

This Resource:

Includes a teacher guide & student worksheet

Contributes to:

Stage 2 (Years 3-4)

- **HS2-GEO-01** - describes how people connect to, use and care for places and environments
- **HS2-GEO-02** - explains how people influence places and the management of spaces
- **HS2-GEO-03** - uses geographical tools (maps, observations, sketching) to investigate places

Teacher Resource Guide

Exploring Sydney's Built Environment

In this resource, students explore the dynamic built environment of Sydney through observation, mapping and design-based thinking. Using real-world examples from the city, students investigate how places are structured, the purpose of key facilities and how people interact with urban environments.

Students are encouraged to:

- identify and describe features of the built environment
- explore how people use and depend on places within a city
- observe and interpret real-world environments from different perspectives
- develop mapping and sketching skills to represent spatial information
- investigate how buildings are designed and constructed
- consider how environmental factors influence design
- reflect on how cities change over time
- apply their understanding through creative design and problem-solving

This resource supports students in building geographical understanding through hands-on, engaging activities that connect directly to their experiences within a real urban setting.

Please Note:

This resource has been produced for teachers to use for FREE and for them to use within their classroom and online learning environments. This resource works best with an excursion to the Sydney Tower Eye Observation Deck.

Go to our website <https://www.sydneytowereye.com.au/> to find out more about school excursions!

Teacher Resource

Answers

Section 1 – I Love Sydney

1. Why do people come to Sydney?

- Work (offices, businesses)
- Tourism (landmarks, attractions like Sydney Opera House and Sydney Tower Eye)
- Shopping
- Entertainment (restaurants, events)
- Transport hub

Key facilities needed in a city

- Hospitals
- Schools
- Public transport (trains, buses, ferries)
- Shops and supermarkets
- Roads and infrastructure
- Parks and recreational spaces

How did your school travel?

(Answers will vary)

- Bus / train / walking / car

Map task

Students should include:

- Roads
- Landmarks
- Shops
- Transport routes
- Symbols + basic direction

Section 2 – What we need in a city

Example answers:

Local Feature/ What are people doing / Why important

- Offices
- Working
- Provides jobs
- Parks
- Exercising, relaxing
- Health & recreation
- Shops
- Buying goods
- Meets daily needs
- Roads
- Travelling
- Transport & access
- Harbour
- Tourism, transport
- Economy & lifestyle

Section 3 – Buildings & Materials

Structure / Materials / How joined / Purpose

- Sydney Tower Eye / Steel, concrete, glass / Bolts, welding / Observation, tourism
- Sydney Harbour Bridge / Steel / Rivets, welding / Transport
- Sydney Opera House / Concrete, tiles, glass / Precast panels / Performing arts
- St Mary's Cathedral / Stone / Mortar / Religious use
- Sydney Cricket Ground / Steel, concrete / Bolts / Sport
- Sydney Airport / Steel, glass, concrete / Bolts / Transport

Section 4 – Fill in the blanks

Correct answers:

Sydney's [weather](#) was an important factor that needed to be considered when the architects and [engineers](#) were designing Sydney Tower Eye. The construction team had to make sure they could build a tall structure that was extremely strong during very [windy](#) weather conditions, as well as being able to withstand an [earthquake](#) if the unlikely event were ever to happen in Sydney. For example, the tower is surrounded by 56 [cables](#), which help support the turret and the tower from blowing or moving too much in the wind. It also has a [lightning](#) rod at the top of the tower for stormy weather. As well as a water [tank](#) on the top of the turret, which acts as a stabiliser to support the structure of the tower and also provides an emergency water supply in case of a [fire](#).

Section 5 – Sketch

(No fixed answer)

Section 6 – Sydney's Past

Example responses: Area / Past / Present

- Darling Harbour / Industrial port / Tourism & dining
- Pyrmont Bridge / Main transport route / Pedestrian/tourist use
- George Street / Horse + carts / Light rail, busy CBD
- St Mary's Cathedral / Fewer buildings / Dense city surrounds
- Sydney Opera House / Not built (1966) / Iconic landmark

Section 7 – Design Task

Example strong responses:

- Idea: Glass skywalk / VR experience / rotating café
- Materials: Steel, reinforced glass, concrete
- Weather factors: Wind, Storms, Lightning, Heat
- Impact: Positive: tourism, jobs, Negative: crowding, noise



Activity 1: I love Sydney

The city of Sydney is an amazing place filled with resources, life and spirit. Take some time to read the following questions, and write your answers in the space provided below.

What are some reasons people might come to the city of Sydney?

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What are some key facilities required by a community in the city of Sydney?

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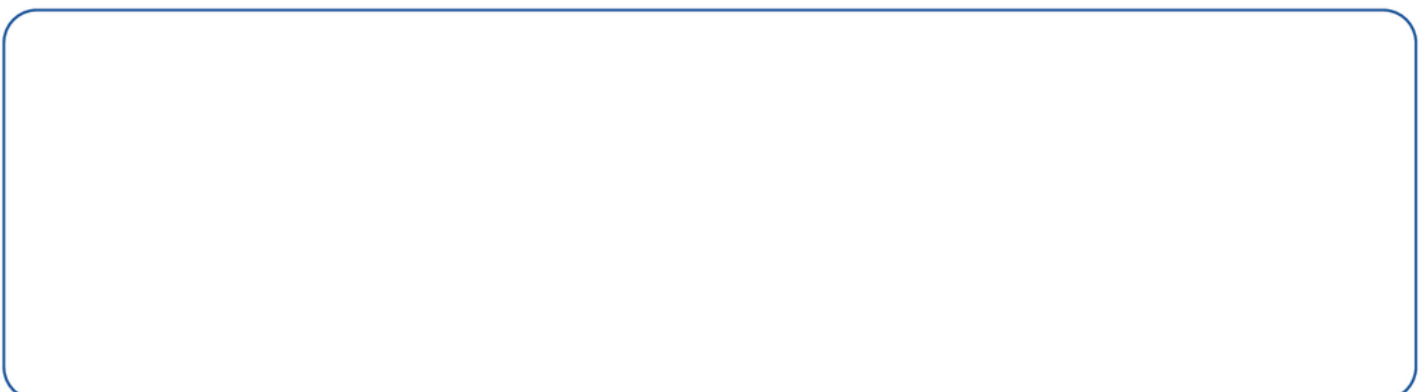
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How did your school travel into the city today?

.....

.....

Draw a map from memory of a section of your route from your school to the city. The map should show the main facilities that you passed to get here today (e.g. shops, sports facilities, main roads etc).



Activity 2: What do we need in a city?

[Excursion Activity]

Walk around the observation deck and look out the windows to see the city of Sydney. Complete the table below and write down any local features you can see from the windows. Suggest what you can see people doing there and why these places are important to have in a city.

[illegible]

Activity 3: What are buildings made of?

[Excursion Activity]

What makes a building? Look out the window and find the iconic landmarks mentioned in the table below. What do you think these buildings are made of? What building materials can you see have been used?

Building/ Structure	What materials are used?	How do you think it's joined together?	What do people use this building/structure for?
Sydney Tower Eye			
Sydney Harbour Bridge			
Sydney Opera House			
St. Mary's Cathedral			
Sydney Cricket Ground			
Sydney Airport			

Activity 4: The weather and Sydney Tower Eye

Read the following passage and use the word bank to help fill in the missing words!

Sydney's _____ was an important factor that needed to be considered when the architects and _____ were designing Sydney Tower Eye. The construction team had to make sure they could build a tall structure that was extremely strong during very _____ weather conditions, as well as being able to withstand an _____ if the unlikely event was ever to happen in Sydney. For example, the tower is surrounded by 56 _____ which help support the turret and the tower from blowing or moving too much in the wind. It also has a _____ rod at the top of the tower for stormy weather. As well as a water _____ on the top of the turret which acts as a stabiliser to support the structure of the tower and also provides an emergency water supply in case of a _____

Weather

Engineers

Build

Windy

Earthquake

Cables

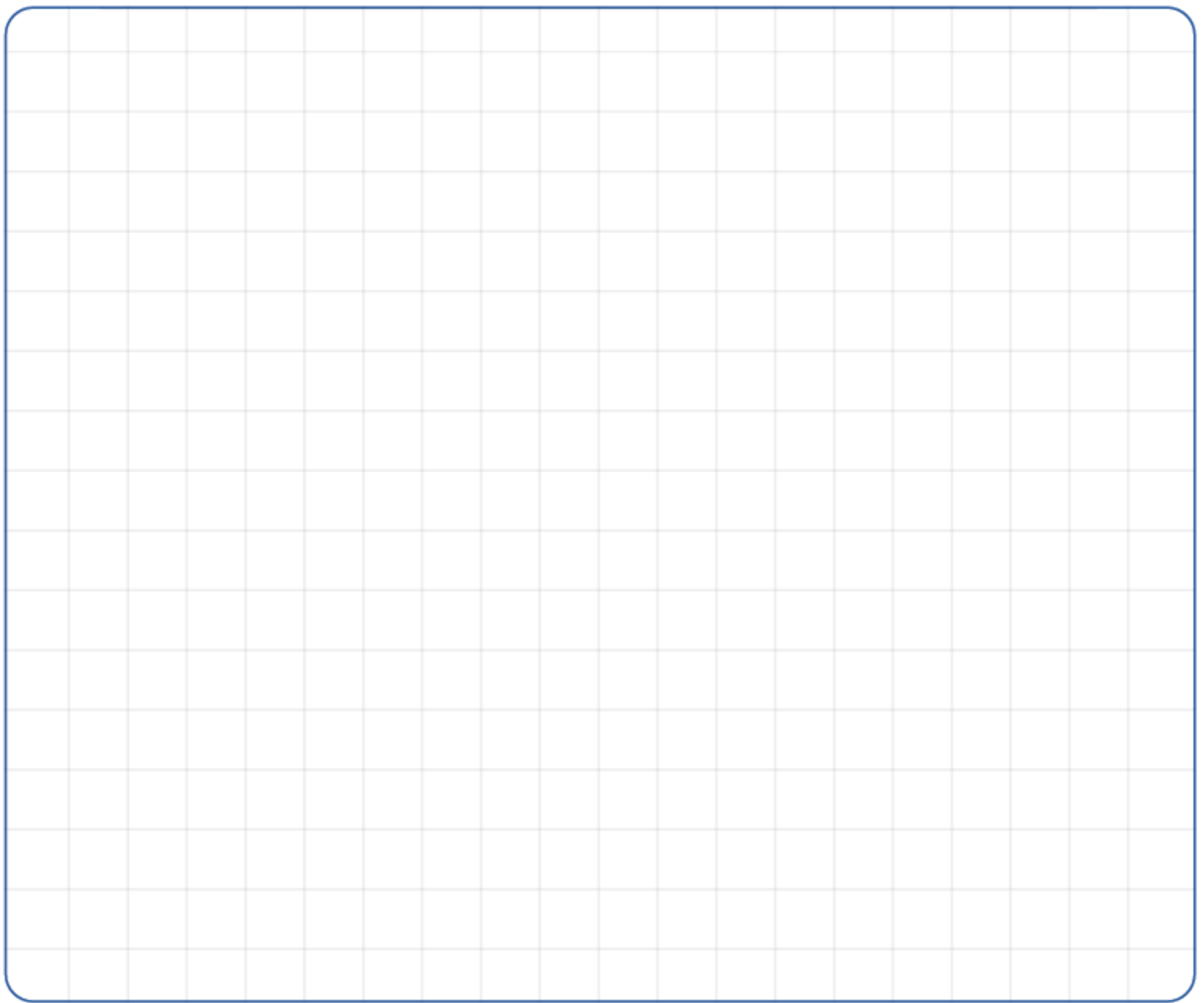
Lightning

Tank

Fire

Activity 5: Sketch it out

Draw a sketch of the tower in the space provided below.

A large rectangular area filled with a light gray grid pattern, intended for drawing a sketch of the Sydney Tower Eye. The grid consists of 20 columns and 20 rows of squares.

Activity 6: Sydney's past

[Excursion Activity]

Go to the binoculars on the observation deck that are located on the north side. Look through to see how the built environment has changed in Sydney CBD over the past 100 years. Compare this to what you can see out the window today.

Area	Past	Present
Darling Harbour 1900		
Pymont Bridge 1977		
George Street 1890		
St. Mary's Cathedra 1920I		
Sydney Opera House 1966		

Activity 7: Sydney's past

The Sydney Tower Eye want to design something new for visitors to experience when they come to visit the observation deck. They are looking for young, budding engineers to design and construct the new experience. Pretend you are an engineer and answer the questions below and on the next page.

What is your new idea?

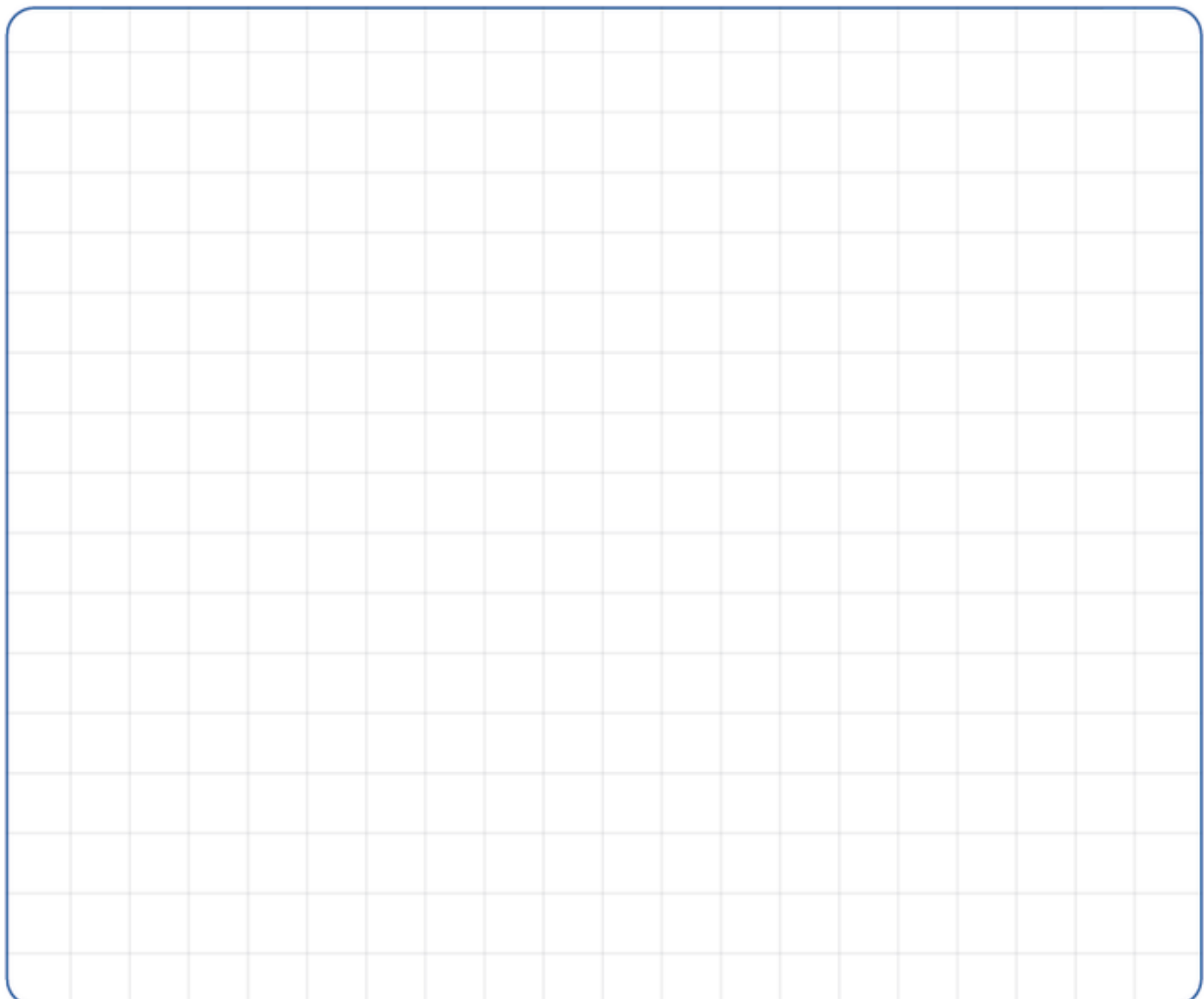
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Draw a picture to show your design of the tower with the new experience.



What building materials do you need to build this?

What weather factors do you need to consider?

Will this new experience have a positive or negative impact on the local community?
