

# Sydney Metro Inquiry Based Unit: Stage 1

## Syllabus Links


Curriculum Area	Outcomes	Skills	General capabilities and cross-curriculum priorities
Geography	<b>GE1-2:</b> identifies ways in which people interact with and care for places	<ul style="list-style-type: none"> <li>• Discussion of why and how the spaces within places can be rearranged for different purposes</li> <li>• Examination of why various activities in an area are located where they are</li> </ul>	<b>Asia and Australia's engagement with Asia</b>  Sustainability
History	<b>HT1-3:</b> describes the effects of changing technology on people's lives over time	<ul style="list-style-type: none"> <li>• Identify examples of changing technologies in their home or community</li> <li>• Discuss the similarities and differences of technology from the past through a range of sources and sequence them over time</li> <li>• Use a range of communication forms to explain how one example of changing technology affected people's lives</li> </ul>	Literacy  Numeracy
Science	<b>ST1-7MW-T:</b> describes how the properties of materials determine their use	<ul style="list-style-type: none"> <li>• Design and evaluate a product, demonstrating understanding of the suitability of materials for a purpose</li> </ul>	Information and communication technology capability  Civics and citizenship


## Key Inquiry Question:






How do transport networks from the past and around the world impact and shape my future with the Sydney Metro infrastructure?

# Teaching, learning and Assessment

Teaching and Learning Experiences	Resources and Technology
<p>'Hook' students into learning about the Sydney Metro by informing them, that they have receive a letter from Sydney Metro. As a class – read the letter out loud and discuss.</p> <p>Provide opportunities for students to experience the following Learning Centres:</p> <ol style="list-style-type: none"><li>1. Trains – Past, Present and Future Trains</li><li>2. Past, Present and Future Stations</li><li>3. Metro vs Train Stations</li><li>4. Features of a Metro Station (Part 1)</li><li>5. Features of a Metro Station (Part 2)</li><li>6. Accessibility of your Metro Station</li><li>7. Birds Eye View Floor Plan</li><li>8. Station Safety</li><li>9. Sydney Metro Gardens and Parks</li><li>10. Sydney Metro vs Melbourne Metro</li></ol>	<p>Letter from Sydney Metro (sample included at the end of the unit)</p> <p>As applicable in the Learning Centre experiences below</p>

Learning Centre	Learning Experience	Student Task Card
Learning Centre 1	<p><b>LI:</b> I am learning to use technology to research information about how trains have changed over time:</p> <ul style="list-style-type: none"> <li>• I can use technology to research information</li> <li>• I can describe how trains have changed over time</li> <li>• I can write facts in my own words on A3 paper to create a timeline</li> </ul> <p>Explicitly teach students how to search and take information from websites. Model how to use Google as the search engine. For example, type into Google: past trains of Western Sydney.</p> <p>Demonstrate how to look for the best link. Demonstrate highlighting using the Promethean's annotate and highlight key words and how to use the key words to write own sentences. Also demonstrate to students how to use Teams to interact with the links. Some students may not have teams installed, teach them how to go through a web browser. If unable to use laptops, copy link addresses into a QR code and print off and borrow iPads from library. Also teach students to use immersive reader on Microsoft Edge to support reading of information.</p> <p>Sample websites for students to visit:</p> <p><b>Past</b>  <a href="https://www.getepic.com/app/read/66151">https://www.getepic.com/app/read/66151</a>  <a href="https://www.getepic.com/app/read/44437">https://www.getepic.com/app/read/44437</a>  <a href="https://www.dkfindout.com/us/transportation/history-trains/">https://www.dkfindout.com/us/transportation/history-trains/</a></p> <p><b>Present</b>  <a href="https://www.getepic.com/app/read/78195">https://www.getepic.com/app/read/78195</a>  <a href="https://www.factsjustforkids.com/technology-facts/train-facts-for-kids/">https://www.factsjustforkids.com/technology-facts/train-facts-for-kids/</a>  Trains at Penrith station  Sydney Metro: Track Laying, July 2021</p> <p><b>Future</b>  <a href="https://www.youtube.com/watch?v=1xyOI5BybCA_">https://www.youtube.com/watch?v=1xyOI5BybCA_</a>  <a href="https://www.youtube.com/watch?v=40U7FUCNZO0">https://www.youtube.com/watch?v=40U7FUCNZO0</a>  <a href="https://www.sydneymetro.info/citysouthwest/project-overview">https://www.sydneymetro.info/citysouthwest/project-overview</a></p>	<div style="border: 2px solid red; padding: 10px; text-align: center;"> <p><i>Past, Present and Future Trains!</i></p> <ol style="list-style-type: none"> <li>1 In <b>watering holes</b> choose a time period of 'Past', 'Present' or 'Future'. Your responsibility is to investigate trains during that time period.</li> <li>2 Find a peer/s from another group who also has the same time period as you and use the links provided to you in Microsoft Teams or by using QR codes with iPads to research trains during that time. <ul style="list-style-type: none"> <li>• Write 5 facts about your chosen station.</li> </ul> </li> <li>3 Return to your <b>watering hole</b> and share your facts with your group. <ul style="list-style-type: none"> <li>• Answer any wondering your group may have about your facts</li> <li>• On A3 paper, add your facts about trains from the 'Past', 'Present' or 'Future' under the correct headings</li> </ul> </li> </ol> <p style="text-align: right;">LCI </p> </div>

<p>Learning Centre 2</p>	<p><b>LI:</b> I am learning to identify how trains have changed.  <b>SC:</b> I can</p> <ul style="list-style-type: none"> <li>• Notice the changes of the train</li> <li>• Voice some differences between Sydney trains and metro trains</li> <li>• Draw a picture of a Sydney train and a metro train</li> </ul> <p>Instructions;</p> <ol style="list-style-type: none"> <li>1. Watch video of <a href="#">sydney train evolution</a></li> <li>2. As a class, discuss the difference from the beginning to the end (colour, size, windows, doors)</li> <li>3. Students to sketch a Sydney train and a Metro train to show the difference between the two types of trains.</li> </ol> <p>As a class, compare and contrast student sketches, highlighting the similarities and differences between the two types of trains.</p>	<div style="border: 2px solid red; padding: 10px;"> <h3 style="text-align: center; color: red;">Old Sydney Trains vs New Metro Train</h3> <ol style="list-style-type: none"> <li>1 Watch the video  of the Sydney train evolution.</li> <li>2 In <b>campfire</b>  discuss the differences between the old train Sydney train and New Metro trains.</li> <li>3 In your workbooks,  draw  a picture of a Sydney train and a Metro train.</li> </ol> <p style="text-align: right;"></p> </div>
<p>Learning Centre 3</p>	<p><b>LI:</b> I am learning about Sydney train stations and Metro stations  <b>SC:</b> I can</p> <ul style="list-style-type: none"> <li>• Identify features of a Sydney train station</li> <li>• Identify features of a Metro station</li> <li>• Notice the similarities and differences between both stations</li> </ul> <p>Instructions:</p> <ol style="list-style-type: none"> <li>1. Watch the videos below with a tour of a Metro station and Central train station in Sydney. <ul style="list-style-type: none"> <li>○ <a href="#">Metro Stations</a></li> <li>○ <a href="#">Central Train Station</a></li> </ul> </li> <li>2. Provide students with photographs of Metro stations and Train stations.</li> <li>3. As a class, sort the screenshots from the videos under the headings 'Metro' and 'Train' stations.</li> <li>4. Students to discuss what they notice and what they wonder about the stations. What might be the advantages and disadvantages of the different features? What might a dream station look like?</li> </ol>	<div style="border: 2px solid red; padding: 10px;"> <h3 style="text-align: center; color: red;">Metro vs Train stations</h3> <ol style="list-style-type: none"> <li>1 In a <b>campfire</b>,  watch  the videos above of tours of a Metro station and Central station.</li> <li>2 In <b>campfire</b>  sort  the screenshots of the different features of Metro stations and train stations under each heading.</li> <li>3 Discuss what they notice  and what they wonder  about each of the stations.</li> </ol> <p style="text-align: right;"></p> </div>

<p>Learning Centre 4</p>	<p>LI: We are learning to understand what a Metro Station is  SC: I can:</p> <ul style="list-style-type: none"> <li>• Search for information and record key words</li> <li>• Write 3 facts using dot points</li> <li>• Turn my dot points into sentences</li> </ul> <p>Explicit:  Brainstorm what students already know about what a Metro is before allowing them to investigate more information using printed and digital resources.</p> <p>Examples of resources for students to engage with:  <a href="https://kids.kiddle.co/Rapid_transit">https://kids.kiddle.co/Rapid_transit</a>  <a href="https://www.sydneymetro.info/northwest/project-overview">https://www.sydneymetro.info/northwest/project-overview</a>  <a href="https://www.sydneymetro.info/metro-trains">https://www.sydneymetro.info/metro-trains</a></p>	<div style="border: 2px solid red; padding: 10px;"> <h2 style="text-align: center; color: red;">What is a Metro Station</h2> <ol style="list-style-type: none"> <li>1 In a watering hole 🐼, investigate 🔍 what Metro Stations <b>M</b> are</li> <li>2 Look 👁️ for information including 'why Sydney Metro <b>M</b> Stations are used' and 'what is the difference between a Sydney Metro <b>M</b> Station and train station'</li> <li>3 Write 📝 3 facts about Metro Stations <b>M</b> in dot points <ul style="list-style-type: none"> <li>• Turn your dot points into sentences</li> </ul> </li> </ol> <p style="text-align: right;">LC4 </p> </div>
<p>Learning Centre 5</p>	<p>LI: We are learning to identify the features of a Sydney Metro station  SC: I can:</p> <ul style="list-style-type: none"> <li>• Identify different features of a Metro Station</li> <li>• Draw a design of the front of your metro station</li> </ul> <p>Explicit:  Visit this link and explore the features of different Sydney Metro stations:  <a href="https://www.sydneymetro.info/map/sydney-metro-interactive-train-map">https://www.sydneymetro.info/map/sydney-metro-interactive-train-map</a>  Point out any signs, technologies and environmental features and discuss as a class.</p> <p>Demonstrate to students how you could use the different features observed to integrate into own design of the outside/external view of a Metro Station.</p>	<div style="border: 2px solid red; padding: 10px;"> <h2 style="text-align: center; color: red;">Features of a Metro Station</h2> <ol style="list-style-type: none"> <li>1 In a watering hole 🐼, look 👁️ at the different Sydney Metro stations and discuss some of the features you see.</li> <li>2 Use Teams to access the link to explore the 360 Degree tour of a Sydney Metro <b>M</b> Station.</li> <li>3 Draw a picture 🎨 of the front of your Jordan Springs Metro <b>M</b> Station. Think about the following: <ul style="list-style-type: none"> <li>signage </li> <li>the environment </li> <li>technology </li> </ul> </li> </ol> <p style="text-align: right;">LC5 </p> </div>

Learning Centre 6

LI: We are learning to understand what accessibility is

SC: I can:

- I can recognise a need for design in my Metro Station
- I can evaluate designs to make improvements on accessibility

Explicit:

Discuss the word 'accessibility' and brainstorm ways we have accessible options at our school. Braille on toilet doors, words and symbols at toilets, wheelchair toilets with showers, lifts to take people in wheelchairs, prams or walkers up lifts etc. Brainstorm ideas about what could be useful in a Metro Station and why.

## Accessibility of your Metro Station

1 In **watering holes** with your group, investigate how Sydney Metro stations have accessibility options for **people with a vision or hearing difficulties, families that travel and people in wheelchairs.**

2 Write or type the things you think your station will need and why in your books or OneNote page.

3 Return to your **watering hole** and share Strengths, Weaknesses and So What ideas about the metro stations with your group.

- Write your ideas down into the S.W.S.W chart



LC6

Learning Centre 7

LI: We are learning to use birds eye view to develop a floor plan

SC: I can:

- Use birds eye view
- Design a floor plan of my Metro Stations
- Include features of a Metro

Explicit:

Look at the following pictures of a floor plan. Discuss and label how the floor plans are organised, include any features and what types of rooms the plans are for. Explain that there are 2D and 3D floor plans which have no roof on them. Discuss birds eye view.










## Birds Eye View - What is a Floor Plan?

1 In a **watering hole** discuss what a floor plan should include

2 Watch the video and record some important features you see in this Minecraft station that can be included in your Sydney Metro design

3 Use blocks, Lego or Minecraft to create your own floor plan of a Sydney Metro Station

LC7

<p>Learning Centre 8</p>	<p>LI: We are learning to identify safety features in different Metros</p> <p>SC: I can:</p> <ul style="list-style-type: none"> <li>Identify different safety features</li> <li>Evaluate them using the S.W.SW</li> </ul> <p>Explicit:</p> <p>Provide students with a mini whiteboard to have with them when watching the following videos:</p> <ul style="list-style-type: none"> <li><a href="#">Sydney Metro: Parramatta metro station 360 degrees</a></li> <li><a href="#">Brief walk through Grand Central Terminal in New York City to catch a train - 360 degree video</a></li> <li><a href="#">King's Cross Station 360 degree walkthrough (London, England)</a></li> <li><a href="#">360 VR Tour   Amsterdam   Amsterdam Centraal   Railway station   Outside   VR Walk   No comment tour</a></li> </ul> <p>Prior to video, brainstorm what safety features students already know of and get them to add their ideas to the whiteboards whilst watching/engaging with the videos.</p>	<div data-bbox="1370 153 2085 639" style="border: 2px solid red; padding: 10px;"> <h3 style="text-align: center; color: red;">Station Safety</h3> <p><b>1</b> As a group watch  the 360° view clips of 4  different train  stations around the world.</p> <ul style="list-style-type: none"> <li><a href="#">Sydney Metro: Parramatta metro station 360 degrees</a></li> <li><a href="#">Brief walk through Grand Central Terminal in New York City to catch a train - 360 degree video</a></li> <li><a href="#">King's Cross Station 360 degree walkthrough (London, England)</a></li> <li><a href="#">360 VR Tour   Amsterdam   Amsterdam Centraal   Railway station   Outside   VR Walk   No comment tour</a></li> </ul> <p><b>2</b> Complete the S.W.SW  chart on each station noting down observations  and any wonderings </p> <p style="text-align: right;">LC8 </p> </div>
<p>Learning Centre 9</p>	<p>LI: We are learning about sustainable choices and materials that could be used in the construction of a metro station.</p> <p>SC: I can:</p> <ul style="list-style-type: none"> <li>Explore green, dirt and concrete spaces during the construction of the metro</li> <li>Test each space with my own metro station model</li> <li>Create a persuasive video to decide which space is the most sustainable choice</li> </ul> <p>Explicit:</p> <p>Review the learning centre. Bring attention to the term <u>sustainability</u> and ask if anyone knows what it means.</p> <p>Introduce the term sustainability:</p>	

Sustainability is about small changes we can make to help look after the planet. Making these changes helps protect animals, plants and our natural resources so that future generations will be able to enjoy them.

Read the following website, scroll down to the dot point "Why is gardening important to the environment?"

<https://www.greenmatters.com/p/why-gardening-is-important>

Students begin their learning centre:

















1. Watch the following two videos and write observations about their green spaces on mini whiteboards, prompt them to notice the changes and how the small changes have helped the future sustainability of the planet. Support student thinking by pointing out how the choices might be sustainable (grass keeps dirt washing/blowing away), trees homes for animals offer shade and oxygen etc. Wonder aloud as to why they didn't leave the spaces with just dirt or concrete:

[Sydney Metro: Arthur Whitling Park, Castle Hill](#)

[Sydney Metro Northwest - Landscape Construction & Maintenance](#)

2. Support and scaffold student thinking by wandering between groups

### Sydney Metro Gardens and Parks

- 1 In **campfire** watch the videos on the gardens and parks created by Sydney Metro . On a mini whiteboard  write down the ways they have created green spaces.
- 2 In **watering holes**  discuss  your observations of the green spaces:  
**What happened to the land when they built the metro?**  
**Why did they add trees, plants and green spaces?**  
**How would this help our future sustainability?**
- 3 Make a small Lego station  Take your Lego station into the playground   
Find a green space  dirt space  and concrete space  to take a birds eye photo . Film  your group testing each space with wind  by blowing air onto your station and rain  by tipping water.
- 4 Create a Flip  with your group  by creating a persuasive video to name which space is best for our Jordan Springs Metro. **LC 9** 

Learning Centre 10

LI: We are learning to compare similarities and differences between Sydney Metro and Melbourne Metro

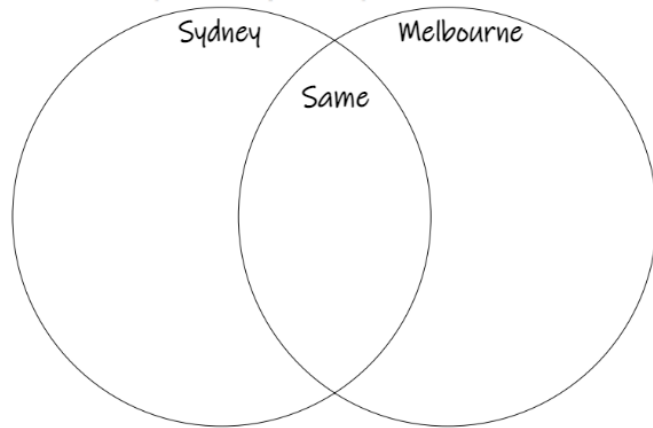
SC: I can:

- View a video on a Sydney Metro station
- Explore Melbourne Metro Station
- Compare similarities and differences of both

Instruct students on how to download Mini Melbourne and to find Town Hall Station (turn right and follow the road). **Download Mini Melbourne on your promethean computer Minecraft app**

Show students Venn diagram, instruct them on labelling them Sydney/Melbourne/Same. Review definition of features, predict what features they might notice link with previous learning.





Students watch the video and with their group, fill in the features they observe for Sydney side of Venn e.g. Opal card ticket, gates, escalators, skyline station etc Video on Sydney Metro station [ROUSE HILL Metro Station | SYDNEY METRO](#) on loop on prometean. Once complete, students grab their laptop and investigate Mini Melbourne. Students note down features on "Melbourne". Students can also view "Flinder's Train station" if complete for an extra exploration task.

Students then discuss and compare the similarities and record in same.

Supporting videos where features are discussed if needed

[Town Hall Station in Minecraft? | Mini Melbourne 2.0 Exclusive Early Look](#)  
<https://www.youtube.com/watch?v=VSh6uehoovA>






## Sydney Metro vs Melbourne Metro

- 1 In *campfire* watch the videos on Sydney Metro stations  and learn how to access  the link to get Melbourne's Town Hall Station in *Minecraft*   







- 2 In *watering holes*  with your group, investigate  Melbourne's Town Hall Station in *Minecraft*  and discuss  the features the station has.
- 3 With your group, write  into a venn diagram  compare the differences and similarities of the Melbourne Metro  and Sydney Metro  stations.

## Sample letter for students from 'Sydney Metro'

Hi students  of Jordan Springs Public School .


From the team at Sydney Metro , we have a very special inquiry task for students  across Kindergarten to Year 6 at Jordan Springs Public School . It must be so very exciting to be at a brand new school  and also to be in the new suburb of Jordan Springs .


Our team at the Metro  has noticed a large amount of people driving  to, and around the Penrith area, especially in Jordan Springs. We would like to offer the opportunity to your school  to create a future Metro station  at Jordan Springs . By designing a future Metro station,  we can provide transport   opportunities to the people  living in and around the Jordan Springs  area.

We know that this is such a big task and there so are many things to think about for your Metro station ! So to help you in successfully completing this inquiry we have provided you with a success criteria  to assist you in your planning . We can imagine how many brilliant ideas  you must have buzzing  around in your brains .

In your design of the new metro station , you are to include:

- A description and labelled birds eye view map of where the train station will be located
- A labelled floor plan of the train station
- Accessibility options at the metro station (wheelchair access, braille, lifts)
- A digital design of the train station using Minecraft
- A display of technologies used within the station
- A description of how you have selected materials for the station and cared for the land
- Safety at the train station and near the edge of the platforms

Your final design is due  to your homebase teachers by the 23rd of September 2022 (Term 3 Week 10).

We wish you all the best , and we absolutely cannot wait to see the final product.

Kind regards,

Sydney Metro Team 