

Factors that Shape Places (Blacktown) | Stage 3 | Geography

Summary	Duration
<p>This unit is written for Stage 3 "Factors that shape places". It is a Geographical Inquiry, enabling students to work through the 3 stages of inquiry; Acquiring, Processing and Communicating Geographical Information. Students use many Geographical Tools, with a particular focus on Fieldwork.</p> <p>The unit is well scaffolded to enable teachers to deliver engaging, quality content with support from Brewongle Environmental Education Centre.</p> <p>Students will conduct research and field assessments to understand the factors affecting the precinct of Blacktown Showground.</p>	<p>Sample term 7 weeks Detail: 7 lessons, 1 fieldwork day</p>

Key inquiry questions
<ul style="list-style-type: none"> ▪ How have people influenced the natural environment at Blacktown Showground? ▪ How does the natural environment, in particular rainfall, influence people and places at Blacktown Showground? ▪ How do people manage spaces within the Blacktown Showground Precinct?



















Outcomes
<p>Geography K-10</p> <ul style="list-style-type: none"> › GE3-1 describes the diverse features and characteristics of places and environments › GE3-2 explains interactions and connections between people, places and environments › GE3-3 compares and contrasts influences on the management of places and environments › GE3-4 acquires, processes and communicates geographical information using geographical tools for inquiry

Geographical concepts	Geographical inquiry skills	Geographical tools
<p>Place: <i>the significance of places and what they are like</i> e.g. characteristics of places.</p> <p>Space: <i>the significance of location and spatial distribution, and ways people organise and manage spaces that we live in</i> e.g.; how people organise and manage spaces in their local environment.</p> <p>Environment: <i>the significance of the environment on human life, and the important interrelationships between humans and the environment</i> e.g. how the environment influences people and places; how people influence the environment; the effect of natural disasters on the environment.</p> <p>Interconnection: <i>no object of geographical study can be viewed in isolation</i> e.g. how environments influence where people live; ways people influence the characteristics of their environments.</p> <p>Scale: <i>the way that geographical phenomena and problems can be</i></p>	<p>Acquiring geographical information</p> <ul style="list-style-type: none"> ▪ identify an issue or problem ▪ develop geographical questions to investigate the issue or problem ▪ collect primary geographical data ▪ gather geographical information from secondary sources ▪ record information <p>Processing geographical information</p> <ul style="list-style-type: none"> ▪ evaluate data and information for reliability and bias ▪ represent data and information in appropriate forms ▪ interpret data and information gathered ▪ analyse findings and results 	<p>Maps -</p> <ul style="list-style-type: none"> ▪ large-scale maps, small-scale maps, topographic maps, flowline maps ▪ maps to identify location, latitude, direction, distance, map references, spatial distributions and patterns <p>Fieldwork -</p> <ul style="list-style-type: none"> ▪ observing, measuring, collecting and recording data, conducting surveys and interviews ▪ fieldwork instruments such as measuring devices, maps, photographs, compasses, GPS <p>Graphs and statistics -</p> <ul style="list-style-type: none"> ▪ pictographs, data tables, column graphs, line graphs, climate graphs ▪ multiple graphs on a geographical theme

<p><i>examined at different spatial levels</i> e.g. environmental and human characteristics of places on local and regional scales; the effect of events on people and places locally and regionally.</p> <p>Sustainability: <i>the capacity of the environment to continue to support our lives and the lives of other living creatures into the future</i> e.g. extent of environmental change; environmental management practices; sustainability initiatives.</p> <p>Change: <i>explaining geographical phenomena by investigating how they have developed over time</i> e.g. changes to environmental and human characteristics of places.</p>	<ul style="list-style-type: none"> ▪ draw conclusions <p>Communicating geographical information</p> <ul style="list-style-type: none"> ▪ reflect on the findings of the investigation; what has been learned; the process and effectiveness of the inquiry 	<ul style="list-style-type: none"> ▪ statistics to find patterns <p>Spatial technologies -</p> <ul style="list-style-type: none"> ▪ virtual maps, satellite images, global positioning systems (GPS) <p>Visual representations -</p> <p>photographs, aerial photographs, illustrations, flow diagrams, annotated diagrams, multimedia, web tools.</p>
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Unit overview

As urban Sydney sprawls in all directions, the Blacktown Local Government Area is changing dramatically. This Geographical Inquiry will focus on the connections between people and nature at Blacktown Showground and its surrounds. Could the Fishing Bats return?

Content	Teaching, learning and assessment
<p>Stage 3 - Factors that Shape Places</p> <p>Environments shape places</p> <p>Students:</p> <ul style="list-style-type: none"> investigate how the natural environment influences people and places, for example: (ACHGK028) <ul style="list-style-type: none"> discussion of how climate influences the distribution of where people live M GS   comparison of how landforms influence where and how people live in Australia and another country M VR  <p>Factors that change environments</p> <p>Students:</p> <ul style="list-style-type: none"> investigate the ways people change the natural environment in Australia and another country, for example: (ACHGK026, ACHGK027) <ul style="list-style-type: none"> examination of how people, including Aboriginal and Torres Strait Islander Peoples, have influenced each country's environmental characteristics eg land clearing    <p>Humans shape places</p> <p>Students:</p> <ul style="list-style-type: none"> investigate how people influence places, for example: (ACHGK029) <ul style="list-style-type: none"> description of who organises and manages places eg local and state governments  identification of ways people influence places and contribute to sustainability eg roads and services, building development applications, local sustainability initiatives F ST   examination of a local planning issue; the different views about it and a possible action in response to it    <p>Bushfire hazard</p> <p>Students:</p> <ul style="list-style-type: none"> investigate the impact of ONE contemporary bushfire hazard in Australia, for example: (ACHGK030) <ul style="list-style-type: none"> identification of the location and extent of the disaster M ST  description of the impact of the disaster on natural vegetation and the damage caused to communities VR   examination of how people can prevent and minimise the effects of a bushfire    	<p>Student-centred inquiry into the contemporary land use and local planning issues</p> <p>Students investigate the natural and built environment around Blacktown Showground, including its historical and current uses.</p> <p>Note: This learning and teaching sequence will evolve into a geographical inquiry project which demonstrates different examples of how the natural environment has influenced people and places.</p> <p>ACQUIRING Geographical Information</p> <p>Pre-Visit Lessons</p> <p>Lesson 1:</p> <p>Students use Google Maps to find Blacktown Showground and answer the relevant questions in the Fieldwork booklet to familiarise themselves with the site.</p> <p>Questioning:</p> <ul style="list-style-type: none"> Clearly articulate the aim or purpose of the geographical investigation. The aim of the investigation is to research the factors that shape places. A particular focus is placed on the connections between people and the natural and built environment at Blacktown Showground precinct. Conduct a class brainstorming session to generate geographical questions to investigate and plan the inquiry in order to answer the inquiry question. This should be a student-centered brainstorming session, however teachers may need to assist students with creating the geographical questions. <i>Geographical questions will help students identify the information they need in order to understand possible ways in which the natural environment influence people and places.</i> For example: <ul style="list-style-type: none"> What are some examples of environmental factors that influence people and places? Why might people choose to live in a specific suburb or area? What is the research site? What are some land uses within the research site? <p>Lesson 2:</p> <p>As a class or in small groups (for example, allocate groups 1-5 with one of the geographical questions created last lesson), students:</p> <ul style="list-style-type: none"> Decide what sort of information is needed to support the geographical inquiry and where additional information can be sourced, e.g. local council and NSW Planning and Environment. Identify the geographical tools required to access information such as referencing a variety of maps, undertaking fieldwork, accessing data, and using spatial technologies and visual representations. Develop a system for recording information collected during the research process. In addition to the raw data to be collected in the Fieldwork booklet, students may create an excel spreadsheet and a Google Drive folder to share data and information easily. <p>Examples of data and information sources Pre Visit:</p> <p>The Stage 3 Geography page of Brewongle EEC's website will provide you with links to support student learning. These include an aerial photo, topographic map, vegetation maps, and information on local Darug and European history.</p> <ul style="list-style-type: none"> Source a range of maps to describe the location. . Research information on the traditional Aboriginal people of the area: how they managed the land, the fresh water sources, what they planted, harvested and hunted to meet their needs. Review photographs of the Blacktown area in the online support material and label the main geographical features (bush, houses, river, grass/farmland). Determine the role of government in planning, developing or managing the place provided in support material. <p>Lesson 3: Students use the secondary data above to conduct an historical investigation of the landuse over time at the Blacktown Showground precinct. This should include Indigenous landuse history as well as landuse since European settlement.</p>

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	<p>Fieldwork Activities</p> <p>Students travel to Blacktown Showground to conduct fieldwork. Fieldwork activities relate directly to the 3 Key Inquiry Questions of the unit and are facilitated by Brewongle EEC staff. Students will answer questions and insert data into their Fieldwork Booklets throughout the activities.</p> <p>Fieldwork Activity One: Rain and Water Sensitive Urban Design</p> <p>One thing that we cannot significantly change over time is rainfall. Students describe and evaluate how rainfall is used at the site. They investigate the water sensitive urban design (WSUD) of the site using a specifically designed iBook.</p> <p><i>Group discussion about how rainfall influences people and places at Blacktown, with a focus on water sensitive urban design.</i></p> <p>Fieldwork Activity Two: Habitat Assessment for Fishing Bat</p> <p>Students take a tour of the site and conduct a habitat assessment along the way:</p> <ul style="list-style-type: none"> ▪ Healthy Habitat Assessment; ▪ Measure air temperature and humidity; ▪ Record aspect using compasses; ▪ Survey bird species diversity; ▪ Conduct a Sound Map of natural and man-made sounds. <p>Students analyse historical photographs of the site where their quadrat survey is conducted. <i>Group discussion about how people have changed the site, extending to natural environment at Sackville North and the local Hawkesbury River Catchment.</i></p> <p>Fieldwork Activity Three: Fishing Bat Food Sources</p> <p>Students investigate biodiversity surveys in the constructed wetlands at Blacktown Showground, searching for appropriate food sources for the fishing bat. Students use dip nets and identification charts to identify waterbug species.</p> <p><i>Group discussion about aquatic biodiversity as an indicator for environmental health.</i></p> <p>Fieldwork Activity Four: "Black's Town" - Indigenous History of the site</p> <p><i>Blacktown has a strong Indigenous history. The creeks and waterways were important for Darug people for tens of thousands of years due to the resources they provided. Much of the history has been lost over time due partly to flooding, but also due to the impacts of early European settlement. Early settlers termed the area "Black's Town" due to the numerous Aboriginal people living there. This term was later shortened to "Blacktown" and made more formal as the name of the suburb in 1906.</i></p> <p>Students will learn about the resources available for Darug people at the site at Blacktown Showground, including food, medicine, shelter and tools.</p> <p>Post Visit Activities</p> <p>Lesson 1:</p> <ul style="list-style-type: none"> ▪ Source appropriate data and other statistical information relating to population growth and the natural environment in the Blacktown Local Government Area. Students may also research other local issues in the area, for example, the traffic and other transport issues, as well as population density and land use. ▪ Develop and conduct a survey of community members to ascertain their perceptions of the impact of population increase on our nature reserves (positive and negative). Include impacts on people, flora and fauna and water quality of the Hawkesbury River (where the water from the wetlands of Blacktown Showground flows to).

Content	Teaching, learning and assessment
	<p>PROCESSING Geographical Information</p> <p>Lesson 2:</p> <p>Below are some examples of geographical tools which students can use to collate and review the data and information collected and evaluate for its usefulness. Teachers or students may choose to use any number of these tools, which will then be included within the Documentary assessment task.</p> <ul style="list-style-type: none"> ▪ Using a topographic map or satellite image as a base map, locate Blacktown Showground and identify surrounding natural and built environmental features. ▪ Students collate data from their in-depth study into a table to summarise their findings. ▪ Create flowcharts to demonstrate understandings of the ways the environment influences people and places. ▪ Assemble and annotate photographs to provide a visual representation of the site. Analyse and label interconnections. ▪ Develop consequences charts to explain human impacts (positive and negative) on the natural environment. Show the impacts on Google Tour Builder. Use photos taken on the day to match parts of the tracks we walked. ▪ Use a T-chart to represent data on advantages and disadvantages of population increases in Blacktown Local Government Area. ▪ Construct a flow chart or concept map to explain the role of government, and other major stakeholders in sustainably developing Western Sydney and protecting our nature reserves. ▪ Design an infographic to educate the public about Fishing Bats and the need to protect their habitat. <p><i>Discussion: Does the information relate to the inquiry questions used to shape the investigation?</i></p> <p>Assessment Task: COMMUNICATING Geographical Information</p> <p>Lessons 3/4:</p> <p>Students work in small groups to develop a 5-6 minute documentary to evaluate the benefits of the Blacktown Showground Precinct being re-developed into its current state. Describe one environmental benefit and one community benefit of the current site.</p> <p>The documentary should include:</p> <ul style="list-style-type: none"> ▪ A clear description of the various land uses around Blacktown Showground and an evaluation of some of the consequences for the environment; ▪ Tools to support your information, such as maps, satellite images, graphs, statistics, flowcharts, labelled photographs, diagrams, illustrations/sketches and other labelled visual representations; ▪ Information on the traditional use of the place by Darug people; ▪ Information on the types of land use by early European settlers; ▪ A description of the role of government in organising or managing the place as well as the perspectives of other stakeholders, for example developers, conservationists, recreationists and local residents; ▪ An evaluation of the potential for Fishing Bats to return to the local area; <p>A description and justification of a course of action to increase the likelihood for Fishing Bats to return to Blacktown Showground.</p>

Assessment overview

Many of the activities require students to demonstrate their learning. These activities, in addition with the students' Fieldwork Booklets, can be used to assess student progress at various stages throughout the inquiry process.

The final task of the unit, the documentary, is designed as an assessment task. Through this, students will demonstrate their understanding of the unit including the Key Inquiry Questions and the Fieldwork. Please see attached Assessment Rubric.

Syllabus images and equations

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