

Alexandria Canal

Field Worksheet – Teacher answers and instructions

This is a program you can deliver yourself at a public site linked to a Sydney Water project.

Before taking your students on an excursion please complete your own risk assessment of the site and contact the relevant council to ensure the closest public toilets are available for your students to use on the day.

This program has supporting resources for the classroom

- Lesson plans – linked to syllabus
- History of Alexandria Canal PowerPoint presentation with student's questions, teacher delivery notes, image sources and online links
- Two classroom worksheets

Stage 4 – Water in the World		Sydney WATER
Teacher lesson plan – Alexandra Canal self-guide excursion		
The value of water - investigate the economic, cultural, spiritual and aesthetic values of water for people, including Aboriginal and Torres Strait Islander Peoples and/or peoples of the Asia region, for example: - description of the ways water is used by people eg. agricultural, commercial, industrial and recreational uses - discussion of variations in people's perceptions about the value of water eg. economic versus aesthetic		Class group: Time: Suggestion 3-4 x 60min class lessons - fieldwork 2-3 hours
Outcomes - explains how interactions and connections between people, places and environments result in change GE4-3 - discusses management of places and environments for their sustainability GE4-5 - acquires and processes geographical information by selecting and using geographical tools for inquiry GE4-7 - communicates geographical information using a variety of strategies GE4-8		Geographical concepts - Place: the significance of places and what they are like - Environment: the significance of the environment in human life, and the important interrelationships between humans and the environment - Interconnection: no object of geographical study can be viewed in isolation - Sustainability: the capacity of the environment to continue to support our lives and the lives of other living creatures into the future - Change: explaining geographical phenomena by investigating how they have developed over time
Geographical enquiry skills Acquiring geographical information - collect, select and record relevant geographical data and information, using ethical protocols, from appropriate primary data and secondary information sources Processing geographical information - evaluate information sources for their reliability and usefulness - represent data in a range of appropriate forms, with and without the use of digital and spatial technologies - apply geographical concepts to draw conclusions based on the analysis of the data and information collected Communicating geographical information - present findings, arguments and ideas in a range of communication forms selected to suit a particular audience and purpose; using geographical terminology and digital technologies as appropriate - reflect on their learning to propose individual and collective action in response to a contemporary geographical challenge, taking account of environmental, economic and social considerations, and predict the expected outcomes of their proposal		Geographical tools Maps – M - maps to identify direction, scale and distance Fieldwork – F - observing, measuring, collecting and recording data, developing and conducting surveys and interviews Spatial technologies – ST - satellite images, global positioning systems (GPS), geographic information systems (GIS) Visual representations – VR - photos, aerial photos, illustrations, annotated diagrams, multimedia, field sketches, web tools

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Activity 1 - Sample answers

Activity 1: Where is Alexandra Canal and what will we see there?

Before you start the excursion, label on the map below what you think you will see.

- What evidence can you see about the way the site is used by people?



Activity 1 – Teacher notes

Aim of activity	Identify features that demonstrate the significance of places and factors influencing people's perceptions of places. Students will develop geographically significant questions and plan an inquiry, using appropriate geographical methodologies and concepts with the use of satellite images.
Teacher delivery notes	• Use this activity with lesson one from the lesson plan for this site to plot where to investigate and hypothesise investigation outcomes • The image on the worksheet is from <i>Nearmap</i>. However, Google will work just as well for you and your students. - Look up Tempe Reserve to find this location - Get the students to zoom in and take a closer look to identify the landscape features and human influences in the area. • The PowerPoint presentation for this site will help understand the changes over time that have led to the shape of this location today.
Questions to get students thinking	• Why is there a path along the water? • Describe the shape of the waterway around Tempe Reserve • Why is it shaped like this? • What activities do you think people might do here?
Resources links	Google map locations of Sydney Water Education Self Guide sites - https://www.google.com/maps/d/edit?hl=en&mid=1sKakxJ3f5LEo-ZmC6KXBxOwo5fh_daPp&ll=33.934785504486705%2C151.1492788713623&z=15
Notes	

Activity 2 and 3 - Sample answers

Activity 2: Recording your observations – parks and gardens

Complete this check list of your observations.

Rate the way each feature has a positive or negative impact on the enjoyment of the site.

Item and description	details	Give a rating (1 Negative 5 positive)
Someone walking, running or riding	exercise - running dog walking relaxing walk	✓
Somewhere to sit	What might someone on this seat be doing? Look at the view, resting or something else? looking at view having lunch	✓
Evidence of animals	Describe what you see bird poo, chirping bees bird drinking water Use an ID chart or app to name some of them magpie magpie seagull	✓
Litter	Make a tally of what you see Plastic bottles: 11 Plastic bags, food wrappers: 11 Glass and metal: 11 Paper and cardboard: 11 Other litter: 11 foam + wire	✓
Vegetation types	Use an ID chart or app to name some of them bottlebrush eucalyptus bottle mangroves	✓

Activity 3: Recording your observations – water and waters edge

Complete this check list of your observations.

Rate the way each feature has a positive or negative impact on the enjoyment of the site.

Item and description	details	Give a rating (1 Negative 5 positive)
Someone on or near the water – looking, fishing, boat, kayak	Why were they doing this here? one guy paddle boarding	✓
Tide level	Is it high or low tide? How do you know? low - rocks exposed	✓
Water quality – observation only	- Is the water clear? kind of - Does the area near the water smell? NO - Is anything living in the water (animals or plants)? oysters mangroves	✓
Litter	Make a tally of what you see Plastic bottles: 11 Plastic bags, food wrappers: 1 Glass and metal: 1 Paper and cardboard: 1 Other litter: 1 Shopping trolley	✓
Modifications	This is not a natural waterway. What can you see as evidence of this? Brick walls along edge - straight square shape	✓

What's your overall evaluation of this place? Overall rating 3.9
There's some rubbish but there are people enjoying the area. Overall it's a nice park overlooking the water

Activity 2 and 3 – Teacher notes

Aim of activity	By observing and conducting surveys, students can record relevant geographical data and information, using ethical protocols, from appropriate primary data. This information will identify the significance of the effect of human activities on natural and human environments.
Teacher delivery notes	Use this activity to complete a site evaluation for the landscape and waterway – looking at uses of the space by people, and animals, vegetation, litter, environmental quality (observation) and identify human modifications. You may like to have the students develop their own participant observation survey. You can use freely available online ID resources to find out what plants and animals are on the site.
Questions to get students thinking	• What are some other ways we could record this information? • What does it tell us if we see lots of animal evidence in the area? • How can we assess the value of the waterway by watching how people look at it? • How can the amount of litter in a place change our opinion about it?
Resources links	Participant observation surveys - https://www.deakin.edu.au/_data/assets/pdf_file/0004/681025/Participant-observation.pdf Plant and animal ID https://www.environment.nsw.gov.au/questions/animal-identification https://www.ala.org.au/faq/species-identification/ https://australianmuseum.net.au/birds-in-your-backyards http://www.abc.net.au/science/articles/2007/09/26/2044094.htm
My notes	

Activity 4 - Sample answers

Activity 4: Field sketch

There are lots of high rise apartment buildings being developed in the area.

All of them are looking over the water.
Why?

enjoyment + people pay more for water views

1. Find a spot on your walk that looks over the water.
2. Complete a field sketch as described below and label the water features on this sketch that make it a good choice for an apartment.



This image is from point C marked on the image on page 1

Field sketch	
Background	apartment
Middle ground	tree water rock wall netting
Foreground	grassy plants

Activity 4 – Teacher notes

Aim of activity	The aim of a field sketch at this site is to identify the significance of location and ways people organise and manage spaces that we live in. Students observe and recording data with visual representations, describing the diverse features and characteristics places and environments.
Teacher delivery notes	• Most of the text books currently published offer in text or online field sketch instructions. • First thing to remind students is that you do not have to be an artist to do a field sketch • There are many online methods for creating an annotated sketch. • Please note that simply taking a photo is not the same as making notes about what you see at the time and place of a sketch. Students can look back on field sketch with notes and recall more than an image.
Questions to get students thinking	• What are some other ways we could record this information? • Why does real estate cost more with a water view? • Why do people like living close to the water?
Resources links	Field sketch https://www.geogspace.edu.au/verve/resources/2.1.2.3_1_field_sketching.pdf http://lrrpublic.cli.det.nsw.edu.au/lrrSecure/Sites/Web/about_fieldwork/lo/Observation/other/Createsketch.htm
My notes	

Activity 5 - Sample answers

Activity 5: Changing values

From the bridge (point B marked on the image on page 1), look both ways at the banks of the canal. Using the photos provided, note the evidence you see of human uses of this waterway over time.

* no pathway along old cement wall but new habitat wall has pathway, trees, seating and gardens

Which direction you are facing? South



Which direction you are facing? North



Activity 5 – Teacher notes

Aim of activity	Using annotated photographs allows students to explain geographical phenomena of changes over time through natural and human geographical processes. They can also investigate the effect of management strategies in reducing the impact of natural and human geographical processes. By using this method students are observing and recording data to help explain how interactions and connections between people, places and environments result in change.
Teacher delivery notes	• The site for this activity is marked on the satellite image from page one of the student worksheet • Students ability to complete this activity will be assisted by doing the PowerPoint support lesson before coming on site.
Questions to get students thinking	• What are some other ways we could record this information? • Can you see any: - natural landscape evidence from when it was called Sheas Creek? - industrial build evidence from the time it was used for transport? - evidence of use as a stormwater drain? - evidence to show today's value of this waterway?
Resources links	Annotated photos https://serc.carleton.edu/eslabs/climate/2a.html
My notes	

Activity 6 - Sample answers

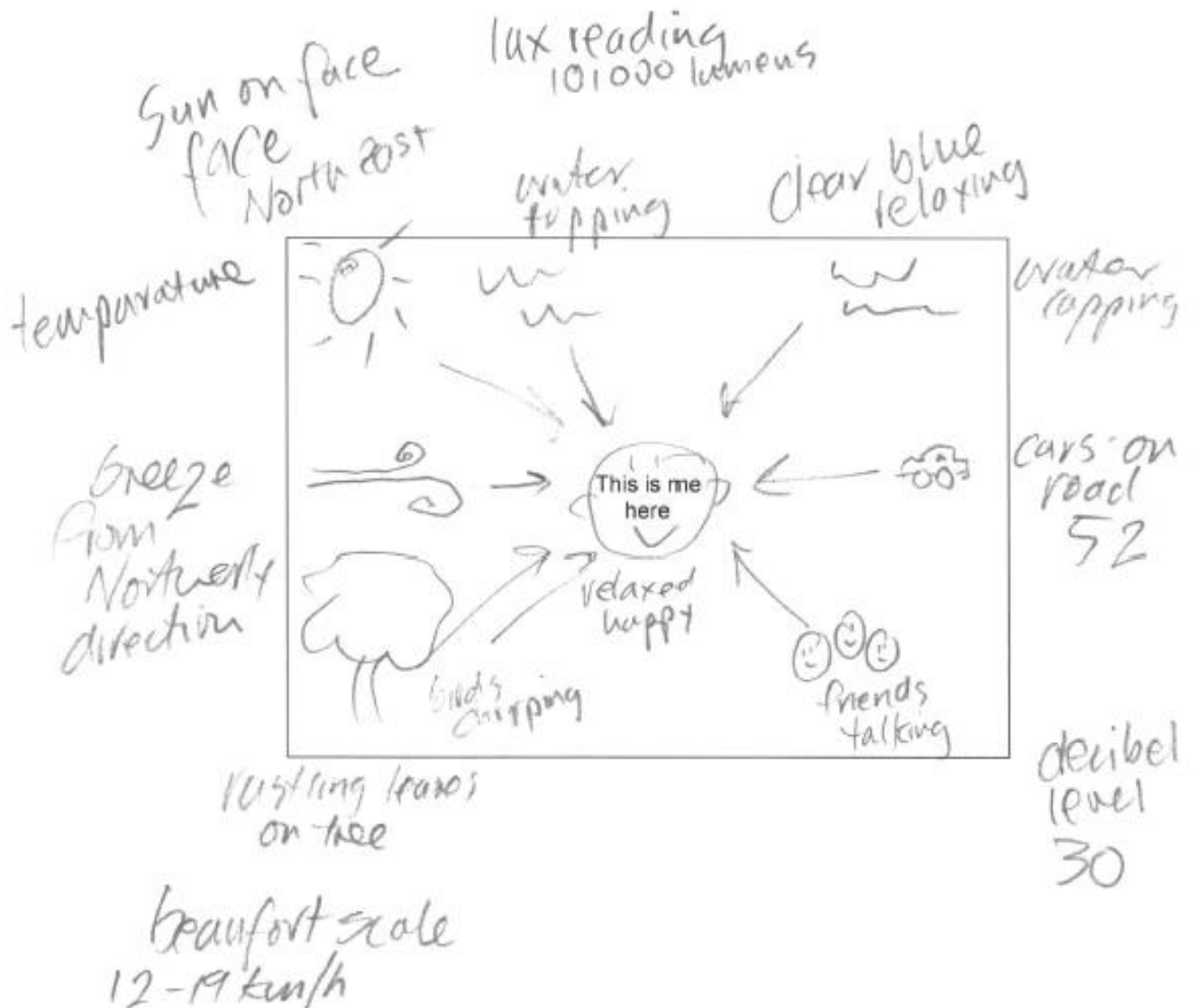
Activity 6: Sensory mapping

Maps are not just about direction, landscapes and buildings. You can draw your own map to describe a site in many ways.

Stop at the water edge at point A (marked on the image on page 1).

Use symbols and words for the following:

1. Listen... what noises do you hear and what directions did it come from?
2. Feel... is the sun on your face? is the wind in your hair? What other things can you feel?
3. Emotion.... Are you happy? Content? Annoyed?
4. Use a word to describe the water you can see at this spot



Activity 6 – Teacher notes

Aim of activity	The aim of sensory mapping is to use various senses to map experiences of an area. This method allows students to how people are affected by the environment and present is as an alternative form of communication.
Teacher delivery notes	- You may like to use an online guide before going into the field. It is good practice to go into the playground to try this first. - You can support thoughts and feelings of sensory mapping by recording atmospheric readings as well, such as wind speed, humidity, sound decibel reading or light levels. - You can use equipment like a lux meter, an anemometer and a decibel meter, or you can use - mobile phone apps and attachments or - scale diagrams and make an estimate. Links provided below.
Questions to get students thinking	- What role does water play in the way you're feeling? - How important are your other senses when thinking about what you like about a place? - Are there other ways you could record what you're thinking and feeling?
Resources links	Sensory mapping http://sensorymaps.com/ https://makingmaps.net/tag/sensory-mapping/ Scale diagrams for light, noise and wind https://www.2mcctv.com/blog/2011_09_15-cctv-lux-light-ratings/ https://www.faa.gov/regulations_policies/policy_guidance/noise/basics/ https://blog.metservice.com/BeaufortWindScale
My notes	

Evaluation

I liked...

The students liked....

If I deliver this again I would....

I need to tell Sydney Water to....

Email: education@sydneywater.com.au