


North West Sydney has an ancient history

Key Learning Area	Unit or lesson title and main focus questions	Most appropriate level and suggested number of lessons
 History	North West Sydney has an ancient history What types of sources have archaeologists unearthed and used to piece together the ancient history of the North West Sydney region? What do these sources reveal about the length and nature of Aboriginal settlement of the area? How have archaeologists, historians and Aboriginal people worked together to develop a deeper understanding of the history of the North West Sydney region?	Stage 4
		1-2 lessons

Teacher briefing

Students examine the diverse roles that historians and archaeologists play in investigating our ancient Aboriginal past. Coverage focuses on several key Aboriginal sites and then narrows to examine recent archaeological finds in Sydney’s North West and what they reveal about the nature and longevity of Aboriginal occupation of the region.

Requirements for these lessons

Activity sheet 1 – Scientific techniques used in archaeology

Activity sheet 2 – Narabeen Man

Activity sheet 3 – Site study

Activity sheet 4 – Pemulwuy’s spear – historians and archaeologists working together.

Assessment

- Any of the learning activities in this lesson could be used for formative assessment and feedback on students’ demonstration of target outcomes.
- A summative assessment activity could test students’ knowledge and understanding of the features and significance of the Australian archaeological sites investigated.

Key terms

- Sources and evidence, continuity and change, significance.

Web links



Aborigines in the Hills District

<https://www.thehills.nsw.gov.au/files/assets/public/library-documents/local-studies/aborigines-in-the-hills-district.pdf>

Aboriginal archaeological sites recorded in the Sydney region up to 2001

<https://dictionaryofsydney.org/media/4033>

'Archaeological evidence of Aboriginal Life in Sydney', by Val Attenbrow, Dictionary of Sydney,

http://dictionaryofsydney.org/entry/archaeological_evidence_of_aboriginal_life_in_sydney

Indigenous Australian timeline pre-contact, Australian Museum

<http://australianmuseum.net.au/indigenous-australia-timeline-pre-contact>

Mungo Lady and Mungo Man

<http://www.visitmungo.com.au/mungo-lady-mungo-man>

Pemulwuy, Australian Dictionary of Biography

<http://adb.anu.edu.au/biography/pemulwuy-13147>

'Speared man unearthed after 4,000 years', Sabra Lane ABC News

For transcript go to <http://www.abc.net.au/news/2007-12-21/speared-man-unearthed-after-4000-years/994510>

'The Mystery of Narabeen Man', Catalyst, ABC Television

<http://www.abc.net.au/catalyst/forensics/>

The transcript of this interview can be found at

<http://www.abc.net.au/catalyst/stories/2278381.htm>

Syllabus links:

History 7-10:

Stage 4 - Depth Study 1: Investigating the Ancient Past

(HT4-1) describes the nature of history and archeology and explains their contribution to an understanding of the past

(HT4-6) uses evidence from sources to support historical narratives and explanations.

Learning experiences

This lesson would come after introductory lessons on how archaeologists work to investigate the ancient past.

Step 1 – Significance of the Lake Mungo archaeological site

- Gauge students' knowledge of Aboriginal archaeological sites in Australia. If necessary, direct students to the Mungo National Park website <http://www.visitmungo.com.au/mungo-lady-mungo-man> and ask them to locate and discuss the significance of the site, for Australia and for the world
- Explain to students how archaeologists, using a range of techniques for dating sites, estimate that Aboriginal people have been in Australia for around 60,000 years. Refer to Resource Sheet 1 – Timeline of Aboriginal occupation of the Sydney region and North West Sydney (pages 86–87)
- Display Australian Museum's Indigenous Australian timeline pre-contact, <https://australianmuseum.net.au/indigenous-australia-timeline-pre-contact>
- Ask students to discuss the climatic and environmental changes of the last 60,000 years. Have students identify which change would have been most significant for the way of life of Aboriginal people and explain how they have determined 'significance'
- Issue Activity Sheet 1 on page 88 on scientific techniques used in archaeology. This can be completed as an individual or group activity, submitted as a completed summary chart or as a digital presentation.

Step 2 – Aboriginal archaeology in the Sydney region

- Display or provide the map 'Aboriginal archaeological sites recorded in the Sydney region up to 2001' <https://dictionaryofsydney.org/media/4033>. Draw students' attention to the different types of sites indicated in the legend. If students are not familiar with these types of sites, have them access the Aboriginal Heritage Office website where there are clear photographs and descriptions of sites in the Sydney region: <http://www.aboriginalheritage.org/sites/identification/>
- Students work in groups to identify and discuss the pattern of distribution of the different types of sites recorded and possible reasons for this distribution
- Display Natural Vegetation Sydney, 1788, Figure 2 (page 83) and ask students to use that to help explain the distribution pattern of sites
- Each group shares their conclusions with the class
- An Aboriginal burial site in Narabeen does not appear on the 2001 Aboriginal sites map because it was unearthed in 2005. Students use Activity Sheet 2 on page 89 to discover the significance of the discovery of Narabeen Man for Australian archaeology and Australian history.

Step 3 – Aboriginal archaeology and the Sydney Metro Northwest

- Display satellite image of the route of the Sydney Metro Northwest and explain that for much of its route it follows ancient Aboriginal pathways along ridges and adjacent to creeks
- Explain that one of the conditions for approval of the Sydney Metro Northwest was the requirement to investigate identified Aboriginal sites within the project area before starting construction. The aim was to collect, analyse and store Aboriginal objects within the construction corridor to ensure Aboriginal heritage information is maintained for future generations
- More than 20 sites were investigated with archaeologists working alongside representatives from the local Aboriginal community. More than 15,000 artefacts were retrieved and analysed, revealing Aboriginal connections with this land over at least 4,000 years.

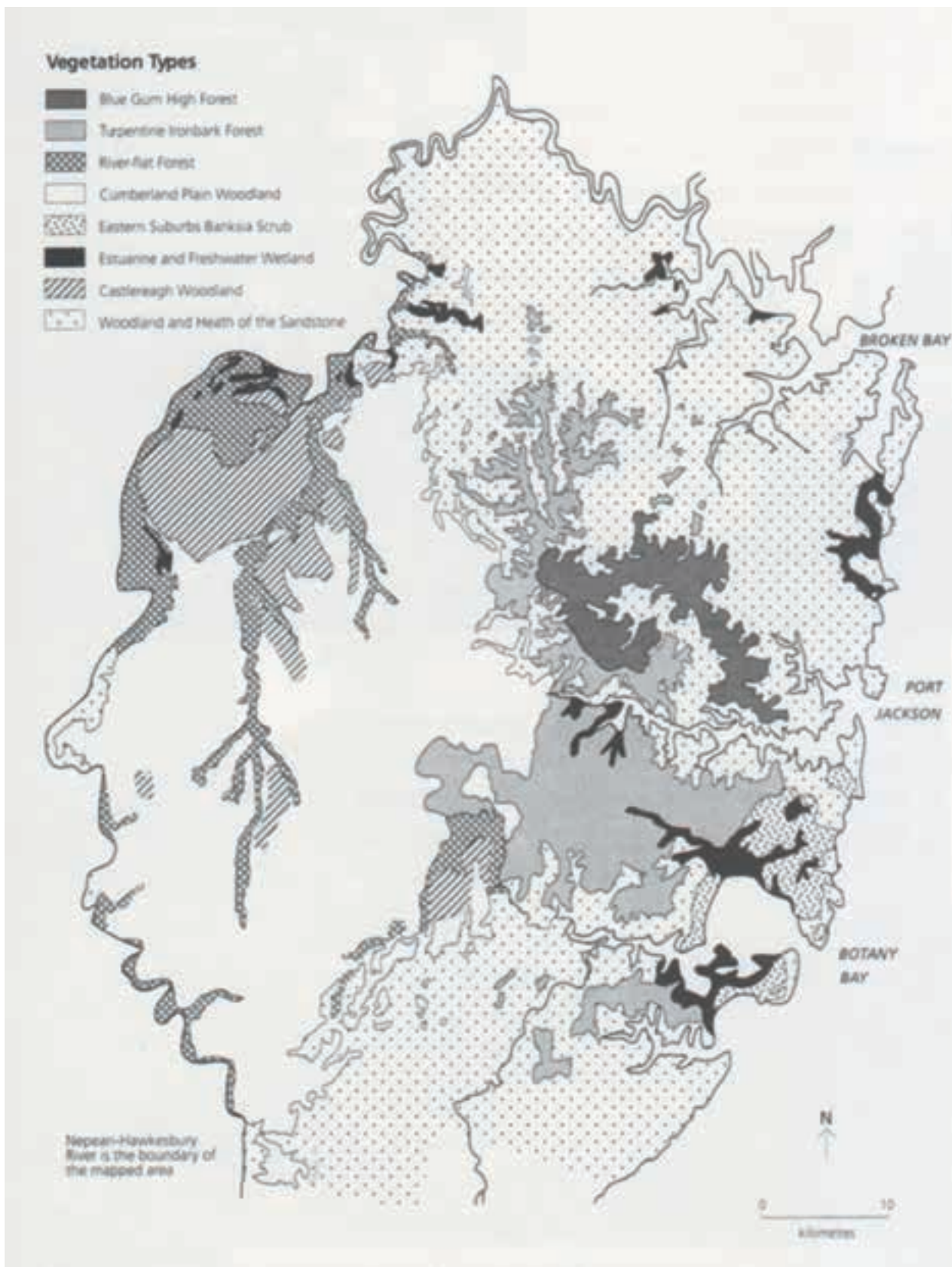


Figure 2: Natural vegetation Sydney 1788. Benson, D and Howell, J, *Taken for granted*, Royal Botanic Gardens, Sydney.

- Display photographs showing the excavation method used.

Excavation methods



Figure 3: Completed 1 x 1 metre square.



Figure 4: Completed cross extension on 1x1m.



Figure 5: Recording artefacts in situ.



Figure 6: Completed open area.

Excavation method used in excavating and recording Aboriginal sites in North West Sydney

Aboriginal archaeological sites in western Sydney are often comprised of scatters of flaked stone artefacts that were created and/or discarded at a specific place. Archaeological sites comprised of stone scatters in the Sydney region are often invisible on the ground surface because of the build-up of soil over time. For the Sydney Metro Northwest program, a methodology was developed to determine the physical extent of each site and recover significant artefacts.

A series of 1 metre x 1 metre squares were excavated by hand on a grid overlain on each site to determine the extent and condition of the archaeological resource (Figures 3 and 4).

Artefacts that were seen within the soil during the excavation (i.e. “in situ”) were photographed and documented with measurements taken of their position and depth below the ground surface (Figure 5). The soil from each square was sieved through meshes to recover any artefacts that were not recovered during the excavating (Figure 5). Where concentrations of artefacts or interesting features were uncovered, the squares were expanded by excavating additional squares around them (Figure 4). This process continued until the artefact concentration or interesting features were uncovered in their entirety (Figure 6).

Sydney Metro Northwest: Archaeological Salvage Program, p. 29, November 2015

<https://www.sydneymetro.info/sites/default/files/document-library/Sydney%20Metro%20Northwest%20Indigenous%20Heritage%20Archaeological%20Salvage%20Program%20Report.pdf>

- Students research the main types of stone tools found in the area, providing a picture and a brief description of flaked, backed and ground-edge stone tools and how they were made. Refer to Figure 7
- One Sydney Metro Northwest site in particular produced a concentration of artefacts: a hilltop between Elizabeth Macarthur Creek and Caddies Creek. Activity Sheet 3 Site Study on page 90 is based on this site.



Figure 7: Examples of the types of stone artefacts found during Sydney Metro Northwest archaeological excavations in the North West region: (L-R) Thumbnail scraper and backed artefact, Hornfels hammerstone fragment and retouched chert flake. *Sydney Metro Northwest Archaeological Salvage Program*, Plate 36, page 96.

Step 4 – Pemulwuy’s spear – historians and archaeologists working together






- Gauge students’ prior knowledge of Pemulwuy, an Aboriginal warrior who fought for many years against the colonists in the Sydney region, including areas around Toongabbie, Parramatta, Kellyville and Rouse Hill. Students may have learnt about him in primary school. For those who know little about him, a brief biography is available online at <http://adb.anu.edu.au/biography/pemulwuy-13147> and a film clip from *First Australians* can be found at <https://www.youtube.com/watch?v=1Nh6TRRdmac>
- Issue Activity Sheet 4, Pemulwuy’s spear on page 92 which requires students to consider how historians and archaeologists can work together to achieve a more complete understanding of the past.

Extension activities

- Students create an annotated map of the Sydney region showing the location of significant Aboriginal archaeological sites
- Survey the websites of museums in the Sydney region to compile a register of Aboriginal artefacts from the area accessible to the public
- Investigate the work of Aboriginal archaeologists. How might their approach to archaeology differ from non-Aboriginal archaeologists working on Australian sites? A good starting point is the ABC Science Program’s ‘Learning country through our eyes’ about Aboriginal archaeologist Dave Johnston <http://www.abc.net.au/science/articles/2012/05/22/3507675.htm>

Resource sheet 1

Timeline of Aboriginal occupation of the Sydney region and North West Sydney






Years ago	Worldwide	Sydney Region	North West Sydney
15,000 to 10,000	First farming settlements arise in the Fertile Crescent in Mesopotamia and the Nile Valley – beginnings of agriculture and permanent settlements (11,000 years ago)	Shaws Creek K2 rockshelter on the western side of the Nepean River being used as a habitation shelter by Aboriginal people (14,700 years ago)	
6,000 to 5,000	The beginning of the Bronze Age (5,300 years ago) Invention of writing (5,200 years ago)	Radiocarbon date from an archaeological site near present day Doonside in western Sydney (6,000 years ago)	
5,000 to 4,000	 Construction of the pyramids at Giza, Egypt (4,600 to 4,500 years ago)	A site along Caddies Creek in Rouse Hill, close to sites excavated for Sydney Metro, is being used by Aboriginal people (4,700 years ago)	People living along the gentle slopes above Elizabeth Macarthur Creek (4,400 years ago) People living on the hilltop near present day Mungerie House (4,200 years ago)
4,000 to 3,000	Last woolly mammoths die off in Russia and the species finally becomes extinct (4,000 years ago) 	Radiocarbon date from a shell midden indicates Aboriginal people living at Balmoral Beach (3,780 years ago) 	 More archaeological evidence for people again living along Elizabeth Macarthur Creek within the Sydney Metro project area (3,600 years ago)
3,000 to 2,000	 First Olympic Games held in Olympia, Greece (2,776 years ago)	Aboriginal people living in rockshelter at Yowie Bay in Sydney's Sutherland Shire (2,670 years ago) Aboriginal people living and creating art within rockshelters near Cherrybrook (2,200 years ago)	



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Resource sheet 1

Timeline of Aboriginal occupation of the Sydney region and North West Sydney

Years ago	Worldwide	Sydney Region	North West Sydney
2,000 to 1,000	<p>Roman invasion of Britain (1970 years ago)</p> <p>Vikings invade and attack Britain and Paris (1,200 years ago)</p>	 <p>Occupation of a site in Parklea, near the Sydney Metro project area (1,070 years ago)</p>	 <p>Later date for occupation of the hilltop near Mungerie House, Sydney Metro area (1,000 years ago)</p>
1,000 to present	 <p>Christopher Columbus discovers America (500 years ago)</p> <p>Invention of the steam engine (245 years ago) ushers in the start of the Industrial Revolution</p>	<p>Aboriginal people living in the Second Ponds Creek Valley, Rouse Hill (650 years ago)</p>  <p>Arrival of the First Fleet in Sydney (Image: from Mitchell Library, State Library of NSW) (225 years ago)</p>	<p>We now have evidence for people living further down the slope of the same hill, closer to a tributary of Caddies Creek (900 – 570 years ago)</p> <p>Construction of Mungerie House (120 years ago)</p>  <p>Archaeological investigation of sites along the Sydney Metro corridor (1 year ago)</p>

Source: Sydney Metro Northwest Early Works Project, *aboriginal cultural heritage interim highlight report*, pages 6-7 October 2014.

Activity sheet 1

Scientific techniques used in archaeology

Use information from reliable print and digital resources, to complete the summary table.

Technique	Description	Example of use in an ancient Australian site	Reference(s)
Radiocarbon or C14 dating			
Thermoluminescence dating			
Lidar or airborne laser scanning technology			
Residue analysis			



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Activity sheet 2

Narabeen Man

Instructions

- A. Read the transcript of the ABC news report on the discovery of Narabeen Man
<http://www.abc.net.au/news/2007-12-21/speared-man-unearthed-after-4000-years/994510>
- B. View three film clips from the Catalyst program on Narrabeen Man
<http://www.abc.net.au/catalyst/forensics/>
'The mystery of Narabeen Man' (7 mins),
'Interview with Dr Denise Donlon' (3 mins) and
'Extended interview with Allen Madden' (3 mins)
- C. Use information from the transcript and the film clips to answer the following questions in complete sentences.
1. **WHERE** was the body found and under what circumstances?
 2. **WHO** led the excavation and what did archaeologists uncover?
 3. **WHEN** did Narabeen Man die and how do we know this?
 4. **HOW** did Narabeen Man die and what evidence supports your explanation?
 5. **WHAT** theory has been offered to explain the death and what evidence supports the theory?
 6. **WHY** is the discovery of Narabeen Man significant for Australian archaeology and Australian history?



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Activity sheet 3

Site study

Instructions

Read the archaeologist's report on the Elizabeth Macarthur Creek and Caddies Creek hilltop site.

Create a poster or flow diagram to show what artefacts were found and how archaeologists interpreted those objects to explain aspects of Aboriginal life at the site over time.

Hilltop between Elizabeth Macarthur Creek and Caddies Creek

An analysis of the landform features along the route of the Sydney Metro identified a hilltop west of Old Windsor Road between Samantha Riley Drive and Windsor Road as having the potential for buried Aboriginal archaeological objects. The area is prominently situated above the banks of Caddies Creek and Elizabeth Macarthur Creek, which flows to the east and west before joining in a confluence to the north of the site. Salvage excavation conducted by archaeologists and Aboriginal community members during the Sydney Metro program uncovered a concentration of approximately 500 Aboriginal stone artefacts at the site. Artefacts were made from raw materials including silcrete, tuff, quartz and hornfels. However, it was the discovery of an elouera, a ground-edge axe and several elongated bipolar quartz flakes that made this site unique amongst the archaeological sites excavated during the Sydney Metro project.

The elouera was produced from a flake of tuff that had been shaped by the removal of multiple flakes along the left lateral margin creating a blunt backed edge. The artefact had been broken into two pieces in antiquity; however, careful excavation successfully recovered the entire artefact. Analysis of residue and usewear on eloueras from other archaeological sites have suggested that these artefacts were utilised for scraping, adzing or cutting activities.

Eloueras from other archaeological sites in the Sydney region have been dated from about 1,600 years ago and it is likely that this site was intermittently used over a similar time span.

A number of elongated bipolar quartz flakes were also discovered during the salvage excavation. Quartz artefacts are uncommon in archaeological sites of western Sydney because the material is difficult to knap and more easily flaked silcrete is readily available. The use of quartz to make elongated flakes at this site suggests that the material was intentionally selected and that the elongated form was significant. It is likely they were produced for a function specific to the utilisation of the area around the site. They were probably not made to be used as everyday tools. Based on the hilltop location, range of artefacts and ethnographic information it is possible the quartz blades were used for ceremonial activities. Further insights should be revealed as the analysis of the site continues.

The ground-edge axe uncovered at the site during the salvage excavation was constructed from a water worn pebble of hornfels. The artefact was shaped by narrowing one edge through knapping off flakes and grinding against an abrasive surface, such as exposed sandstone bedrock. Axe grinding grooves have been identified on Caddies Creek to the north of the study area.



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Figure 8: (L-R) Ground axe found at a hill top site within the Sydney Metro Northwest area and an example of Sydney Region Aboriginal rock art with a mythical figure holding an axe. *Sydney Metro Northwest Archaeological Salvage Program*, Plate 10, page 22.

Several accounts of the use of ground-edge axes by Aboriginal people were documented by early British settlers in the Sydney region. Uses for ground-edge axes included: general woodworking, the removal of bark during the construction of canoes, shelters and shields and as weapons.

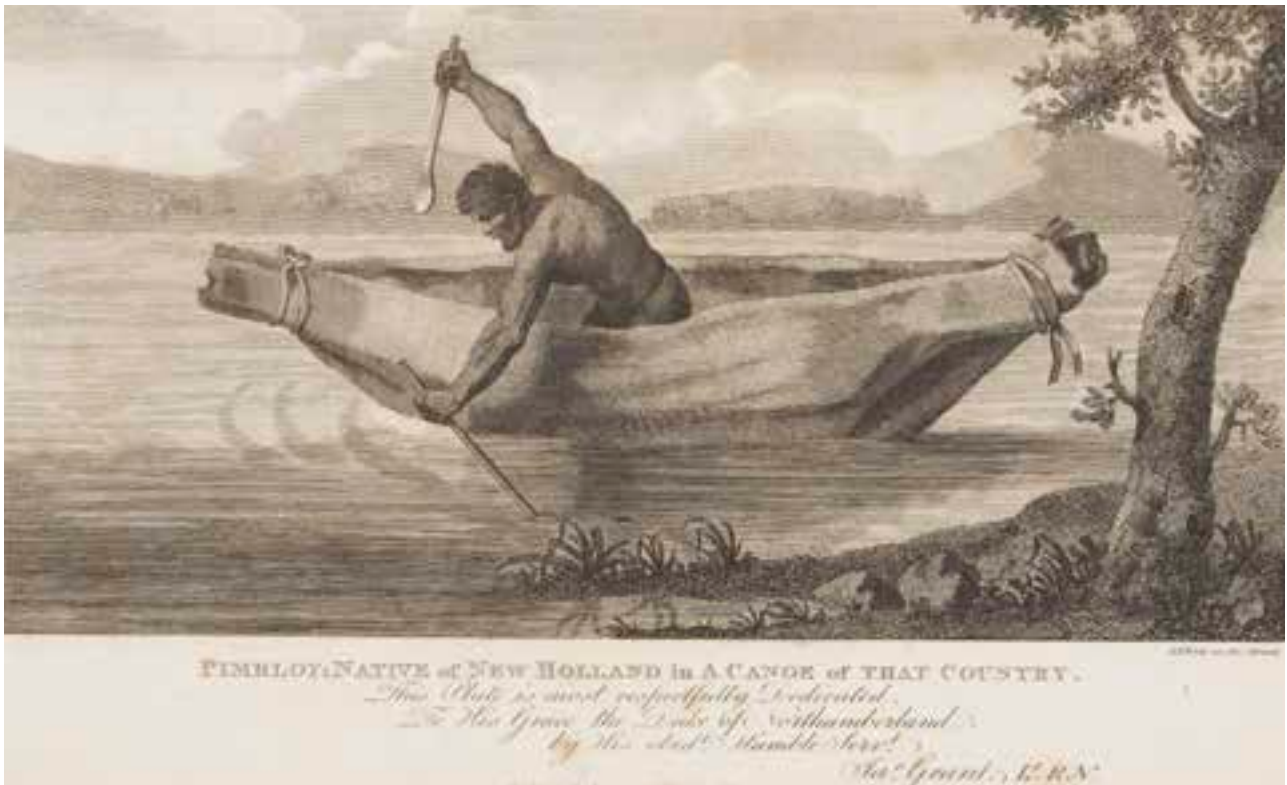
Many ground-edge axes, including the artefact found at this site, show evidence of battering and pecking opposite the ground edge. It is believed that, in addition to being used as an axe, the opposite edge was used as a hammer, making this a true multi-purpose tool. In many instances, the use of ground-edge axes as hammers resulted in the accidental removal of large flakes. The damage caused by accidental flaking to this ground-edge axe may be the reason for its discard at the site.

The artefacts uncovered at this site provide a valuable insight into the range of activities that were being conducted in the area by past Aboriginal people. Archaeological research has found that eloueras, quartz blades and ground-edge axes were used for both mundane and selective tasks. The landscape context and relatively selective array of archaeological material from the hilltop site however suggests that the place was a special location where selective activities were undertaken as opposed to utilitarian tasks. Selective activities may include leisure, initiations or ritual functions.

Source: *Sydney Metro Northwest Early Works Project, aboriginal cultural heritage interim highlight report*, October 2014

Activity sheet 4

Pemulwuy's spear – historians and archaeologists working together



Source A

Pimblooy (Pemulwuy) by Samuel Neele.

<http://handle.slv.vic.gov.au/10381/255652>

Source B

Description of Pemulwuy's spear, used to kill John McIntyre, Governor Phillip's Gamekeeper in 1790

"When he extracted the spearhead, Surgeon General John White found that it was barbed with 'small pieces of red stone' which confirmed that Pemulwuy belonged to one of the woods tribes."

Cited in the *Sydney Metro Northwest Interim Highlight Report*

Activity sheet 4

Pemulwuy's spear – historians and archaeologists working together



Source C

Bi-ni-long (Bennelong) by Samuel Neele.

<https://nla.gov.au/nla.obj-135681648/view>

This portrait of Bennelong shows on the upper left a spear very similar to that likely used by Pemulwuy to spear John McIntyre, although this spear is barbed with shell.

Source D

“Spears used by Aboriginal people from coastal groups were barbed with pieces of shell, while spears of the inland groups were barbed with stone flakes. ‘Similar red silcrete flakes as described on Pemulwuy’s spear, were recovered from the Sydney Metro excavations, suggesting that Bediagal (Bidjigal) people had been making their spears that way for a long time.’”

Sydney Metro Northwest Interim Highlight Report 2014

Instructions

After examining the four sources, write a brief explanation of how historians, who work mainly with written and pictorial remains, and archaeologists, who work mainly with physical remains, can work together to provide a more complete understanding of the past.



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