INTRODUCTION

The National Sports Museum (NSM) is located at the Melbourne Cricket Ground and houses a collection of sporting heritage artefacts and information with many interactive displays. A visit to the National Sports Museum provides many opportunities for primary students to investigate and apply geographical concepts.

AusVELS Geography curriculum

The AusVELS Geography curriculum outlines seven concepts which help students to develop a geographical understanding. These are Space, Place, Interconnection, Change, Environment, Scale and Sustainability. By applying these concepts, students learn to think geographically. These worksheets are appropriate for students applying the concepts at Levels 3, 4, 5 and 6.

In addition, students have the opportunity to investigate Key Geographical Knowledge and Understanding and Key Inquiry and Skills in the Level 3, 4, 5 and 6 curriculum as follows:

<table>
<thead>
<tr>
<th>Level</th>
<th>Topic</th>
<th>Key Geographical Knowledge and Understanding</th>
<th>Key Inquiry and Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Places are both similar and different</td>
<td>The main climates of the world and the similarities and differences between the climates of different places (ACHGK017)</td>
<td>Collect relevant geographical data and information, for example, by observing by interviewing, conducting surveys, measuring, or from sources such as maps, photographs, satellite images, the media and the internet (ACHGS020)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The similarities and differences in individuals’ and groups’ feelings and perceptions about places, and how they influence views about the protection of these places (ACHGK018)</td>
<td>Record and represent data by constructing tables and graphs (ACHGS021)</td>
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<tr>
<td></td>
<td></td>
<td>The similarities and differences between places in terms of their type of settlement, demographic characteristics and the lives of the people who live there (ACHGK019)</td>
<td>Represent the location of places and their features by constructing maps of appropriate scale that conform to cartographic conventions including scale, legend, title and north point, and describe their location using simple grid references, compass direction and distance (ACHGS022)</td>
</tr>
<tr>
<td>4</td>
<td>The Earth’s environment sustains all life</td>
<td>The importance of environments to animals and people, and different views on how they can be protected (ACHGK022)</td>
<td>Collect relevant geographical data and information, for example, by observing by interviewing, conducting surveys, measuring, or from sources such as maps, photographs, satellite images, the media and the internet (ACHGS027)</td>
</tr>
<tr>
<td>5</td>
<td>Factors that shape the human and environmental characteristics of places</td>
<td>The influence of the environment on the human characteristics of a place (ACHGK028)</td>
<td>Record and represent data in different forms, for example, maps, plans, graphs, tables, sketches and diagrams (ACHGS035)</td>
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<tr>
<td></td>
<td>The influence people have on the human characteristics of places and the management of spaces within them (ACHGK029)</td>
<td>Represent the location and features of places and different types of geographical information by constructing large scale and small scale maps that conform to cartographic conventions, including border, source, scale, legend, title and north point, using spatial technologies as appropriate (ACHGS036)</td>
<td>Interpret geographical maps, data and other information, using digital and spatial technologies as appropriate, to identify and describe spatial distributions, patterns and trends, and infer relationships to suggest conclusions (ACHGS037)</td>
</tr>
<tr>
<td>6</td>
<td>Significant events that connect people and places throughout the world (ACHGK034)</td>
<td>Record and represent data in different forms, for example, maps, plans, graphs, tables, sketches and diagrams (ACHGS042)</td>
<td>Represent the location and features of places and different types of geographical information by constructing large scale and small scale maps that conform to cartographic conventions including border, source, scale, legend, title and north point, using spatial technologies as appropriate (ACHGS043)</td>
</tr>
<tr>
<td></td>
<td>The various connections Australia has with other countries and how these connections change people and places (ACHGK035)</td>
<td>Interpret geographical maps, data and other information using digital and spatial technologies as appropriate, to identify and describe spatial distributions, patterns and trends, and infer relationships to suggest conclusions (ACHGS044)</td>
<td></td>
</tr>
</tbody>
</table>
Student activities

Six worksheets have been designed for students to complete prior to the National Sports Museum visit. There are 10 worksheets that can be completed at the NSM relating directly to the displayed artefacts. One worksheet is designed to be completed after the museum visit.

Teachers are encouraged to choose which worksheets best suit their students and year level. When at the NSM, it is suggested that teachers allocate one or two activities to pairs or small groups of students to complete. This allows students to share in the gathering of information that can be discussed and shared back at school. It also allows students time to visit other exhibits during their visit.

Each of the worksheets is designed to focus on one or two geographical concepts. These are summarised below.

<table>
<thead>
<tr>
<th>Worksheet Number</th>
<th>Title</th>
<th>Year level</th>
<th>Concept/s</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Before the visit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet 1</td>
<td>Where is the “G”?</td>
<td>3-4</td>
<td>Interconnection, Scale</td>
</tr>
<tr>
<td>Worksheet 2</td>
<td>Where have the Olympic Games been staged?</td>
<td>5-6</td>
<td>Interconnection, Scale</td>
</tr>
<tr>
<td>Worksheet 3</td>
<td>Scarred for Life</td>
<td>3-4</td>
<td>Place</td>
</tr>
<tr>
<td>Worksheet 4</td>
<td>Changes over time</td>
<td>5-6</td>
<td>Change, Place</td>
</tr>
<tr>
<td>Worksheet 5</td>
<td>A sustainable MCG</td>
<td>5-6</td>
<td>Environment, Sustainability</td>
</tr>
<tr>
<td>Worksheet 6</td>
<td>Whatever the weather</td>
<td>5-6</td>
<td>Environment</td>
</tr>
<tr>
<td></td>
<td><strong>During the visit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet 1</td>
<td>Change at the MCG</td>
<td>5-6</td>
<td>Change</td>
</tr>
<tr>
<td>Worksheet 2</td>
<td>How’s The Weather Today</td>
<td>3-4 and 5-6</td>
<td>Environment</td>
</tr>
<tr>
<td>Worksheet 3</td>
<td>Out and about around the ‘G’</td>
<td>5-6</td>
<td>Environment</td>
</tr>
<tr>
<td>Worksheet 4</td>
<td>A sustainable MCG</td>
<td>5-6</td>
<td>Sustainability</td>
</tr>
<tr>
<td>Worksheet 5</td>
<td>Mini MCG</td>
<td>3-4 and 5-6</td>
<td>Scale, Change</td>
</tr>
<tr>
<td>Worksheet 6</td>
<td>Surveying the crowd</td>
<td>5-6</td>
<td>Place</td>
</tr>
<tr>
<td>Worksheet 7</td>
<td>Faster, higher, stronger</td>
<td>5-6</td>
<td>Place</td>
</tr>
<tr>
<td>Worksheet 8</td>
<td>Light Up My World</td>
<td>3-4 and 5-6</td>
<td>Place</td>
</tr>
<tr>
<td>Worksheet 9</td>
<td>AFL – Australia’s game</td>
<td>3-4 and 5-6</td>
<td>Change, Space</td>
</tr>
<tr>
<td>Worksheet 10</td>
<td>My Gold, Silver and Bronze</td>
<td>3-4 and 5-6</td>
<td>Space</td>
</tr>
<tr>
<td></td>
<td><strong>After the visit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worksheet 1</td>
<td>My Space at the NSM</td>
<td>3-4 and 5-6</td>
<td>Space</td>
</tr>
</tbody>
</table>

Teacher notes

The activities are designed to focus on one or two concepts. The following provides specific teacher notes for each worksheet.
BEFORE THE VISIT
WHERE IS THE “G”?

Level: Year 3–4

AusVels Geography links

Concepts for developing geographical understanding: **INTERCONNECTION, SCALE**

Interpret geographical maps and data to identify and describe distributions and patterns and draw conclusions (ACHGS023) and (ACHGS030)

Present findings in a range of communication forms, for example, written, oral, digital, graphic, tabular, and visual, and use geographical terminology (ACHGS024) and (ACHGS031)

**Aim**

Students familiarise themselves with the location of inner-city suburbs of Melbourne and the location of the National Sports Museum and the MCG.

**Activities**

1. Students can work individually, in pairs or as a class to complete these activities. Teachers are encouraged to show the maps on a whiteboard to help students interpret what they are seeing.

2. Print the following maps for students to use. Alternatively, use the links to bring the maps up on a whiteboard and conduct discussions to help students to answer the questions.

   a. Google Map image of inner city Melbourne and surrounds

The second map is an online interactive one. If opened on a whiteboards, teachers can zoom in and out to show different features.

3. Hand out Worksheet 1 to the students – Where is the “G”? 
Help the class to read the maps. Use this as an opportunity to show where North, South, East and West are on the map. Ask students to draw a compass rose on their printed map.

4. Use the map of Melbourne and its surrounding suburbs to:
   - highlight in yellow the names of suburbs that you recognise
   - highlight in green any parks you can see
   - highlight in blue any body of water that you can see (include the Yarra River, Albert Park Lake, Hobsons Bay).

5. Help students to locate Yarra Park and the MCG and sporting precinct on the map – they can colour this red.

6. There are many transport interconnections around the MCG / National Sports Museum. Help the students to name the main roads that surround the MCG. What are some public transport options to get to the MCG?

7. Demonstrate the use of rulers and scale to measure distance. Students use the scale on the map to find the straight line distance of the MCG to (the centre of):
   - Fitzroy Gardens
   - Federation Square
   - Birrarung Marr
   - Etihad Stadium.
8. Help students identify the symbols used in the map legend to show tram routes. They now make up their own symbol to show trams and trains.

9. Use an electronic whiteboard or have access to computers/mobile devices to go to http://www.maps-streetview.com/Australia/Melbourne/satelliteview.php to see a satellite image of Melbourne.
   a. Compare the map and the satellite image - note three differences between them:
   ........................................................................................................................................................................
   ........................................................................................................................................................................
   ........................................................................................................................................................................
   b. Which map would you prefer to use and why?
   c. Use Street View to find the entrance to the National Sports Museum. Create a symbol to record the entrance location on one of your maps and add the symbol to the legend.

Resources

access to whiteboard and / or computers for Internet links
street directory
coloured pencils
copies of maps.
Level: Year 5-6

AusVels Geography links

Concepts for developing geographical understanding: **INTERCONNECTION, SCALE**

The influence people have on the human characteristics of places and the management of spaces within them (ACHGK029)

Record and represent data in different forms, for example, maps, plans, graphs, tables, sketches and diagrams (ACHGS035)

Interpret geographical maps, data and other information, using digital and spatial technologies as appropriate, to identify and describe spatial distributions, patterns and trends, and infer relationships to suggest conclusions (ACHGS037)

**Aim**

Students use Google Earth/Maps to locate places around their home and Melbourne. They navigate the site to find directions and modes of transport.

**Activities**

1. It is useful to show students the different ways they can look at maps to find locations and measure distances and use scale. Show students a digital map (e.g. Google Earth/Maps https://www.google.com.au/maps), a street directory and an atlas to find the same location. Discuss with them the advantages and disadvantages of each method. Students can then choose one or more to complete the following:

   a. How far is the National Sports Museum from your school or home? How long would it take to drive, walk or take public transport? For the second part, students can use Directions in Google Maps. They could also take a screen shot of their map and add it to their worksheet.

      ________________________  ________________________ (by car / public transport / walking)

2. Depending on where you live, which form of public transport (train, bus, tram) would be the best way for you to travel to the MCG and National Sports Museum? This activity requires students to gain an overall understanding of the public transport available to them. Once again, using Google Maps or an App can help them decide the route and the type of transport to be used.

3. Print a copy of Google Maps which includes the MCG – one copy for each student – to complete the next activity. Students will need to use a map scale and a ruler / piece of string to measure the distance of their chosen walking route.

   Using a copy of the map showing the MCG and nearest train stations, mark the route you would walk to get to the entrance of the National Sports Museum. How far would the walk be?

4. How long would it take to walk from:

   a. Flinders Street Station to the MCG? ________________________ minutes

   b. Richmond / Jolimont Stations ________________________ minutes

5. It would be useful to show this next activity on a whiteboard and complete it as a class. Using Google Maps again, zoom into the MCG. Go to the SEARCH drop down box named Traffic. Use the traffic selection day and time to find which locations and times have the fastest and slowest traffic in the streets around the Nationals Sports Museum / MCG: Circle fastest in green and the slowest in brown. Add a symbol to your legend.

   Once you have shown the students how to do this, get them to experiment with different days and times to see the changes that take place.
6. Use the aerial satellite photo to see what natural features can be found around the MCG.
   (i) **e.g. Yarra River**  
   (ii) **e.g. Fitzroy Gardens**  
   (iii) **e.g. trees**

7. What other sporting activities / facilities are found in this area?
   (i) **Rod Laver Arena**  
   (ii) **AAMI Park (soccer/rugby league/rugby union)**  
   (iii) **Punt Road Oval**

**Resources**

- access to whiteboard and / or computers for Internet links
- street directory
- coloured pencils
- copies of maps.
Level: Year 3-4

AusVels links

Concepts for developing geographical understanding: PLACE

The similarities and differences in individuals’ and groups’ feelings and perceptions about places, and how they influence views about the protection of these places (ACHGK018)

The custodial responsibility Aboriginal and Torres Strait Islander Peoples have for Country/Place, and how this influences their past and present views about the use of resources (ACHGK023)

Aim

Students investigate how the local Indigenous people may have used the land and natural resources near the MCG and the meaning of this place for them.

Activities

1. On your way to the National Sports Museum, visit the scar tree located near a footpath running between the MCG and the Richmond ground. It is a dead tree between 200-800 years old. Sit around the tree and ask the students to imagine what it would have been like to live in this area before white people came.

   “The City of Melbourne is located on the traditional land of the Kulin Nation. This special place is now known by its European name of Melbourne. Today, Melbourne is one of the great multicultural cities of the world and is a significant meeting place. For the Wurundjeri, Boonerwrun, Taungurung, Diajawurrung and the Wathaurung which make up the Kulin Nation, Melbourne has always been an important meeting place and location for events of social, educational, sporting and cultural significance.”

   Source: www.melbourne.vic.gov.au/AboutMelbourne/History/Pages/HistoryofaCity.aspx

The plaque on the scar tree reads:

   The scar on this tree was created when Aboriginal people removed bark to make canoes, shields, food and water containers, string, baby carriers and other items.

   Please respect this site. It is important to the Wurundjeri people as traditional custodians of the land and is part of the heritage of all Australians.

What meaning do you think this scar tree has for the local Indigenous people of Melbourne?
2. How do you think the traditional land owners would have used this land prior to 1835 when the first Europeans came to this area?

**Building shelters/huts, fishing, hunting, ceremonies**

3. The Canoe Tree or Scarred Tree can be found in Yarra Park, 400m from the National Sports Museum. The scar on the tree was created prior to 1853 when Aboriginal people removed bark to make items for their everyday use.

Unscramble the letters to see what the bark was used for by the original inhabitants of this area:

- Ocaens: canoes
- lhesdsi: shield
- dfoo and twrae: food and water containers
- instrg: string
- ybba rrciraes: baby carriers

4. What else do you think the Aboriginal people could use the bark for?

**Assorted answers could include: fire, sleeping mats, digging tools**

5. A sense of place. Discuss this phrase with your students. What sense of place does the MCG hold for them and their families? How is this different from the sense of place that Indigenous people would have of the same area?

**Resources**

Photo of the scar tree
Level: Year 5-6

AusVels Geography links

Concepts for developing geographical understanding: **PLACE, CHANGE**

The influence people have on the human characteristics of places and the management of spaces within them (ACHGK029)

Record and represent data in different forms, for example, maps, plans, graphs, tables, sketches and diagrams (ACHGS035) and (ACHGS042)

Interpret geographical maps, data and other information, using digital and spatial technologies as appropriate, to identify and describe spatial distributions, patterns and trends, and infer relationships to suggest conclusions (ACHGS037) and (ACHGS044)

**Aim**

To use the Melway street directory to show how the area surrounding the MCG has changed over time.

**Activities**

Students can work individually or in pairs on this activity. They will use grid references to describe the location of different places and features and become familiar with using a legend to locate places on a map.

1. Street directories are a great way to observe change over time. Melway has placed all its old editions online. This activity asks students to compare a 1966 map of the MCG and surrounds with a current map. As students will need to compare directly, teachers can either print a copy of the map from page 44 (from 1966 and current) or can display them on a projector on a whiteboard. The larger the maps, the easier it will be for students to read and note differences.

2. The following is a copy of the map legend and symbols. Provide one copy for each individual or pair of students. Spend some time helping them to interpret the symbols. Use the key to map symbols to see any of the symbols appear on a current map of this area.

   You should also show the students how to give simple grid references for locations i.e. the letter followed by a number. The grid reference for the MCG is B10.

   **(Green for garden/park areas; Roads are orange and blue)**

   a. What are the most common symbols / colours used in the two maps showing the MCG and surrounds?

   b. Draw the symbols and colours for the following:

   - **Tram lines**
   - **Railway lines**
   - **Underground railway station**
   - **Above ground railway station**
c. Complete the following table by recording what feature is located at each grid reference.

<table>
<thead>
<tr>
<th>Grid reference</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>B9 / B10</td>
<td>MCG</td>
</tr>
<tr>
<td>B11</td>
<td>AAMI Park; Olympic Park</td>
</tr>
<tr>
<td>C10</td>
<td>Richmond Cricket Ground</td>
</tr>
<tr>
<td>D8</td>
<td>West Richmond Station</td>
</tr>
<tr>
<td>A10</td>
<td>Melbourne Park</td>
</tr>
</tbody>
</table>

d. Complete the following table by recording the grid reference for the following features:

<table>
<thead>
<tr>
<th>Grid reference</th>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>B9</td>
<td>Jolimont Station</td>
</tr>
<tr>
<td>C7</td>
<td>Powlett Reserve</td>
</tr>
<tr>
<td>D7</td>
<td>North Richmond Station</td>
</tr>
<tr>
<td>C11</td>
<td>Gosch’s Paddock</td>
</tr>
<tr>
<td>B11</td>
<td>Hisense Arena</td>
</tr>
</tbody>
</table>

3. Go to the following sites to access the maps:

Choose how you would like to make these maps available to your students. Before looking at the maps in detail, discuss in general terms how the maps are similar and different in their look. Students observe the two maps and identify the changes that have taken place by completing the following:

Compare the 1966 Melway map (first edition) with a current Melway map. How has the landscape surrounding the MCG changed over the years?

Describe which land use has remained the same?

List five differences that you notice. Provide a grid reference for each one.

1. 
2. 
3. 
4. 
5. 

Resources

Copy of 1966 Melway Map 44
Copy of map symbols
Copy of current Melway Map 44
KEY TO MAP SYMBOLS

- State Road Network Numbers
- National & Alternative Route Numbers
- Metropolitan Route Numbers
- Traffic Lights, Pedestrian Lights
- One-way Traffic
- Bridges under 4.6 metres clearance
- Police Stations
- Hospitals
- Fixed Speed & Red Light Cameras
- Petrol Stations
- Post Offices
- Public Telephones
- Places of Worship
- Hotels, Motels
- Restaurants
- Toilets
- Kindergartens, Preschool Centres
- Child Care Centres
- Community Houses, Neighbourhood Houses
- Libraries
- Halls
- Maternal & Child Health Centres
- Facility for Disabled People
- Right of Way
- Information Centres, Accredited Information Centres
- Lookouts
- Cliffs
- Transmission Line Pylons
- Shops, Shopping Centres
- Malls or Public Open Space
- Swimming Pools, Bowling Clubs, Tennis Courts
- Car Parks, Undercover Parking, Vehicle Entrance
- Disabled Motorist Parking Bays
- Bicycle Station
- Bicycle Tracks, Equestrian Trails
- Walking Tracks, Steps
- No Dogs, No Horses Permitted
- Features, Buildings, Pavilions
- Playgrounds, Barbecues
- Emergency Helicopter Landing Sites
- Public Mooring - 4 hour limit

- Tollways (CityLink Ph 13 26 29, Eastern Link Ph 13 54 65)
- Freeways (VicRoads), with emergency telephone & number
- Proposed Freeways (VicRoads)
- Primary State Arterial Roads (VicRoads), under construction with distances from Melbourne CBD km
- Secondary State Arterial Roads (VicRoads), under construction, proposed
- Major Roads (Local Council), under construction, proposed
- Collector Roads (Local Council), under construction, proposed
- Local Traffic Streets (Local Council), with Traffic Management devices
- Roads not fully trafficable (some roads proposed or unformed)
- Tracks, Four Wheel Drive access tracks
- Tramways, with stop numbers, route numbers, wheelchair accessible tram stops & terminus
- Railways, with distance from Rinders Street Station, number of car parking spaces and bicycle lockers available
- Underground Railway Lines & Stations
- Bus Routes, with route number, route direction arrow & route terminus
- Municipal Boundaries and Municipal Names
- Use as a guide only. The precise legal boundary may be along a property boundary, the centre of a road or creek.
- Metropolitan Fire Brigade & Country Fire Authority Boundary
- Suburb/Locality Boundaries
- Use as a guide only. The precise legal boundary may be along a property boundary, the centre of a road or creek.
- Suburb/Locality Names, Postcodes, Neighbourhood & local area Names
- Fruit Fly Exclusion Zone, shown on maps X918 to X910
- Recreation Reserves and Parks, with Sports Ground, Golf Courses
- Proposed Parks, Buildings, Shops
- Rivers and Creeks, with Footbridge, Jetty, Boat Launching Ramp
- Wetlands, Area Subject to inundation
- Mangroves, Beach Access Markers, Beaches, Marine National Parks & Sanctuaries, Rocks
- Direction & Straight Line Distance to Melbourne, Geelong

Monuments
Communications Tower
Bay Side City Council Car Park
Emergency Location Number
Emergency Beach Locations
Phillip Island maps 731-734
Emergency Markers (Dia 000)
Camping Access Markers
Vineyards or Wineries

North Point on all maps
is Grid North based on
VicGrid 94 projection
Magnetic North is 1°32′06″ East (2011)
Level: Year 5-6

AusVels Geography links

Concepts for developing geographical understanding: **ENVIRONMENT, SUSTAINABILITY**

The influence people have on the human characteristics of places and the management of spaces within them (ACHGK029)

Record and represent data in different forms, for example, maps, plans, graphs, tables, sketches and diagrams (ACHGS035) and (ACHGS042)

Interpret geographical maps, data and other information, using digital and spatial technologies as appropriate, to identify and describe spatial distributions, patterns and trends, and infer relationships to suggest conclusions (ACHGS037) and (ACHGS044)

**Aim**

To investigate and discuss how the MCG maintains its grounds and facilities through the use of sustainable methods.

**Activities**

The MCG is a large facility that caters for hundreds of thousands of people at events each year. Facilities people use include food, toilets and lighting. Sustainable practices over the years have reduced the environmental impact of the MCG use.

1. Decide if you want students to work alone or in small groups. Allocate one of the following topics for each group to research. Students will report their findings to the rest of the class – they should be encouraged to present their information in interesting ways.

   **Water recycling**

   Read about and watch the video about water recycling at the MCG at www.mcg.org.au/About-Us/Policies/Water-Recycling

   a. How large is the water recycling unit?

   b. What use is made of this water?

   c. Where is the unit located? Can you easily see it?

   d. Why is it underground?
Tree planting

Read about tree planting at the MCG at www.mcg.org.au/Whats-On/Latest-News/Yarra-Park-tree-planting

a. Why are some trees being removed?

b. What types of trees will be planted? Why?

c. How many trees will be planted? What change do you think these will make to the environment around the MCG?

d. Look at the map showing the proposed tree planting. Use direction (N, S, E, W) and numbers to describe where the planting will take place.

Energy and waste

Read about energy use and waste management at the MCG at http://www.mcg.org.au/about-us/policies/sustainability

a. What action is taken to try and reduce waste?

b. What is the last resort for getting rid of waste? Why do you think this is the last option?

c. List all the ways that energy use will be reduced at the MCG?
d. What savings are expected to be made in energy use once the system is complete?

Arena growth lights

Read about energy use and waste management at the MCG at http://authoring.mcc.org.au/sitecore/content/MCG/Website/The%20MCG%20Stadium/Facts%20and%20Figures/Grow%20Lights.aspx

a. What problem has been caused by the high northern stand?

b. How does the artificial lighting work? When is it needed?

c. List other stadia that use this system? (Find them all on Google Maps)

d. What do you think would happen if the grounds keepers did not use these devices to maintain the grass at the MCG?

2. Have groups report their findings to the class. Discuss why these activities are sustainable and how they improve the environment.

Resources

Access to the listed weblinks
Level: Year 5-6

AusVels Geography links

Concepts for developing geographical understanding: **ENVIRONMENT**

The influence of the environment on the human characteristics of a place (ACHGK028)

Record and represent data in different forms, for example, maps, plans, graphs, tables, sketches and diagrams (ACHGS035) and (ACHGS042)

Interpret geographical maps, data and other information, using digital and spatial technologies as appropriate, to identify and describe spatial distributions, patterns and trends, and infer relationships to suggest conclusions (ACHGS037) and (ACHGS044)

**Aim**

Students read and interpret temperature information and to draw a climograph for Melbourne.

**Activities**

A climograph is a graph drawn to show rainfall and temperature over one year. Watch the video on YouTube (www.youtube.com/watch?v=7l5uQQTqxz4). You can show this to your class.

You can also access excellent information about climate graphs here: [www.geogspace.edu.au/verve/_resources/2.3.2.2_2_climate_graphs.pdf](http://www.geogspace.edu.au/verve/_resources/2.3.2.2_2_climate_graphs.pdf).

The data for the climographs below is from the Bureau of Meteorology and compares the temperature and rainfall over different years for Melbourne. The figures in red show the highest maximum and minimum temperatures and highest rainfall averages. The figures in blue show the lowest maximum and minimum temperatures and lowest rainfall averages.

1. Students can draw two graphs each or work in pairs and draw one graph. Download a template for your students to use when drawing a climate graph here: [www.geogspace.edu.au/verve/_resources/2.3.2.2_3_climate_graph_temp_pdf.pdf](http://www.geogspace.edu.au/verve/_resources/2.3.2.2_3_climate_graph_temp_pdf.pdf). Students should always draw a border around the graph and always have an appropriate title. Check that all the elements of a graph are present: Scale, Axes and Title. All should be drawn neatly and accurately.

Temperature and rainfall for Melbourne 1861-1890

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
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<th>Jul</th>
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<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Annual</th>
<th>Years</th>
<th>Plot</th>
<th>Map</th>
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<tbody>
<tr>
<td><strong>Temperature</strong></td>
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<tr>
<td>Mean maximum temp (°C)</td>
<td>25.6</td>
<td>25.2</td>
<td>23.8</td>
<td>20.7</td>
<td>16.5</td>
<td>14.0</td>
<td>13.2</td>
<td>15.0</td>
<td>17.1</td>
<td>19.4</td>
<td>21.6</td>
<td>23.8</td>
<td>19.7</td>
<td>30</td>
<td>1861</td>
<td>1890</td>
</tr>
<tr>
<td>Mean minimum temp (°C)</td>
<td>13.4</td>
<td>13.4</td>
<td>12.4</td>
<td>10.2</td>
<td>8.0</td>
<td>6.6</td>
<td>5.2</td>
<td>6.1</td>
<td>7.4</td>
<td>8.7</td>
<td>10.2</td>
<td>11.9</td>
<td>9.5</td>
<td>30</td>
<td>1861</td>
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<tr>
<td><strong>Rainfall</strong></td>
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<tr>
<td>Mean rainfall (mm)</td>
<td>47.6</td>
<td>45.6</td>
<td>54.9</td>
<td>59.2</td>
<td>55.0</td>
<td>48.5</td>
<td>44.2</td>
<td>49.9</td>
<td>56.3</td>
<td>72.7</td>
<td>68.1</td>
<td>56.9</td>
<td>658.9</td>
<td>30</td>
<td>1861</td>
<td>1890</td>
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## Temperature and rainfall for Melbourne 1981–2010

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Jan</th>
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<th>Mar</th>
<th>Apr</th>
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<th>Jul</th>
<th>Aug</th>
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<tbody>
<tr>
<td><strong>Temperature</strong></td>
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<tr>
<td>Mean maximum temp (°C)</td>
<td>26.3</td>
<td>26.6</td>
<td>24.4</td>
<td>21.0</td>
<td>17.5</td>
<td>14.8</td>
<td>14.2</td>
<td>15.7</td>
<td>17.7</td>
<td>20.1</td>
<td>22.6</td>
<td>24.4</td>
<td>20.4</td>
<td>30</td>
<td>1981 2010</td>
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</tr>
<tr>
<td>Mean minimum temp (°C)</td>
<td>15.6</td>
<td>16.0</td>
<td>14.5</td>
<td>11.8</td>
<td>9.8</td>
<td>7.9</td>
<td>7.1</td>
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<td>10.6</td>
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<td>1981 2010</td>
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<tr>
<td><strong>Rainfall</strong></td>
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</tr>
<tr>
<td>Mean rainfall (mm)</td>
<td>45.1</td>
<td>39.9</td>
<td>40.7</td>
<td>50.2</td>
<td>46.5</td>
<td>46.5</td>
<td>44.7</td>
<td>50.5</td>
<td>52.9</td>
<td>58.5</td>
<td>63.1</td>
<td>64.1</td>
<td>602.6</td>
<td>30</td>
<td>1981 2010</td>
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</tr>
</tbody>
</table>

2. Students should analyse their climograph and answer the following questions:

   a. What is the difference between the minimum and maximum temperatures?

   b. Which month had the highest maximum and minimum temperatures in 1861-1890? How does this compare with 1981-2010?

   c. Has there been a change in temperature over the years? E.g. Does January have the same mean temperature?

   d. When does the MCG (Melbourne data) need to use more water to keep the ground green? What sport is played at that time of year?
3. Students can compare climate and weather conditions using the Bureau of Meteorology website. Go to www.bom.gov.au/climate/data/ and select a location from the map. Choose a location close to your home or school or even a different city that plays AFL or cricket, and draw another climograph. Compare this climograph with the Melbourne one you drew. What are the similarities and differences you observe?

Extension

Students can be shown how to draw a climograph using Excel. Watch the video at www.youtube.com/watch?v=LhPVMrg1fGY and plot the data above on an Excel spreadsheet.

Resources

Video on how to draw climographs: www.youtube.com/watch?v=7I5uQQTqxz4
Video on how to draw climographs in Excel: www.youtube.com/watch?v=LhPVMrg1fGY
Bureau of Meteorology website for climate data: www.bom.vic.gov.au
Climate graph template: www.geogspace.edu.au/verve/_resources/2.3.2.2_3_climate_graph_temp_pdf.pdf
DURING THE VISIT
Level: Year 5-6

AusVels links

GEOGRAPHY CONCEPT:

Change: Places and environments change over time – sometimes they change quickly, sometimes slowly

Aim

This activity will show how change has occurred at the MCG over a period of time. Students will identify change of the facilities of the MCG, sports played and other activities.

Activities

Students are asked to look for clues around the exhibits to investigate how the MCG has changed over the years. Direct their attention to photos and images that they will see. Note the buildings, landscape, stadiums etc.

Resources

Reading information panels located throughout the exhibitions.


www.mcg.org.au/

www.mcg.org.au/About-Us/About-the-MCG
Level: Year 3-4 and 5-6

AusVels links

GEOGRAPHY CONCEPT:

Environment: People rely on, use and change the physical and human environment.

Aim

To investigate the type of weather information that is of relevance to players at the MCG and to investigating the development of the turf as part of the MCG environment.

Activities

Direct the students to locate the yellow “Kelvinator Air Conditioning” display. Ensure they know the meaning of wind direction, humidity, wind speed and why these may be useful. The weather gauge showed many different temperature factors - investigate what a barometer is used for. What is humidity?

Back at school you could fill a container with different layers of sand, gravel, stones and soil. Sprinkle grass seeds on top and see if this has an impact on grass growth. Compare grass growth in a container with stones or gravel.

Resources

www.weatherwizkids.com/weather-words.htm
www.weatherwizkids.com/
www.cleanair.pima.gov/more/FourLayersSoil.html
Level: Year 5-6

AusVels links

GEOGRAPHY CONCEPT:

Environment: People rely on, use and change the physical and human environment.

Aim

Students identify and read maps and images in Yarra Park on the way to the National Sports Museum. They identify how the grounds are managed.

Activities

1. Students are asked to look at guide maps around Yarra Park that locate places and give direction. They are asked to consider name of paths and use directional compass points.

2. Investigate how groundskeepers protect trees around the grounds from possums. Why do they have possum guards in place?

3. There are no set car parks in the surrounding grounds of the MCG, yet cars are directed to park on grassed areas and under trees.

   Students are asked to think about the impact of cars on the natural environment and why the grounds keepers may have made the decision not to asphalt the area but to keep it as grass cover.

Resources

www.weatherwizkids.com/weather-words.htm
www.weatherwizkids.com/
www.cleanair.pima.gov/more/FourLayersSoil.html
Level: Year 5-6

AusVels links

**GEOGRAPHY CONCEPT:**

*Sustainability:* It is important to use the environment and resources so they can be shared by all people and living creatures now and into the future.

**Aim**

To investigate how the MCG implements sustainable practices to reduce waste and water and energy use.

**Activities:**

The MCC (Melbourne Cricket Club) recognises that the events around the MCG can have an impact on the environment.

Matching the activity to its heading – **answers in bold**

<table>
<thead>
<tr>
<th>Waste</th>
<th>- reduce unrecyclable waste</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- reuse materials where possible</td>
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<td></td>
<td>- promote recycling by providing appropriate infrastructure</td>
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<td></td>
<td>- the MCC is also an active participant in the closed loop recycling program.</td>
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<tr>
<td>Water</td>
<td>- the sand profile on the ground has helped reduce water usage by more than one million litres each year</td>
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<tr>
<td></td>
<td>- the MCC is conscious of its social and community responsibility towards the use of water. There are a number of measures either in place or being examined to ensure the MCC remains a responsible user of this precious resource</td>
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<td>- one of the most significant water saving projects involved the installation of a water recycling plant in Yarra Park that has reduced consumption of potable water by up to 50 per cent.</td>
</tr>
<tr>
<td>Energy</td>
<td>- replacing the existing lighting systems with low-energy lighting technologies</td>
</tr>
<tr>
<td></td>
<td>- installing a new building management system</td>
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<td></td>
<td>- implementing changes to heating and ventilation systems</td>
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<td>- installing new chilled water systems and modernised room control systems.</td>
</tr>
</tbody>
</table>
The rain water tank at the MCG holds 1.5 million litres of water that is harvested from the roof of the Northern Grandstand. What do you think this water could be used for? Measure 100 litres of water – what could be done with this water at your school?

Share student responses – these could include watering the grounds, flushing toilets, cleaning, using in kitchens to prepare food.

In the National Sports Museum there is a FYI Panel board

In summer the grass is cut to 12mm for cricket whereas in winter it is cut to 25mm for Australian football.

Why do you think they vary the length of the grass for the different sports?

Measure these lengths and using paper squares create some fake grass. How well will a ball roll through these grass lengths?

Resources

www.mcg.org.au/About-Us/Policies/Sustainability
www.mcg.org.au/About-Us/Policies/Water-Recycling
Level: Year 3-4 and 5-6

AusVels links

GEOGRAPHY CONCEPT:

Scale: We can see patterns at different levels – local, national, regional and global.

Change: Places and environments change over time – sometimes they change quickly, sometimes slowly.

Aim

To compare the scale of a model of the MCG to reality and to investigate the changes that have occurred at the MCG over time.

Activities

Locate the 3-D model of the MCG in the National Sports Museum. On the model compare the photo of the public grandstand (1876-1884) to the Northern Stand (2006).

OR

Compare the Members Pavilion 1800s to present day.

https://en.wikipedia.org/wiki/Melbourne_Cricket_Ground
This model doesn’t cover the scope of the MCG but complete the activity below and compare to your own school. If you wanted to create a model of your school what would the scale (ratio) be?

- The MCG covers an area of 20,000 square meters (174 X 149 m from fence to fence). Back at school, measure out the area of your school property. How much of your school area is covered by buildings? Playgrounds? Ovals?

- The MCG has six flood lights that are 75 m high this is equivalent to a 24-storey building. The lights are angled at 15°. At school, use a small light with a flexible arm to create the same angle. How much light does this cover? What if you change the angle of the light?

Resources

https://en.wikipedia.org/wiki/Melbourne_Cricket_Ground
http://futurecity.org/lb/build/a/proportions-ratios-and-scale-drawings
www.123helpme.com/view.asp?id=122301 (coverage of light and shadowing)
Level: Year 5-6

AusVels links

GEOGRAPHY CONCEPT:

Place: The world is made up of many places. Places have names and special meanings for people.

Aim

Conduct a survey about visitor perceptions of place (the NSM) and record the results, interpreting survey and graph results.

Activities

The students conduct a survey and record results using a tally. Results can be displayed in graph form and then students are asked to write a summary of their results.

Help students to interpret their results. They should include one or two short sentences describing their findings.

Resources

http://nces.ed.gov/nceskids/createagraph/ (Creating graphs)
Level: Year 5-6

AusVels links

GEOGRAPHY CONCEPT:

Place: The world is made up of many places. Places have names and special meanings for people.

Aim

Investigating countries / continents where the Modern Olympic Games have been held.

Activities

On a world map locate the cities and countries that have held the Modern Olympic Games. What continents are these countries located in?

Use a Venn diagram to compare the Modern Olympic Games with the Ancient Games

Students investigate the significance of the dates 1916, 1940 or 1944 – brainstorm why there weren’t any games during these years (impacts of World Wars I and II).

Resources

http://history1900s.about.com/od/fadsfashion/a/olympics1940.htm
Level: Year 3-4 and 5-6

AusVels links

GEOGRAPHY CONCEPT:

Place: The world is made up of many places. Places have names and special meanings for people.

Aim

Investigate the route of the Olympic Torch as it travels to a host country.

Activities

Compare the design of The Olympic Torch over the years. Locate the places visited in the Olympic Torch relay for the 2000 Sydney Olympic Games. On a map of Australia trace the relay. Were there any places in Australia that the torch did not visit? Why did it not visit these places/regions? How did the torch travel over the Great Barrier Reef?

Resources

Level: Year 3-4 and 5-6

AusVels links

GEOGRAPHY CONCEPT:

Change: Places and environments change over time – sometimes they change quickly, sometimes slowly.

Space: Where are people and things located on the Earth’s surface? How do people manage space?

Aim

Students will look through the Gallery to find information about their own AFL team as well as places and locations involved in the VFL and AFL.

Activities

Students research their own team and find information about their club. They develop a timeline to show how football locations have changed over the years.

Resources

Level: Year 3-4 and 5-6

AusVels links

GEOGRAPHY CONCEPT:

Space: Where are people and things located on the Earth’s surface? How do people manage space?

Aim

For students to identify which space at the National Sports Museum that they enjoyed the most during their visit.

Activities

Talk to students about how they will have to identify which areas of the National Sports Museum that they enjoy the most and then write a short explanation as to why those chose their gold star exhibit.

Resources

Teachers will need to supply gold, silver and bronze stars to place on the map of the NSM.
AFTER THE VISIT
It is suggested that, after visiting the National Sports Museum, teachers spend some time with the class discussing and sharing some of their findings. As different groups have completed specific worksheets, it is recommended that groups provide short presentations about the concepts and activities they completed. In this way, the entire class benefits in gaining knowledge from all the displays.

A final activity is outlined below.

**Level: Year 3-4 and 5-6**

**AusVels links**

**GEOGRAPHY CONCEPT:**

*Space: Where are people and things located on the Earth’s surface? How do people manage space?*

**Aim**

After visiting the various displays at the museum, students have an opportunity to design their own exhibit.

**Activities**

Encourage students to think of a sport that is not represented, or they think is under-represented at the NSM. They should then use ideas from the museum to create a list of the objects they would like to include in their exhibit. Encourage students to use the Internet to gather their information, people, events and images/objects.

Once they have gathered all their information, they can design their display space. Some may like to draw a map of their exhibition space; others may like to build a 3-D model of their space. Using graph paper will encourage students to pace out and map to scale the floor plan of their space. Images and text need to be used in the final design. You may also like to use the floor plan of the NSM and ask the students to designate the location of their exhibit.

A short summary paragraph should be written to justify their choice of exhibit.

This activity can be either individual, pairs or groups work. It is a suitable activity for assessment.

**Resources**
