water. It is commonly found near wetlands across the south west.

In the Heritage Park a very similar reed species, *Typha orientalis* grows naturally along areas such as the filtration ponds at the Heritage Park. Unfortunately, due to extensive fertiliser use around Manjimup, these ponds receive a lot more nutrients than would have happened in the past, and without regular harvesting by Aboriginal people, the reeds grow too big and too fast. *Typha* reeds are now being removed from the the Park, so they don't smother the system.

Activity

There are several other native plant species in the Park which were used by Noongar people, including:

- Marri (Corymbia calophylla)
- Moonah (Melaleuca preissiana)
- Riverside sword sedge (Lepidosperma effusum)
- WA Peppermint tree (Agonis flexuosa)

Familiarise yourself with these plants before your visit to the park, and while there, see if you can find them!

Afterwards, conduct additional research to:

- Create a collage showing forest plant and animal foods that were traditionally eaten by Noongar people. Make sure you include explanatory captions or labels alongside the images you use in your collage.
- Find out more about nutrient pollution, and how extra nutrients can get into water sources.



Sleeper cutters



Sleeper cutter in the south west, c. 1920s.

Courtesy State Library of WA.

[SLWA 078688PD](#)

In the second half of the 1800s and early 1900s a lot of railways were built across Australia and the world. Building railroads created lots of jobs for 'sleeper cutters' – people who shaped railroad sleepers.

Until the start of World War 2, most sleepers were cut (hewn) with a broadaxe. Up to 1000 sleeper cutters worked in the forests in the south west. At the demand's peak in 1927, 2.4 million sleepers were exported.

In WA, the Railways Department built its own mills to supply its needs, and in 1912 the State Sawmills built mills at Deanmill and Pemberton to cut sleepers for the Trans Australia Railway.

A sleeper cutter could produce seven sleepers a day on average and was paid 20-24 cents per sleeper. He earned more than the highest paid mill worker or teamster.



Sleeper cutters cont'd

Activity

List three interesting things you notice in this photograph.

List two things this photo makes you think.

List one thing this photo makes you wonder.

Do you think there is a lot of need for 'sleeper cutters' today? Why/why not?



Community Together

Timber mills were more than just a place to make timber. They were the heart of communities for workers and their families. There were at least 100 mill communities in Western Australia between the 1870s and 1950s. Just about everyone, apart from the government forester and the school teachers, was employed by the mill companies.

Activity

Look at the photographs and read quotes from people who lived in mill towns. Using two different coloured pens, highlight those parts of the text or images that seem more positive, and those that seem negative. Then, list the challenges and benefits associated with living in a mill town.

Living in a Mill Town

Challenges	Benefits



Community Together cont'd

I quickly realised that I would be spending a fair bit of my time in this little house and would have to make the best of it.. Fortunately I had a wonderful neighbour in Edith Lyons... who took me under wing and set out to teach me the delights of country living... She took me fishing at Myalup beach (and would fall about in hysterics at my excited dashes into the water to retrieve fish) and initiated me into a range of hunter-gatherer activities, including mushrooming and mulberrying. At other times of the year she taught me to make pickles and jams and coax veggies out of the sandy soil.

Irene Batini

The sense of community was outstanding. I couldn't call it anything else. Notably if anyone was sick or had sick children. There were always people on the doorstep to do their washing, their cleaning, look after their children, take care of them in every way. And I found this quite incredible after living in a city for all of my life until then.

Jessie Coleman

You could always tell a New Australian's house at Shannon. Most of the Australians might have a patch of lawn outside their houses, but the migrants used up every square inch of their yards with vegetable gardens or fruit trees. No one had money to spare, so growing vegetables and having chooks was the way families were able to survive.

Froggie Miskiewicz



Community Together cont'd



Community fire volunteers. Mornington, 1947. Courtesy Hughan Collection



Nyamup town and timber mill, 1955. Courtesy State Library of WA.



Community Together cont'd

“ Pit-sawing was the job nobody wanted. In winter it meant working long hours up to your knees in mud, while sawdust rained down into your eyes. In summer your sweat turned the sawdust into glue and the ants crawled up your legs. And it wasn't much better for the top sawyer. He had the heavy lifting to do.”

Bill Bunbury

“ We used to have a sawdust heap in those days and so of course that's what we used to get on... and then we used to go through the mill where all the conveyor belts were, when the mill wasn't working of course... and we had a Deanmill dam and ventured down there to catch marron. There was a stream running through, we used to catch fish and frogs and then in the bush we made cubbies. We made our own fun for sure and we all got on because we had kids there all around our same age.”

Carol Samsa

“ Every family at every mill knew the shriek of the four whistles which meant an accident in the mill and in the silence which followed as the mill engines and the saws stopped, everyone in the town waited in fear or ran to the mill to know who it was and what had happened. When the mill stopped it meant a serious accident. In those days it did not stop for a cut-off finger.”

Jenny Mills



Horse maths

Examine these images from State Library of Western Australia:



Bullock team hauling timber on a whim at Lyalls Mill, c1906.

Courtesy State Library of Western Australia.

[B5097251/1](#)



Horse team hauling logs during the construction of the Denmark to Nornalup Railway, c. 1929.

Courtesy State Library of Western Australia.

[4336B/52](#)

Discuss

- Who are the people in the photos?
- What are they doing?
- Why are the animals next to them?



Horse maths cont'd

Before the arrival of steam and diesel vehicles, horses and bullocks were used to help pull logs of wood from the forest to the timber mills. Horses worked often in teams of 8–10 in jarrah forest and 12–15 in karri. Bullocks worked in teams of 10.

Bullocks mostly just ate the grass they found, but horses had a stricter diet. Each horse needed about 9 tonnes of food each year:

- 6 tonnes of chaff
- 2 tonnes of oats
- 1 tonne of bran

Activity

If a forester had a team of **12** horses, how many tonnes of food would he need to buy each year in total?

How many tonnes of chaff would he need to buy each month?

How many kilograms of food would each horse eat per day?

Do you think the forester would want more money for a log of karri, or a log of jarrah? Give a reason for your answer.



Looking out for fire

The fire tower at the Manjimup Heritage Park is a replica of fire towers used by the Forests Department between 1936 and mid-1970s.

Lookout towers – and, in some cases, tall lookout trees - were an important part of forestry fire suppression efforts. They allowed people to spot fires early, and work out their location so that fire services could be directed to the correct spot.

Lookout operators climbed up to the top, and stayed on duty from 7am to 7pm, or even later, during summer and autumn. When they spotted a fire, they telephoned the headquarters and reported where the fire was in relation to them (the bearing).

The lookout towers swayed in strong winds, were sometimes made unsafe by termites, or were at risk of being struck by lightning. Boredom was also a big problem for those on duty.

Activity

What sort of person do you think would be an ideal candidate to take on the role of watching out for fires?

Think about their physical and mental attributes, then write an advertisement notice, which could be put into the local paper or put up in a community hall, asking for volunteers to join the fire watch crew.



Calling on migrants

Today, WA's south west has a great reputation for its agricultural products, but that wasn't always the case. For example, before the 1920s, WA had a very small dairy operation. Although the area provided milk from local suppliers, butter had to be imported from the Eastern states.

To reduce the state's dependence on other states, former premier James Mitchell introduced 'The Group Settlement Scheme', a program of assisted migration that was designed to bring in a labour force from the UK to open up new areas of land for agriculture.

Activity

Go on a scavenger hunt to find at least five different types of information sources about the Group Settlement Scheme. Try to find a variety of primary and secondary sources of information:

- A newspaper article
- A photograph or a drawing
- A map
- A poster
- A quote from a diary or a letter
- A book
- A website
- An encyclopedia entry
- A video clip
- An oral history recording
- An object
- An official document

Of your five sources, which one is the most useful for learning about:

- Why people might have wanted to take part in the Group Settlement Scheme?
- What life was like in Australia for the new migrants?
- How the migrants who took part in the scheme contributed to the community?



Calling on migrants cont'd

Choose one of your sources and complete the following questions:

Who created this?

When was it created?

Where can you find it?

Why was it made?

Who was the intended audience?

How did the person who created this know about the topic?



If it were me

The two photographs below show the first, temporary huts built by people who took part in the Group Settlement Scheme. They came from the UK, hoping for a fresh start after World War 1. Their intention was to set up new farms in the south west, but to do that, they first needed to clear the land, and build shelter for themselves.

Imagine you were one of those settlers, standing where the photos were taken.

Activity

The photos show what you can see – but what might you hear or smell? What might be going through your mind? Would you be depressed? Hopeful? Determined?

Write a short reflective piece, for example in the form of a diary or a letter back home to England, describing your situation and your state of mind.

Alternatively, consider how you might have felt if you were a Noongar person observing the new arrivals, and explain your thoughts as if you were talking to someone over a campfire.



Group Settlement Temporary Houses ses, ca.1925

State Library of WA [211029PD](#)



Settlers first home in group settlement, Karridale, 1924

State Library of WA [005145D](#)



Wants and needs

Forests are a valuable natural resource that help to satisfy our needs and wants. Below are some examples of products that are often made from timber.

Circle the items which are most closely linked to our needs, and highlight those which are more closely linked with our wants.

Carvings and
sculptures

Musical
instruments

Power poles

Bee hives

House
constructions

Boat
construction

Fences

Paper

Scaffolding

Furniture

Railway
sleepers

Saunas and
hot tubs

Flooring

Window
frames

Wine Barrels

Fuel/power
generation

Oils used in
perfumes and
cosmetics

Boxes and
crates



Wants and needs cont'd

People have choices about how we use the land on which forests grow.

Consider the following scenarios, and list an advantage and a disadvantage of each.

Action

Plus

Minus

Chop down half a forest to make room for farm land.

Turn an entire forest into a national park, where no trees can be chopped down.

Allow an entire forest to be cut down for timber.



Forest setting

Discuss

Discuss and explore some stories or films you are familiar with that were set in, or which significantly include a forest setting, eg:

- The Lion, the Witch and the Wardrobe / Chronicles of Narnia (C.S. Lewis)
- Little Red Riding Hood (Brothers Grimm)
- Harry Potter and the Philosopher's Stone (J.K. Rowling)
- The Magic Faraway Tree (Enid Blyton)
- Ngalak Waakar! Ngardanginy (Charmaine Bennell) or other books set in Noongar country

Focus on the words and phrases used to describe the setting, or, in case of films, the camera angles, shot types, sounds and lighting used to create a sense of the forest.

Activity

While at the Heritage Park, visit the native bushland area and take detailed notes about what you can see, hear and smell there. Choose one tree or bush, and describe it in as much detail as possible, or describe the area as a whole. What words or phrases could you use to explain the exact colour and shape of the leaves or flowers? What do the shadows look like? How thick or sparse is the foliage? How could you describe the bark to someone who cannot see? Be as creative as you can!

Eg:

'The trees were silent, like giants lost for words'

'The sun sneaks through the leaves, leaving happy patterns on the ground'

Use your notes to write a story that takes place in the south west forest, paying particular attention to the way you describe the setting.



Playing among the trees

While on the excursion to the Heritage Park, keep an eye out for signs and any other features which are placed there to help visitors stay safe.

Discuss

What are some 'do's' and 'don'ts' that park visitors should follow?

Are these 'do's' and 'don'ts' rules or laws?

Who has the greater responsibility for staying safe within the park – the visitors, or the local government that manages the park?



Like the Heritage Park, nearby forest environments have a great recreational value for the community. They present opportunities for people to take part in activities such as hiking, mountain bike riding, geocaching and camping – plus many others.

However, although being physically active in a forest is fun, it comes with certain risks. Consider what some of these risks might be, eg:

- Getting lost or hurt
- Weather
- Risks from plants and animals
- Fire danger
- Insects
- Thirst
- Sunstroke

Working with a partner, suggest some things that government could do to help keep forests safe and create a list of 'dos' and 'don'ts' for people visiting forests for recreational purposes.

Design an informative poster or a catchy jingle advising people how they can stay safe.



Trees around the world

Below are six trees that are native to six different continents. Each one is an important natural resource. Match the tree to the continent it is native to.

Saharan Cypress
Cupressus dupreziana

Australia

Common Oak
Quercus robur

Africa

Maiden Hair Tree
Gingko bilboa

South America

Douglas Fir
Pseudotsuga menziesii

North America

Jacaranda
Jacaranda mimosifolia

Asia

Murray River Red Gum
Eucalyptus camaldulensis

Europe



Trees around the world cont'd

Choose one the trees and investigate:

A) What is the climate in which this tree grows?

B) What special features or adaptations does the tree have that help it survive?

C) What are some uses for this tree?

Create a presentation which shows some other plants that grow in the same region as your chosen tree.



From the forest to you

Identify an object made out of wood (eg. a chair), and consider all the things that need to happen to turn a tree in a forest into that object.

Activity

Watch a video showing a logging operation (eg. [Timber Harvesting Part 1](#) and [Timber Harvesting Part 2](#)), and use it to create a table which identifies the natural, human and capital resources that are required to produce a usable piece of timber similar to which you may find in a hardware store.

Then, watch the clip [Among the Hardwoods](#), and compare the natural resources, tools and equipment used, and how the skill requirements of workers have changed over time.

Make a hypothesis of how logging and milling might change in the future.



Power poles up!

The introduction of electricity led to huge changes in just about every aspect of human endeavour. It has also changed our urban landscapes: with power poles!



Electricity and Gas Department workers installing a power pole on Cambridge Street, Leederville, 1934. Courtesy SLWA.



Electricity equipment being installed on power pole, 1934. Courtesy SLWA.

Activity

Look at some pictures of power poles (utility poles) being installed (eg. SLWA images [102290PD](#) and [102315PD](#)), and compare to how a power pole is installed today.

What are some differences in what you can see?

Watch a video showing how a wooden power pole is made, and:

- explain what utility poles are used for
- summarise the main stages involved in the production of utility poles
- identify what tests are conducted to make sure the power poles are suitable for their use
- research to find out what materials other than wood can be used to make power poles (and what might be the benefits of using other materials)
- Investigate the advantages associated with underground power lines.



Electricity and agriculture

One of the significant – and undoubtedly unplanned – developments associated with the invention of electricity is refrigeration. At home, the presence of a refrigerator reduces the need for shopping, enables greater diversity of food, and improves food safety.

On a regional scale, refrigeration has changed the nature of agriculture and trade in Manjimup.

The first coolstore in Manjimup was built in the 1950s and could hold 900 wooden boxes of produce such as apples. Coolstores keep produce fresher for longer and control ripening. For example, apples picked in April in Manjimup can still be eaten in February. This means that locally produced food is available almost year-round. Refrigeration also means that produce can stay fresh while being transported long distances – even as far as England, on the other side of the world.

As a result, areas such as the south west, which are a long way away from more densely populated areas where most of the consumers are, can become important agricultural centres.



Activity

Have a go at one of the following activities:

- Conduct an experiment to compare how quickly mould grows on food at different temperatures.
- Find and watch a video which explains how a refrigerator works, then explain the process to a friend.
- Investigate how power and electricity has contributed to other areas of agriculture.



Electrifying the saw mills



All power stations have an engine attached to a generator, like the unit pictured here, and which you can see at the Power Up Electricity Museum.

After generating power for coal mines in Scotland for 30 years, this steam engine and generating set were purchased by West Australian State Sawmills in 1955 and shipped to WA. It was installed in the State Saw Mill No 1 in Pemberton, making it one of the first saw mills to have electricity.

The steam required to power the engine was produced by burning saw dust, which the mill had ample supply of.

The Pemberton saw mill had its own power house. It contained six steam engines in total.

In the 1980s, the world's oil prices went up. The State Saw Mills decided that saw dust was a competitive fuel and could be sold elsewhere so the mill closed down and the steam engines drew their power from the State Electricity Commission network.

Activity

- Investigate and draw a flow diagram to show how a steam engine works.
- Other than sawdust, what are some different fuels that can be burned and used to produce electricity?
- Give an example of at least three different ways that we can produce electricity, other than burning something.



Wooden Art



Site Specific Ephemeral Sculpture at the Heritage Park facilitated by Southern Forests Community Landcare with artist Elaine Clocherty.

Explore different examples of artworks created from natural materials and identify those which are made out of products that come from trees.

Discuss

Which ones caught your attention?

What do you think inspired the artist?

Why do you think some artists choose to work with natural, found materials?



Wooden Art cont'd

Gather a range of materials that come from trees, then use them to create an artwork that is inspired by your visit to the Manjimup Heritage Park.

Here are some materials you might consider using:

wood offcuts

match sticks

leaves

paper

cork

gum nuts

cardboard

bark

wooden clothes pegs

egg cartons

paddle sticks

twigs

Once you have completed your project, create a descriptive label, such as you would find in a gallery display.

Your label should include:

- A title
- The materials you used
- An explanation of what inspired you to create your artwork

