

SYDNEY LEARNING ADVENTURES

Groundwork: Archaeology at The Big Dig

Teacher Resource Pack

Secondary Program

- Stage 5 Elective History
- Stage 6 Ancient History
- Year 12 History Extension





Native life at Port Jackson 1788 – Port Jackson Painter. *Natural History Museum, London*

Acknowledgements

Welcome – Budyari Gamarruwa

Sydney Learning Adventures acknowledges and pays respect to the Gadigal people, on whose land our excursions take place. We recognise the continuous connection all First Australians have with country, community, water and sky. Sydney Learning Adventures pays its respect to Elders past, present and emerging.

The Big Dig Archaeology Education Centre programs have been originally designed for Sydney Harbour Youth Hostel (YHA) and Sydney Learning Adventures (SLA) by education consultant Louise Zarmati.

Sydney Learning Adventures gratefully acknowledges the assistance of Dr Grace Karskens and Dr Wayne Johnson.

Sydney Learning Adventures is an initiative of Place Management NSW.

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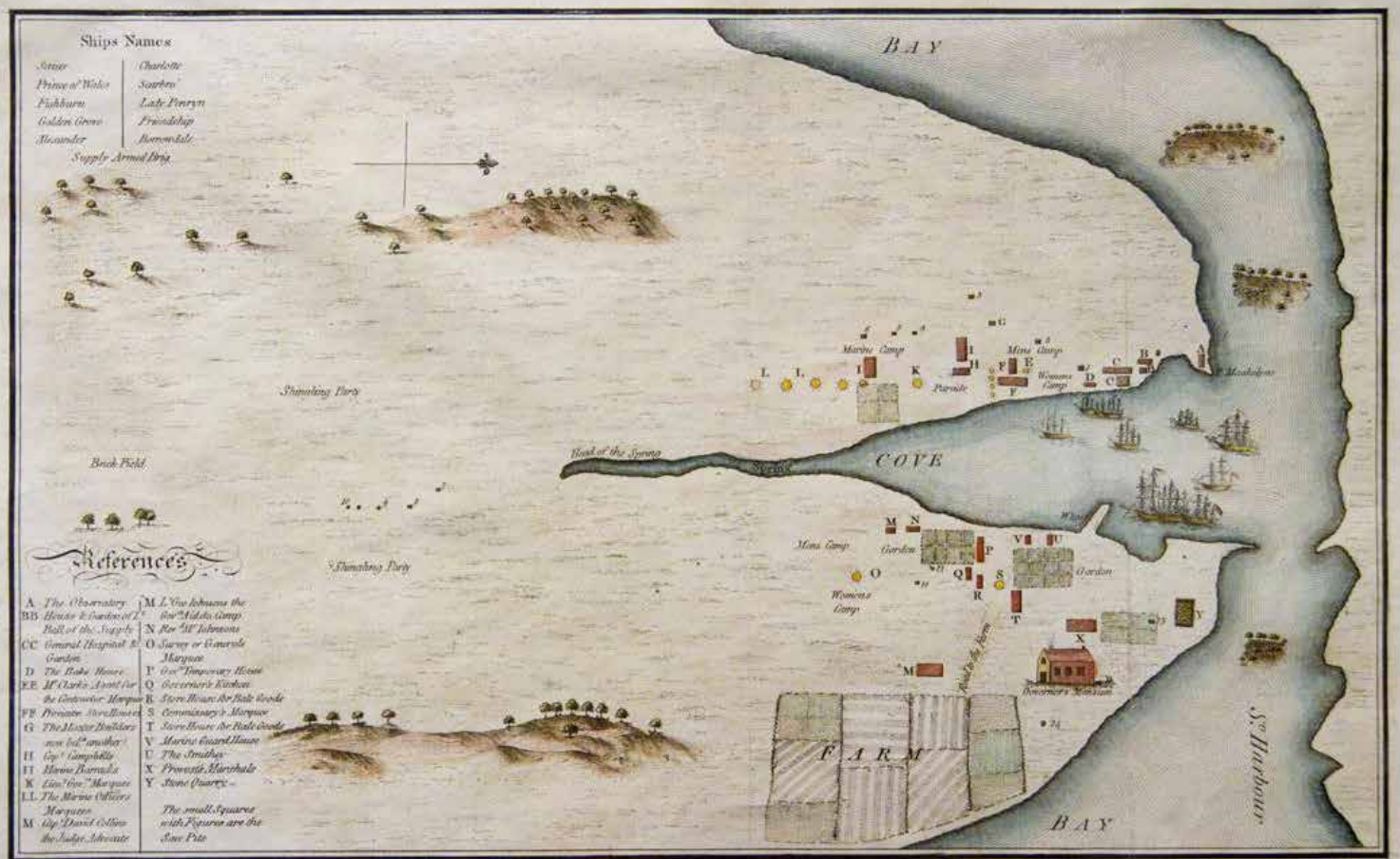
Aboriginal and Torres Strait Islander people should be aware that this document may contain images and names of deceased persons in photographs and/or printed material.



Students at The Big Dig Archaeology Education Centre

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Sketch & Description of the Settlement at SYDNEY COVE PORT JACKSON in the COUNTY of CUMBERLAND taken
 by a transported Convict on the 10th of July 1788
 Image courtesy of The State Library of New South Wales
 Sydney Cove lies 3 Leagues to the Northward of BOTANY BAY which is situated in Lat. 34° 51' S. Long. 151° E.

Your Learning Experience

Groundwork: Archaeology at The Big Dig is a Sydney Learning Adventures' program that is designed to maximise your students' learning experiences beyond the classroom in the hands-on, interactive environment of an authentic archaeological dig.

Students will use tangible, archaeological evidence from The Big Dig site to develop their own historical arguments to reconstruct the past. The program begins with a PowerPoint presentation that clearly outlines the connected roles of history and archaeology before students explore the remains of structures built more than 200 years ago, helping them construct a strong picture of the everyday lives of the people who lived and worked here.

Working collaboratively, students will examine artefacts excavated in The Rocks and consider the same questions working archaeologists ask to determine the use, possible owners and manufacturing dates of artefacts. This process allows students to develop strong feelings of connection to the individuals and groups who comprised The Rocks' communities of the nineteenth century. Our dynamic and experienced Education Guides lead students on an investigation that maintains an emphasis on using the evidence before them to make reasoned judgements and form logical conclusions.

Curriculum Outcomes Overview and Key Inquiry Question

The Groundwork: Archaeology at The Big Dig program covers content, skills and concepts from the Ancient History syllabus by addressing the key inquiry question:

What methods and issues, especially relating to archaeology, are involved in investigations of the past?

Students will engage with curriculum outcomes while participating in 3 activities during the program. These activities are:

1

PowerPoint Presentation

This has a principal focus on the role archaeology plays in investigating the past. Images and information from both ancient sites and The Big Dig are used as prompts to stimulate student discussion and reflect on questions such as the methods used by archaeologists, the strengths and limitations of different sources in reconstructing the past and ethical issues related to the practice of archaeological excavation.

2

Tour

Students enjoy exclusive access to an authentic, archaeological dig site featuring the remnants of structures from the first years of European settlement to the turn of the twentieth century. Artefacts spanning more than 200 years, representing both the pre- and post-industrial ages, are on display and are used, in conjunction with historical documents, to build a detailed picture of what life in The Rocks was like in the nineteenth century and how it changed over time.

3

Artefact Analysis

Students will handle, examine and analyse artefacts excavated from both The Big Dig site and other archaeological digs in The Rocks. They will work as archaeologists to identify what materials artefacts are made from, how they were used and who might have owned them. During the program students will have the opportunity to discuss and interpret the archaeological and historical evidence to which they have been exposed, applying their knowledge to make judgements and draw conclusions centred on continuity and change, cause and effect and differing perspectives of the past.

Curriculum Links

Links between our program activities and the NSW syllabus outcomes are outlined in the following tables. Please note that all programs will be modified to cater for the specific Stage group visiting. Teachers will be consulted prior to the start of the program.

Subject	Ancient History
Topic	Historical Investigation Historical Authentication and Reliability Preservation, Conservation and/or Reconstruction of Ancient Sites Cultural Heritage and the Role of Museums Core Study: Ancient Australia
Knowledge and Understanding	
Outcomes	YEAR 11 AH11-1 describes the nature of continuity and change in the ancient world AH11-2 proposes ideas about the varying causes and effects of events and developments AH11-3 analyses the role of historical features, individuals and groups in shaping the past AH11-4 accounts for the different perspectives of individuals and groups AH11-5 examines the significance of historical features, people, places, events and developments of the world YEAR 12 AH12-1 accounts for the nature of continuity and change in the ancient world AH12-2 proposes arguments about the varying causes and effects of events and developments AH12-3 evaluates the role of historical features, individuals and groups in shaping the past AH12-4 analyses the different perspectives of individuals and groups AH12-5 assesses the significance of historic features, people, places, events and developments of the world
Skills	
Outcomes	YEARS 11 AND 12 AH11-6 and AH12-6 analyses and interprets different types of sources for evidence to support an historical account or argument AH11-7 and AH12-7 discusses and evaluates differing interpretations and representations of the past AH11-8 and AH2-8 plans and conducts historical investigations and presents reasoned conclusions, using relevant evidence from a range of sources AH11-9 and AH12-9 communicates historical understanding, using historical knowledge, concepts and terms, in appropriate, well-structured forms AH11-10 discusses contemporary methods and issues involved in the investigation of ancient history AH12-10 analyses issues relating to the ownership, custodianship and conservation of the ancient past



Chinese ceramic fragment found at The Big Dig site



Denture, circa 1850-1900

Subject	History Extension
Topic	Constructing History - Key Questions Western Imperialism in the 19th Century Women Convicts in New South Wales
Knowledge and Understanding	
Skills	
Outcomes	YEAR 12 HE12-1 analyses and evaluates different approaches to history and the complexity of factors that shape historical interpretation HE12-4 constructs an historical position about an area of historical inquiry and discusses and challenges other positions

Subject	Elective History
Topic	History, Heritage and Archaeology Ancient, Medieval and Modern Societies Thematic Studies: Economy and Society Crime and Punishment War and Peace
Knowledge and Understanding	
Outcomes	HTE5-1 applies an understanding of history, heritage, archaeology and the methods of historical inquiry HTE5-2 examines the ways in which historical meanings can be constructed through a range of media HTE5-3 sequences major historical events or heritage features, to show an understanding of continuity, change and causation HTE5-4 explains the importance of key features of past societies or periods, including groups and personalities HTE5-5 evaluates the contributions of cultural groups, sites and/or family to our shared heritage

Skills	
Outcomes	HTE5-6 identifies and evaluates the usefulness of historical sources in an historical inquiry process HTE5-7 explains different contexts, perspectives and interpretations of the past HTE5-8 selects and analyses a range of historical sources to locate information relevant to an historical inquiry HTE5-9 applies a range of relevant historical terms and concepts when communicating an understanding of the past HTE5-10 selects and uses appropriate oral, written, visual and digital forms to communicate effectively about the past for different audiences

Program Activities

1. PowerPoint Presentation

Students will:

- share their own understandings of archaeological and historical terms, concepts, methods, sites and changing archaeological practices
- propose theories as to why there is limited archaeological evidence of at least 50,000 years of Gadigal presence in The Rocks prior to 1788
- form opinions about issues such as how sources may contradict each other, reasons behind a dig, steps involved in the process of excavation and post excavation project phases
- discuss the areas of focus of The Big Dig excavation, including the standard of living and the social and economic role of women
- examine the idea of bias in historical sources, particularly in relation to written and visual primary documents and archaeological evidence at The Big Dig
- review dating techniques used in archaeology, including relative and absolute dating
- learn about all stages of The Big Dig development, including the role of government and private industry, site changes over time, what ongoing research is occurring and how archaeological evidence has been conserved and presented to the public
- gather and process information about the lives of people who inhabited The Rocks from the first years of European settlement to the beginning of the twentieth century
- compare archaeological standards applied during The Big Dig to other modern and ancient excavations
- review examples of what can happen if the excavation process is unregulated
- identify and assess the type of ethical issues which affect the practice of archaeology
- respond to questions posed by the Education Guide, teachers and fellow students arising from the PowerPoint presentation
- ask questions and raise discussion points stemming from familiar and new information presented

2. Tour

Students will:

- observe and discuss the natural terrain of The Rocks in 1788
- visit sites to view and compare the foundational remains of houses built in different decades
- relate changes in the archaeological evidence to social, economic and technological changes occurring in the colony
- undertake an in-depth study of one Rocks' inhabitant, George Cribb
- identify physical features of the Rocks' community, including narrow thoroughfares, rows of terrace houses and industry intermixed with residences

Concepts and Skills

Historical Concepts:

Causation

Students will explore cause and effect in relation to:

- European settlement and the traditional Gadigal lifestyle
- physical and social changes to the neighbourhood between 1788 and 1915
- changes in the type, style and manufacture of products, spanning a 120-year period, using a range of primary sources including artefacts

Students will:

- link our ability to predict future events and understand our world to archaeological evidence, for example the best ways to house people in crowded cities
- recognise links between cause and effect are complex and intricate, especially when diverse social and cultural factors are involved
- appreciate differing chronologies can be involved in cause and effect chains, for example short and long term consequences of the Gold Rushes

Continuity and change

Students will:

- appreciate the length of time Gadigal people inhabited the country sustainably
- sequence events occurring in Sydney and globally during the 18th and 19th centuries
- relate archaeological evidence to changing patterns of work
- interpret archaeological evidence to evaluate the scope and range of change across technological, medical and social spheres in the 19th century

Perspectives

Students will:

- see the past through the eyes of the people who lived it by being immersed in their time, place and identity at The Big Dig site
- reassess their own personal values and beliefs by forming close emotional connections with people from long ago whose belongings they are handling
- question what is "essential" for survival and happiness by studying The Rocks' community of 150 to 200 years ago

Significance

Students will:

- use archaeological evidence to identify significant events, for example the Industrial Revolution, in people's lives during the 19th century
- understand the importance of artefacts left behind and the role they play in reconstructing the past
- consider the question "Why is studying the past important?" through the example of the preservation of The Big Dig site

Program Activities

- observe and interpret sites that played important roles in maintaining the fabric of The Rocks' community, such as Berry's Bakery
- trace the changing pattern of land use in The Rocks, for example from a butcher's slaughter yard to terrace housing
- gain insight into methods of preserving public access to archaeological sites while recognising the needs of private enterprise

3. Artefact Analysis

Students will:

- answer questions about the primary and secondary sorting criteria archaeologists use in artefact analysis
- sort artefact fragments into categories based on the materials from which they are made
- observe a modelled example of artefact analysis
- handle and closely examine artefacts excavated from The Big Dig and associated sites in central Sydney
- sketch artefacts to record their size, shape and important details
- recognise distinctive marks and features of artefacts that help identify the process and date of manufacture, for example seam lines in glass bottles
- use logical thinking to develop reasoned arguments, supported by evidence, about the consumer decisions made by The Rocks' residents
- have their curiosity and imagination about the people who bought and owned these artefacts stimulated
- relate the range and style of products available to the values, attitudes and fashion choices common in the 19th century
- make connections between unfamiliar artefacts and products used for similar purposes today
- consider the impact of the Industrial Revolution on the range of artefacts uncovered and their method of production
- work collaboratively in teams to discuss findings and draw conclusions
- understand the need for safe and careful handling of artefacts and put this into practice
- complete an artefact analysis worksheet for up to 4 artefacts, asking the same questions archaeologists consider when studying artefacts
- communicate with their peers to select a team presenter to share the groups' conclusions and deductions with the class



Concepts and Skills

Contestability

Students will:

- use James Taylor's 1820 painting of The Rocks and Sydney Harbour to examine the concept of bias, both intentional and unintentional
- look at a range of sources relevant to The Big Dig site, including official records, newspaper reports, letters, oral history and archaeological evidence to understand why historical debate exists over the standard of living existing in The Rocks in the 1800s
- investigate how evidence from The Big Dig excavation in 1994 challenged existing interpretations of post-contact history

Historical Skills:

Analysis and Use of Sources

Students will:

- place the lives of The Big Dig residents in the context of life at the time by synthesising information from archaeology, public documents and oral history
- examine artefacts, make informed suggestions about how they were used and deduce what this tells us about how people lived
- interpret foundational remains to work out what people's houses were like
- identify the strengths and limitations of archaeology as an historical source

Historical Interpretation

Students will:

- examine changing historical interpretations of the character of The Rocks, particularly in response to new evidence from 1994's Big Dig
- begin to develop impartial decision-making skills by comparing historical interpretations of The Rocks
- form opinions as to which historical interpretations have validity and reliability

Historical Investigation and Research

Students will:

- conduct on-site research about life in The Rocks in the 1800s
- examine families living in The Rocks as part of a larger community of people with diverse backgrounds and circumstances
- appreciate the importance of the location and depth of where artefacts are found
- recognise the ethical issues involved in excavating and conserving archaeological sites

Explanation and Communication

Students will:

- select relevant information and use precise terminology to complete an artefact analysis worksheet and present the information to their peers
- work collaboratively in teams to resolve differences of historical opinion
- ask, and respond to, questions in a safe and supportive environment



Over one million artefacts have been excavated at The Big Dig Site
Image courtesy of The Big Dig Archive

Multi-Curricula Links

The Groundwork: Archaeology at The Big Dig program makes valuable contributions to syllabus outcomes in complementary Stage 6 subjects by fostering transferable competencies.

Modern History

The skills, values and attitudes in the Modern History syllabus closely mirror those in Ancient History, and both have a similar focus on the process of historical enquiry. The Groundwork: Archaeology at The Big Dig program emphasises source based investigation and reconstruction of the past, helping students in both disciplines think critically about what has gone before and how that may shape the future. History students develop the ability to advance reasoned arguments supported by evidence and are encouraged to question historical authentication and reliability. The content of both subjects embraces excursion activities based on investigating historic sites and sources, looking at the impact of the Industrial Age and recognising the importance of cultural heritage.

English - Standard and Advanced

The Groundwork: Archaeology at The Big Dig program contributes to learning in English through encouraging and modelling critical, creative and interpretative thinking and its expression in both written and oral forms. In particular, the use of technical vocabulary to make meaning for a specific purpose and audience demonstrates the power and diversity of language, whilst the study of artefacts gives practical experience in weighing evidence and justifying conclusions. Students must use effective communication when working in teams and sharing ideas during artefact analysis and when presenting their findings to their peers, teacher and Education Guide.

Geography

Content and skills covered in this excursion also assist with learning in the Urban Places section of the NSW Geography syllabus. Students will explore The Rocks as a distinct and unique space both physically and in respect to its inhabitants. The program includes discussion of the difficulties The Rocks' inhabitants faced in their daily lives, especially in relation to sanitation, water supply and housing, and how these challenges were perceived by residents and government authorities.

Schedule for The Day

Please arrive at The Big Dig Archaeological Education Centre at least 10 minutes before the scheduled start of the program to allow time for students to be organised into groups, meet their guide and store their bags.

A bus drop-off and pick-up is on Cumberland Street in front of the Sydney Harbour YHA. Please refer to the map of The Rocks attached at the end of this document.

A small, uncovered outside area near the Education Centre is available for your students to enjoy recess or lunch before and after the program. Please ask the guides on the day for more directions and to provide a bin.

Male, female and disabled bathroom facilities are available in the Education Centre.

Program Activities

Session	Component	Location	Timing
Session 1	PowerPoint Presentation	The Big Dig Education Centre	40 mins
Session 2	Tour	The Big Dig Archaeological site	40 mins
Session 3	Artefact Analysis	The Big Dig Education Centre	40 mins

If more than one group is on the site, program activities will happen in a different order for each group.

Your Education Guide for the day will ask you to complete a short evaluation form before the completion of the program to help with our continuous improvement.



The Whalers Arms Hotel, corner Gloucester Street and Cumberland Place, The Rocks, 1901.
Image courtesy of The Bertie family



The Rocks Discovery Museum

The Rocks Discovery Museum

We suggest a visit to The Rocks Discovery Museum in Kendall Lane to complement your Groundwork: Archaeology at The Big Dig program. The museum features an exhibition room, Warrane, focusing on the lives of the Gadigal people before colonisation and then follows the progress of European settlement in The Rocks.

This story spans the years from the arrival of the First Fleet, to Sydney's growth as a bustling port, to events of the twentieth century, including the building of the Harbour Bridge and the Green Bans of the 1970s. The museum displays many artefacts found during The Big Dig excavation and one of the highlights is the presentation of the George Cribb story. As part of this exhibit, artefacts found in George's well are arranged in a stratigraphic display that accentuates his rise from convict to moneyed landowner. Entry is free; however, bookings are essential for self-guided school tours.

For more information and bookings, please call on (02) 9240 8680 or email therocksdiscoverymuseum@property.nsw.gov.au.

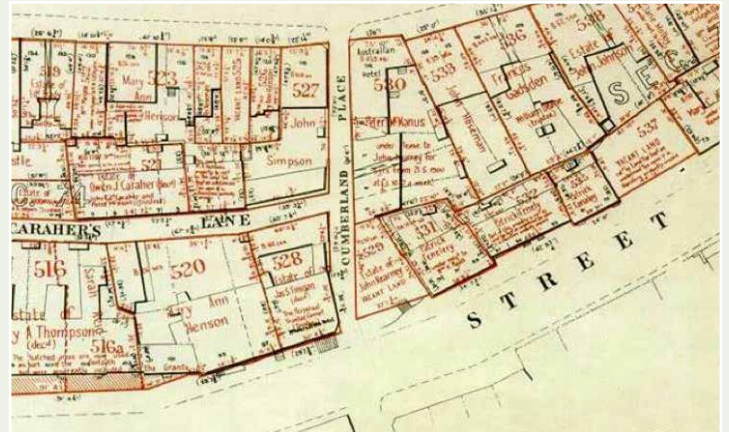
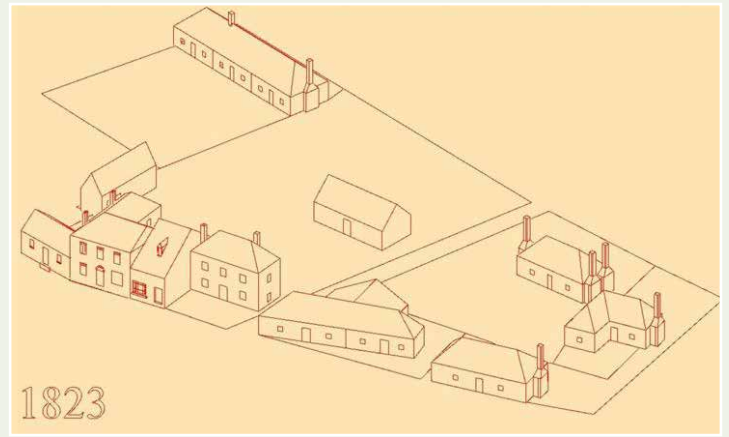
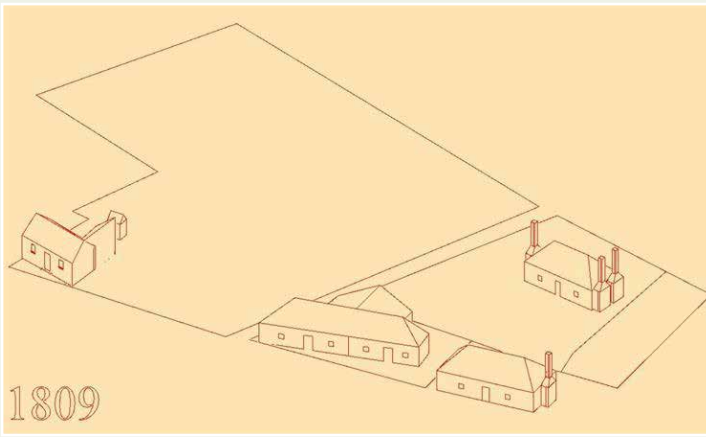
Artefact Analysis Worksheet

This worksheet, with trays containing up to eight authentic artefacts uncovered in archaeological digs in The Rocks area, will be handed out to students, working in teams or individually, to complete.

Groundwork: Archaeology at The Big Dig Artefact Analysis Worksheet

Name: _____

	Artefact 1	Artefact 2	Sketch: Artefact 1
What is it made from? For example, wood, metal, stone, ceramic, bone, shell.			
Is it complete? Is it broken, snapped, cut or worn away?			
Does it have any markings? For example, patterns, decoration, symbols, writing, cuts, scratches?			
How as it made? By hand or machine? Locally or imported?			
What do you think it is? How was it used?			Sketch: Artefact 2
Can you think of other ways it may have been used?			
Estimate when you think it was made			
Where do you think it was found?			
Who do you think may have used or owned it?			



CAD (computer aided design) drawings of how the site that became The Big Dig looked between 1850 and 1890. The Rocks Resumption Map, 1901.

Pre and Post Excursion Activity Suggestions

Pre-excursion activities

- Watch the video “Archaeology at The Big Dig: Investigating Colonial Lives in The Rocks” at thebigdig.com.au/education/documentary
- Familiarise students with the field of Urban Archaeology, perhaps using London’s Big Dig as an example. www.nationalgeographic.com/magazine/2016/02/artifacts-found-under-london-archaeology

Post-excursion activities

- Use the Artefact Analysis worksheet in this resource pack to analyse a modern artefact found in the classroom.
- Discuss how The Big Dig excavation in 1994 contributed to new historical interpretations of post-contact history in The Rocks.
- Review the ethical rules that should be followed in all archaeological digs.

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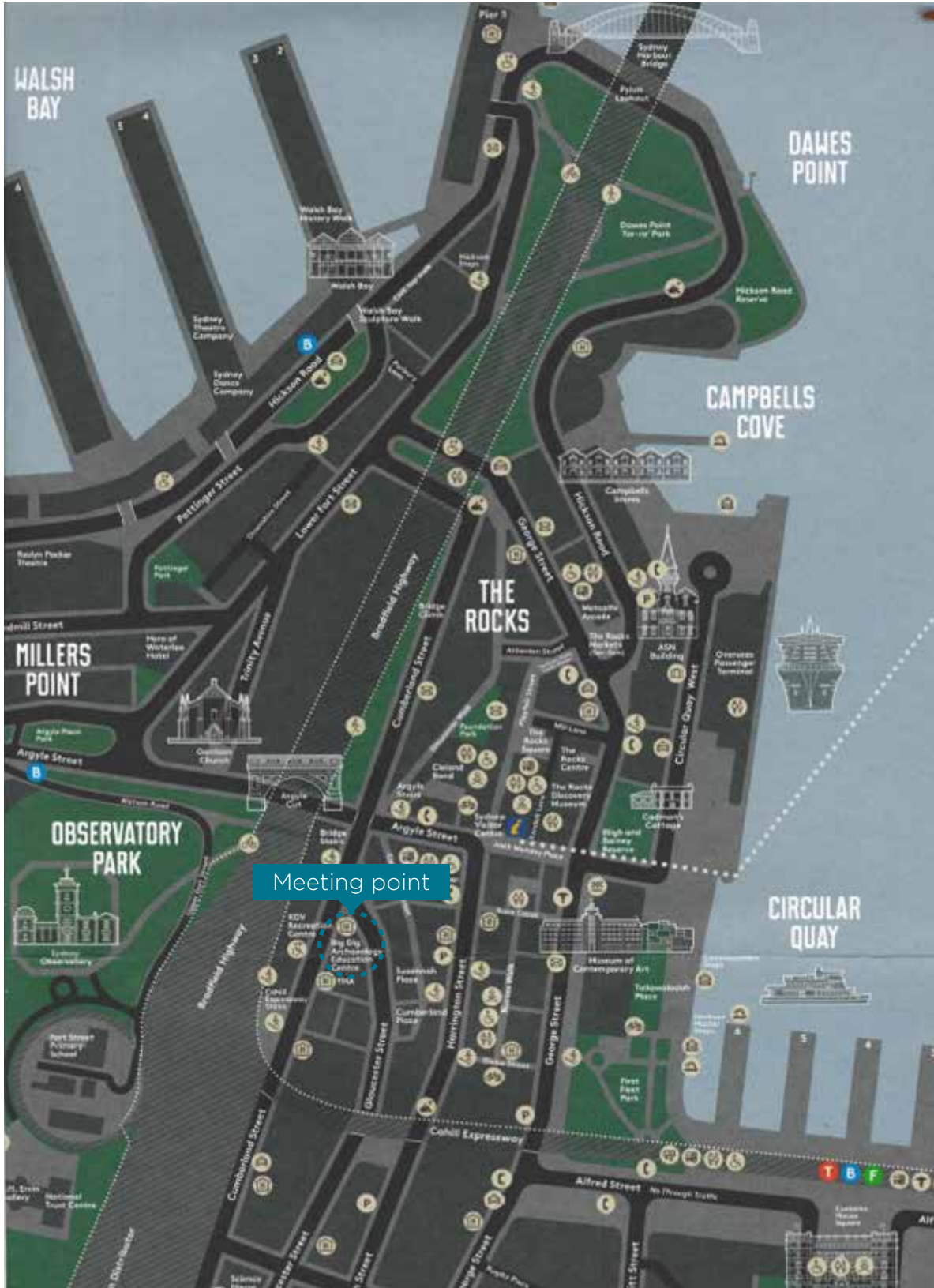
Websites

Information about The Rocks	www.therocks.com
The Rocks Discovery Museum	www.therocks.com/shop/the-rocks-discovery-museum
City of Sydney Council	www.cityofsydney.nsw.gov.au
Information on Aboriginal Sydney	www.sydneybarani.com.au
National Library of Australia	www.nla.gov.au
NSW Heritage Office	www.heritage.nsw.gov.au
NSW Government (homepage)	www.nsw.gov.au
State Library of NSW	www.sl.nsw.gov.au
State Records Office	www.records.nsw.gov.au
Property NSW	www.dpie.nsw.gov.au/housing-and-property/place-management-nsw/the-rocks
Teaching Heritage	www.teachingheritage.nsw.edu.au
Sydney Learning Adventures	www.sydneylearningadventures.com
Australian Curriculum	www.australiancurriculum.edu.au
Cumberland Street Dig Site	www.shfa.nsw.gov.au/sydney-About_us-Heritage_role-Heritage_and_Conservation_register.htm%26objectid%3d159

Map of The Rocks

Meeting point:

The Big Dig Education Centre, 110 Cumberland Street, The Rocks NSW 2000



Contact us

Your Booking

If you have any questions regarding your booking, please contact Sydney Learning Adventures on (02) 9240 8552 or email tours@property.nsw.gov.au.

The Rocks Discovery Museum

Address:

2-8 Kendall Lane, The Rocks NSW 2000

Trading hours:

10:00am - 5:00pm

Entry is free

Booking essential for self-guided tours

Recommended time allowance for self-guided tours:

30 min for Stages 1 - 3, 45 min for Stages 4 - 6

Contact details:

(02) 9240 8680, therocksdiscoverymuseum@property.nsw.gov.au

Sydney Harbour YHA

Address:

110 Cumberland Street, The Rocks NSW 2000

Contact details:

(02) 8272 0900, sydneyharbour@yha.com.au

Website:

www.yha.com.au/hostels/nsw/sydney-surrounds/sydney-harbour/

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www.sydneylearningadventures.com