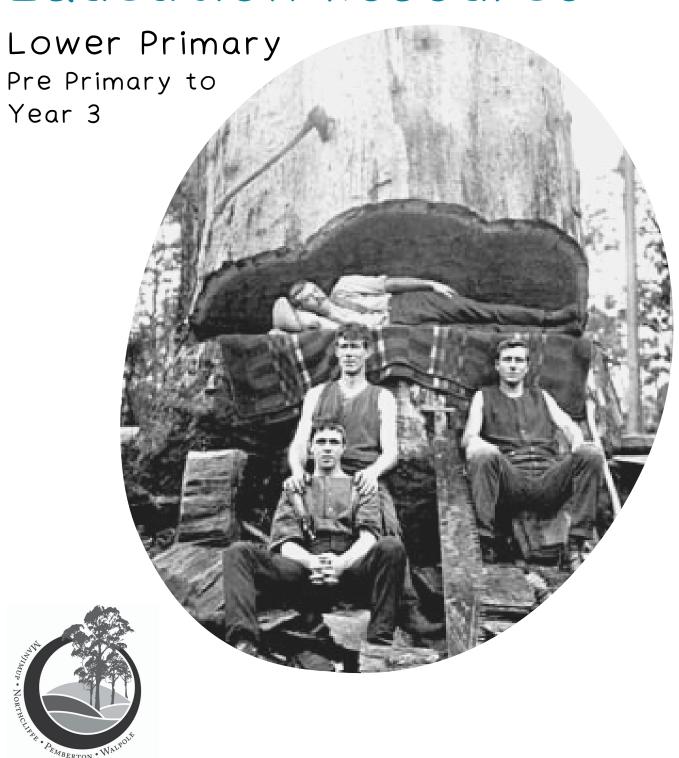
# Manjimup Heritage Park

# Education Resource



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
Logging team in karri forest
State Library of Western
Australia.
00686D

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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Tool safety	Keeping cool	School life	Noongar life	Life in a timber town	nests and hollows	A museum of	live	Different ways to	Making paper		A useful material	Parts of trees	Going loco		Moving logs	Falling trees	Mapping a park	Forests v gardens	Odd one out	Activity
Safe use of tools and equipment	Influence of electricity on food preservation	School life in the past Community celebrations	Traditional use of forest resources by Noongar people	Living conditions and daily life in timber towns	Endangered species	Forest habitats	shelter	How wood and other products are used for	Uses of timber	Uses of wood	Properties of materials	Features and parts of trees	Transport in the past	How ground surface affects moving objects	Technologies used in moving timber	The way objects move	Maps and symbols	Comparing features of places	Wood related vocabulary	Ideas explored
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# **Odd one out**

Can you pick the odd one out from each group of the words below?

timber	wood	metal	tree
board	rocK	planK	log
ьеасh	forest	orchard	woodland
twig	petal	sticK	branch
jarrah	oaK	rose	pine
barK	roots	trunK	wheel

Either search online, or take your own photos, to gather images which illustrate the different wood-related words, and use them to create a 'wood dictionary'.

Along each word and image, write a sentence that uses the word.



#### **Forest v Gardens**

On your visit to the Manjimup Heritage Park, make sure you explore the native bushland area, and compare this area to the garden at the Settlers Cottage in the Historic Hamlet and the Community Garden space. Take photos of interesting things you see.

On return to school, talk about your own gardens at home, then reflect on any trips you might have taken into a forest, look at online images of forests, and watch a video about a forest. Use your reflections, the images and video to then draw a Venn diagram which shows differences and similarities between a forest and a garden.

Use natural materials to create a diorama of a forest/natural bushland and of an urban garden.

#### Discuss

What are some ways that you need to look after a garden?

What might be some ways we need to look after a forest?

How do we use the two areas differently?

Why are both areas important?

What animals might we find in the forest/in the garden?

Where do they live?



# Mapping a park

Discuss different types of maps you have seen (eg. a world globe, map of the school, Google maps etc). Share ideas about how different types of maps are useful.

Show several different maps, and draw students' attention to the symbols shown on them.

#### Activity

Provide students with a copy of the map of the Manjimup Heritage Park (over page). Examine and discuss the symbols used, and then ask students to mark in the following:

- A) Place(s) where you could wash your hands.
- B) Place(s) place where you might be able to buy something to eat or drink.
- C) Place(s) where you might need to supervise young children particularly close.
- D) Place(s) where you might find lots of information about the past.
- E) Place(s) where you are most likely to find animals in their natural habitat.
- F) Place(s) you might meet at for a picnic with friends

Share and discuss findings.

- Did everyone agree on the locations? Why/why not?
- Why might this map be useful for tourists?



# Mapping a park



Manjimup Heritage Park Wayfinding Map



# **Falling Trees**

Did you see the large wooden log outside the State Timber Museum?

- · How long was it?
- · How do you think it was cut?

Look at the picture (over page) of the tree as it was being cut down. It was felled as part of a special community event (in 1976), to demonstrate how logging was done in the past. Fallers regularly cut down 60-metre tall trees that weighed 20 tonnes.

You can also view a video which shows a tree being cut down by hand.

- What tools and equipment are people using here?
- What are some things that could go wrong in this situation?

When the trees hit the ground, the earth shook. Fellers had to be careful to make them fall in the right direction without knocking down other trees – or falling on other men working in the forest.

Predict which way the tree in the photo would have fallen down. Test your hypothesis by using Jenga blocks to build a tower, then pulling out blocks from one side of it.

After running the experiment, have another look at the photo, and discuss why the workers might have chosen to make a wedge in the tree from this side, rather than the opposite side (note the already weakened base).

Explain that the fellers often worked on platforms above ground for a number of reasons:

- to avoid the extra work involved in cutting the large 'butt swell' (the bulbous base of the tree which was usually unsuitable for mill timber);
- to avoid the part of the tree that had a rotten or hollow centre and which could make felling dangerous;
- To provide a stable and level base on a sloping ground.



# **Falling Trees**





# **Moving Logs**

In order to use trees to make products we need, a tree needs to be cut — and then moved. But how?

Traditional Aboriginal people did not have domesticated animals like horses or bullocks, so they could only move trees that they could pull or carry themselves. However, they often didn't cut down whole trees, but only removed smaller parts, such as branches, or carved out parts of the trunk.

Early European timber cutters used animals to help them pull the trees through the forest and load them onto carts. Show students a photo of a bullock team hauling timber (SLWA B5097251/1).

#### Discuss

What is happening in the photo?

What does the surface of the ground look like?

What do you think it would belike to drive or walk across it?

What if it was wet and muddy?

What might happen to a log being pulled behind?

#### Activity

Experiment how far and how easily a toy truck moves across different surfaces: eg. smooth lino, sandy patch, pavement, woodchip, mud etc. Record your observations.

Challenge students to find the best way to 'tow' a long block of wood across a stretch of soil or sand (attach string to the toy truck, or otherwise students can physically tow it themselves). You may like to put in obstacles along the path, like trees in the forest.



# **Moving Logs (cont'd)**

Once students had a chance to experiment and come up with their own solutions, show them an example of a logging shoe and a <u>rubber tyred arch</u>, and discuss why lifting the point of the log makes it easier to tow.

Eventually, machines such as tractors replaced horses and bullocks. Point out the caterpillar tracks and rubber tyres on the vehicle in the photo, and discuss how these inventions make it easier to traverse rough terrain.



A logging shoe. Courtesy National Archive of Australia (REFERENCE NO.)

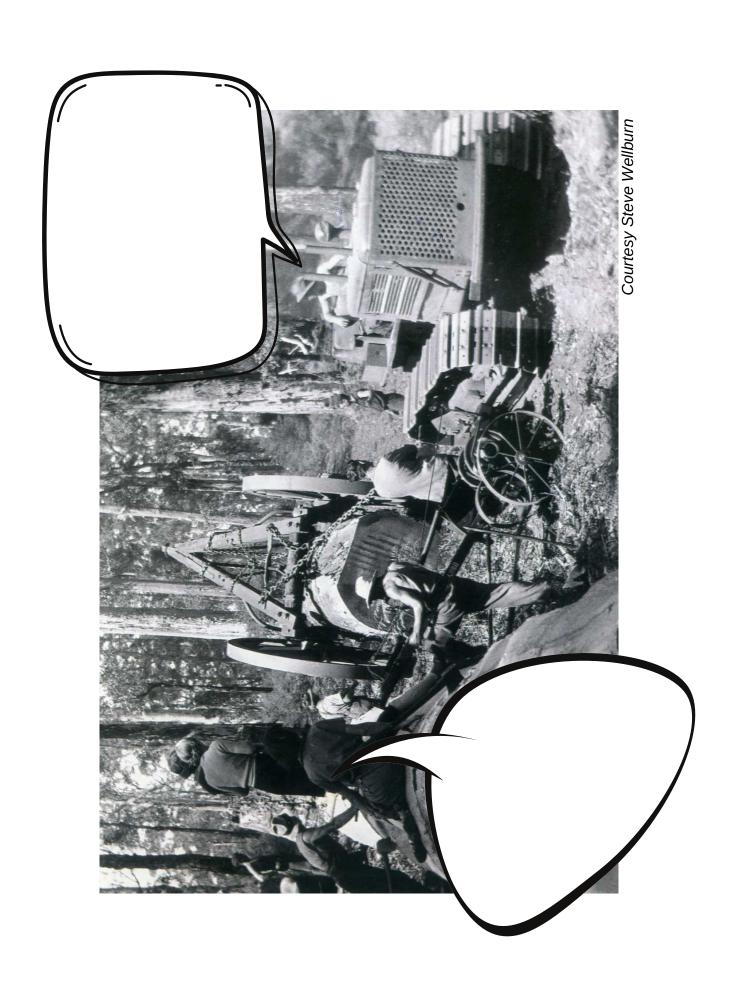


Rubber Tyred Arch Courtesy State Library of WA 816B/TBt337

#### Activity

The photo on the opposite page shows the first tractor used near Pemberton. What do you think the people in this photo could be thinking or saying?





# **Going Loco**



Mrs Barker and son Alphie from Settlement Group #89 Courtesy Steve Wellburn



Timber train with Karri logs, 1949. Courtesy State Library of Western Australia 195446PD

Steam locomotives made it easier for to travel and to transport goods. Before their invention, people had to rely on their own two feet, or on animals, to help them move themselves or things from place to place.

#### Activity

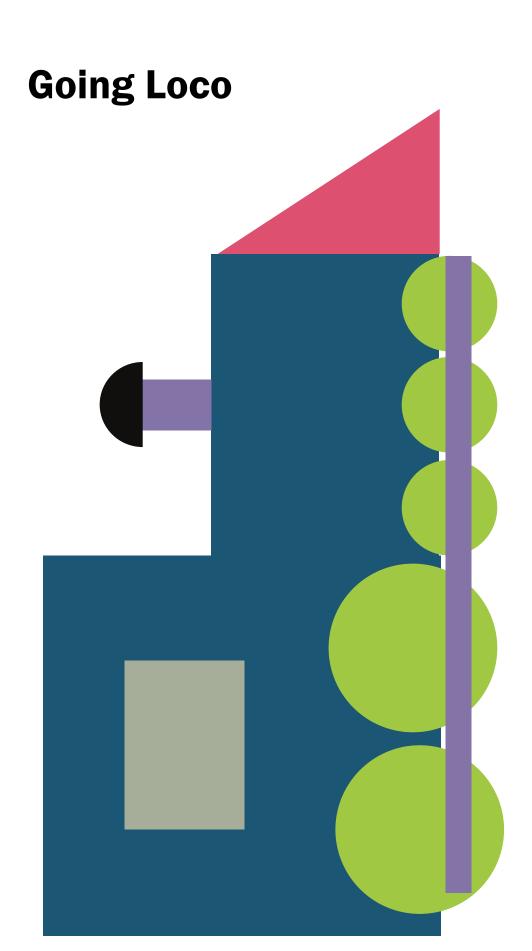
Find some pictures of locomotives on line and describe their common features.

What are some shapes you can see?

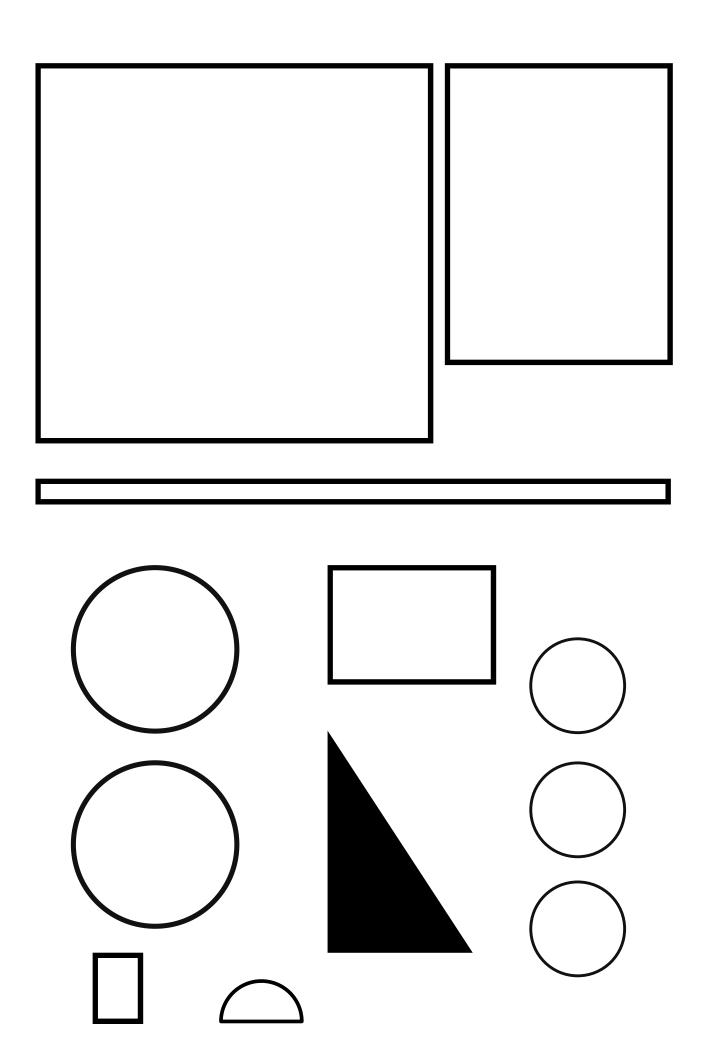
Using the template over page, colour in, cut out and 'build' a locomotive out of the shapes provided.

You can watch a video about how a steam engine works.









#### **Parts of Trees**

#### Activity

Watch and listen to the <u>Tree Song</u> video. Come up with appropriate actions that match the songs words.

Discuss the role of the different parts of the tree mentioned in the song: roots, trunk, leaves, fruit and seeds.

Look at any pictures of trees you took while on a visit to the Heritage Park and/or go out into your school grounds and examine any trees you have growing at your school. Identify the different parts of trees that were mentioned in the song.

Collect different types of fruit and cut in them half to identify the seeds inside, and compare to the fruit of native WA trees, such as jarrah, karri or marri nuts (gumnuts).

When you are finished, use the gumnuts and other fruit as stamps to make a 'fruit' painting.





### A Useful Material

Collect examples of different materials, of which wood is one (eg. wool, metal, glass, plastic, fabric, rubber, sand, paper).

Brainstorm (or match) some words that describe these different materials:

soft	waterproof	flexible
brittle	transparent	grainy
hard	shiny	opaque
warm	colourful	smooth

#### Activity

Discuss how wood is one of the earliest materials used by people, and although today we have many other materials to choose from, wood continues to be used for <u>many different things</u>.

Then, grab an iPad or a camera, and get snapping! Take pictures of things which are made out of wood, and use the best photos to create a digital collage which illustrates why wood is an important resource. Make sure that your collage shows diversity of products made out of wood (eg. make sure that the pictures are not of all the same type of thing like stationery or furniture).



# **Making Paper**



Ship at Bunbury Port being loaded with woodchip, on its way to Japan where it will be turned into paper.

Courtesy State Library of Western Australia 135021PD

#### Activity

One of the most important uses of trees is in the production of paper – an invention that we take for granted today, but which when it was first discovered, <u>changed the world</u>.

Other than for writing on, investigate the different uses we have for paper. Investigate <u>how paper is made today</u>, and <u>how it is recycled</u>, then have a go at making <u>your own recycled paper</u>. Try experimenting with different types of paper to make your paper, and compare the results.

Use your handmade paper to make a forest-inspired greeting card.



# **Different Ways to Live**



What material are the buildings in the Hamlet at the Manjimup Heritage Park made from?

One of the most important uses of timber is for making shelter — even when other materials, like bricks, are used, wood is often used to make the housing frames or to support roofs.





#### Activity

Have a look at some wooden houses from around the world. How are they different from each other?

- Mia-mia
- Bamboo house
- · Log Cabin
- Weatherboard Cottage
- Old Railway Carriage House
- Modern Wooden House

Explore some other ways people live and the different materials that houses can be made from. Discuss what might be the advantages and disadvantages of using different building materials. Make sure you try to find out what both the outside and the inside of the houses looks like!

Then, use a range of different materials to build your own model house.



# A museum of nests and hollows

On your visit to Manjimup Heritage Park, you might have noticed some wooden boxes nailed to trees (see picture over page).

A lot of Australian animals live in tree hollows. These tree hollows can take over 100 years to form. When old trees with hollows are cut down to clear the land for farms or to get timber, it can mean that animals such as cockatoos, bats or possums lose a place where they can find shelter or raise their young.

As a result of habitat loss, many animal species are now becoming threatened. Special nesting boxes, like the ones you saw at the Park, can help them survive.

Often, the first step towards helping threatened species, is to inform people about them and the problems they face.

#### Activity

Create a museum-style display to educate people about animals that live in forest habitats. Be creative! Some things you might want to include in your museum display could be:

- Photos of different parts of forests (eg. canopy, undergrowth, water ways), with captions which explain what animals live in these different places.
- Interactive activities, where 'visitors' have to match a fact about an animal to a picture of it.
- A model of a bandicoot's nest, or a bird nest, made out of things like grass, leaf litter and small sticks.
- A PowerPoint display showing different types of bird nests.
- A poster which lists some way people can help to look after threatened animals.
- Collection boxes for donations, the proceeds of which you can pass on to animal support organisations.

What other ideas do you have for how to educate the community about threatened species?



See the next page for more on nesting boxes

# A museum of nests and hollows cont'd



There are at least 5 different species of Microbats in this area that use these nesting boxes.

They use these boxes to roost at night or shelter with young.

Micobats are great at keeping insects like mosquitoes numbers down as they eat them.

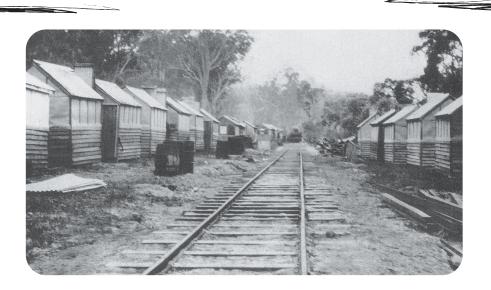
For more info on microbats look here.



# Life in a timber town

#### Activity

Photographs are important sources of historical information. Look at the photos provided over page and explain what you can learn about what life was like for WA's timber workers and their families. In each case, consider both the factual information provided in the photograph, and what you can infer from it. An example is given below.



#### What this photo tells me about the past:

Timber workers lived in small huts, built close to the rail lines. People lived close to each other. The huts were small, and looked similar to each other.

#### What this photo makes me think:

Timber workers were probably a tight-Knit community, where people Knew everyone and what their lives were like. The families were probably not well off. It looks like they might have been cold in winter.

After completing the photo analysis, watch a video from showing <u>what life in a timber town was like in 1972</u> (a few decades after the photos were taken).

Compare what you see to the photos, and also discuss how some of the things you see might be different or similar to today.



# Life in a timber town (cont'd)



Mobile school, Jarrahdale Courtesy Hughan Collection



Family and home in timber country, c.1920s. Courtesy State Library of Western Australia <u>021961PD</u>



# Life in a timber town (cont'd)



Community fire volunteers.
Mornington,1947.
Courtesy Hughan
Collection



South west timber mill interior, c. 1920s.
Courtesy State
Library of Australia.
021968PD



State Saw Mill, Pemberton, 1912. Courtesy State Library of Australia. 229049PD



# **Noongar life**

Our State's south west forests have been home to Noongar people for thousands of years, and provided all the shelter, resources and food that they needed.

As an example, show a picture of a <u>booka</u> (kangaroo cloak) and a <u>kodj</u> (stone axe), both of which can be made out of materials found in a forest.

Explain that traditionally, Noongar children grew up learning about what resources were available where, how they could be used and how they should be protected by watching and listening to older people in their families, and that this information only started to be written down in the last 100-150 years.

Read out the information about <u>Noongar seasons</u> from the Kaartdijin Noongar website and challenge students to listen out for and remember all the different types of food sources that are mentioned. See who can remember the most, and discuss any unfamiliar foods mentioned.

Survey the class to find out if anyone has eaten any of the foods mentioned, and which ones they would like to try if they had an opportunity.



# **School Life**

The school building at the Hamlet at Manjimup Heritage Park is a one teacher school that was originally located in Banksiadale, near Dwellingup. It ran from 1920 to 1963 as a one teacher school, which meant that children of different ages were in the same class together.

This is a newspaper article about the school celebrating the 50th jubilee of Australian Federation, published on the 17 May, 1951 in the South Western Advertiser: <a href="http://nla.gov.au/nla.news-article149062825">http://nla.gov.au/nla.news-article149062825</a>

#### Discuss 1

What might have been some pluses and minuses of going to a one teacher school?

Allocate one paragraph each to different students, and illustrate these paragraphs. Use these illustrations to create a class display.

#### Discuss 2

- What roles within each of these activities might have been carried out by younger students/which ones might have been done by older students?
- Which part of the celebrations might have been most fun? Which part might have been most formal? Which part might have taken the most effort to organize?
- What are some things we celebrate as a school today?

Consider an anniversary coming up at your school, class or community (eg. anniversary of your school being built, the foundation of your town or suburb, a national or state event, anniversary of a new school building) and suggest a program of events for a special celebration.

(To extend this activity further, you can look at what a newspaper in the past looked like compared to what it looks like today, what were some other local news stories at that time, and what products and services were advertised).



# **Keeping it cool**



Do you remember seeing the refrigerator on display at the Power Up museum? How was it similar or different to our fridges today?

#### Discuss

One of the most important electrical devices we have at home today is the refrigerator. List some things that we keep in the fridge, and discuss:

- Why do we keep some food in the fridge, instead of in the pantry?
- What did people do before refrigeration?
- What would be some downsides of not having a fridge?

Investigate different ways that people preserved food in the past, and try preparing some of the following:

- · Pickled cucumbers
- Dried fruit
- Sauerkraut



# **Tool safety**

#### Reflect

What tools or equipment have you seen at the Heritage Park? What jobs were they used for?

#### Discuss

Watch Bob the Builder episode 'Leo learns to use the chainsaw'. Use the episode to discuss:

- What tools and equipment did Leo and Bob use?
- What were they using the different tools for?
- What safety equipment or safe behaviours did Bob encourage Leo to use?
- What things went wrong for Leo and why?

Compare some power tools or equipment and manual tools (eg. saw/electric saw, hammer/nail gun, whisk/electric beater) and consider advantages as well as risks associated with powered equipment.

Students can role play a situation where they are instructing a younger child on how to safely use some common tools and equipment (eg. Stanley knife, hot oven, sewing machine, glue gun, electric toaster).

You might also wish to show students the two photographs below, and discuss how work equipment has changed over time (horse pulled buggy with a platform vs cherry pickers today, axe vs chain saws) and how work clothing/protective gear has changed.



Tower erection at Kalgoorlie Electric Tramways, 1902. Courtesy State Library of Australia. 024170PD



Sleeper cutter with broadaxe, c1920s. Courtesy State Library of Australia.

