

FUTURE

THE
BUILDING

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Architecture starts when you
carefully put two bricks together.
There it begins.

Mies Van De Rhoe



Introduction

Purpose and focus

The built environment includes structures and systems (buildings, parks, roads, churches, transport etc) that often reflect the prevailing culture, style and thought of society in a particular period of time. Like books, paintings, music, artworks and poetry, the built environment can provide students with a rich store-house of information about our past, present and future. However, 'reading' the built environment with depth of understanding, requires teaching students about the key concepts that underpin architectural literacy.

In this unit of work students explore their local neighbourhood and consider sustainability, aesthetic, cultural, safety and functional issues facing our community now and in the future. Students will develop a deeper understanding of how places have come to be, how they are now and how they can be in the future.

This unit of work is part of a suite of innovative teaching materials initiated by the NSW Architects Registration Board as part of its role in promoting an understanding of architectural issues in the community. *Building the Future* is a collaboration between the Board, the Historic Houses Trust of New South Wales and Sydney Region, NSW Department of Education and Communities.

How to use this unit

Building the Future has been organized to meet Stage 3 Design and Technology outcomes, consistent with the NSW Board of Studies Science and Technology Syllabus. This maintains disciplinary integrity and authentic assessment practice. However, it is possible to use the unit as stimulus material for investigations in other Key Learning Areas or to make conceptual connections that cross disciplines.

These suggestions are outlined in Part F – Building Curriculum Links. This allows teachers and schools to use the unit in a number of different ways:

1. to build subject depth and knowledge in Design and Technology
2. to integrate with other KLAs where meaningful links are identified

Organisation

The unit is organised using an adaption of the 5 Es model (Bybee, 1997).

ENGAGE.

The unit begins with a lesson that mentally engages students with an activity or question. It captures their interest, provides an opportunity for them to express what they know about the concept or skill being developed, and helps them to make connections between what they know and the new ideas.

EXPLORE.

Students carry out hands-on activities in which they can explore the concept or skill. They grapple with the problem or phenomenon and describe it in their own words. This phase allows students to acquire a common set of experiences that they can use to help each other make sense of the new concept or skill.

EXPLAIN.

Only after students have explored the concept or skill does the teacher provide the concepts and terms used by the students to develop explanations for the phenomenon they have experienced. The significant aspect of this phase is that explanation follows experience.

ELABORATE.

This phase provides opportunities for students to apply what they have learned to new situations and so develop a deeper understanding of the concept or greater use of the skill. It is important for students to discuss and compare their ideas with each other during this phase.

EVALUATE.

The final phase provides an opportunity for students to review and reflect on their own learning and new understanding and skills. It is also when students provide evidence for changes to their understanding, beliefs and skills.



Unit Overview

Building the Future is intended to enable Stage 3 students to explore and map their local built environment. The unit combines K-6 syllabus outcomes in Science and Technology, HSIE (History and Geography) and English, with suggestions for further exploration through the Creative Arts.

The unit has three components:

Part 1

Building Understanding

...involves students in building an understanding of their neighbourhood through a guided neighbourhood walk, mapping (creating a wall size Neighbourhood Big Map), photography and the collection and creation of narratives. The emotional impact of the built environment is explored through a 'happy mapping' activity (acts as a 'diagnostic' pre-assessment for teachers).

Part 2

Building a Case for Change

...sees students create a 'biography of a building', with student teams choosing a building, area or facility of significance to them and creating an annotated image/poster to be added to the class Neighbourhood Big Map. Student teams then choose an aspect of the environment they would like to see changed or adapted for more effective use and build a case for their recommended change.

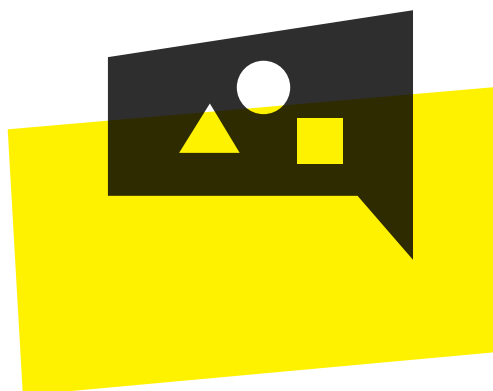
Part 3

Sharing Stories

...is the opportunity for students to share their Biography of a Building and their Case for Change through the Pecha Kucha format, a short presentation supported by 10-20 slides, with a maximum of 10 seconds per slide.

The audience may include representatives from the local council who will assist in assessing the presentations.

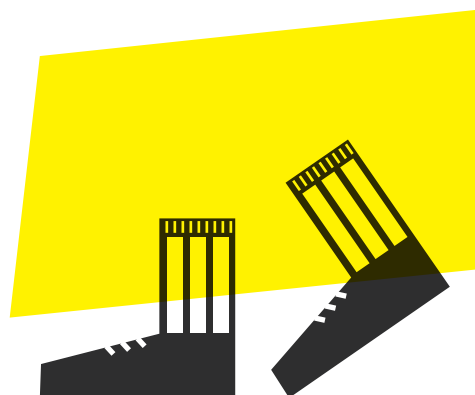
Part 1 Building Understanding



Teacher introduction

Discussion of the concepts of neighbourhood, community and the built environment. Examples of communities and built environments are explored through storybooks, videos, local council maps and internet resources.

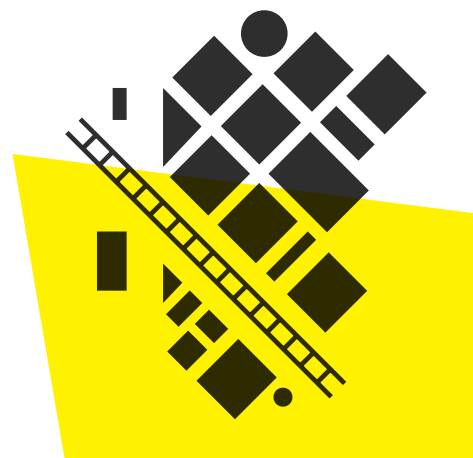
 What does an architect do?



Neighbourhood Walk

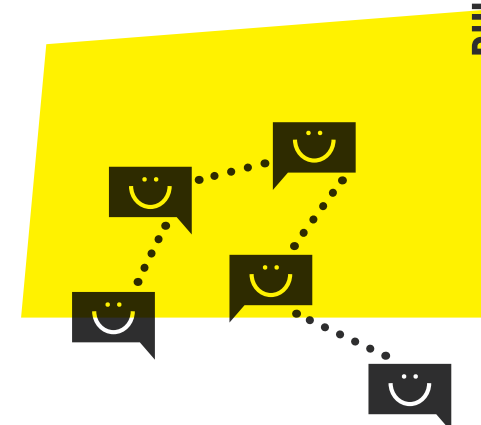
Students are accompanied on a neighbourhood walk by their teacher and a local architect or council planner. Students are provided with a scaffold for observing the physical features of the environment and are also asked to note their emotional response to the various areas they explore ('emotional mapping'). The students' information and impressions are used to annotate a large neighborhood map on their classroom wall.

 Find an architect or planner



The Big Map

Students create a large scale wall map of their neighbourhood, showing streets, buildings and services that are used by or are significant to them (eg educational, transport, recreation, residential, commercial areas).



Neighbourhood Stories and Emotional/Happy Mapping

Students add one short anecdote to the map that has some particular significance to them. This may be a 'random act of kindness', happy memory or other incident that had some impact on them. An overall 'emotional map' is then overlaid on the Big Map through discussion and general agreement.

Part 2 Building a Case for Change



Key Assessment Task 1 **Biography of a Building**

Students create a written biography of a building or system (eg transport) with appropriate visuals (images/diagrams/plans etc.) to be added to the Big Map (eg around edges of map with arrows to site or system).

Process

Working in pairs, students identify a building, facility or system (eg transport) that they wish to explore further. They undertake internet research and, if possible, a site visit, including photography and interviews of current users of their chosen area, to build a better understanding of their chosen building or facility's historical and current use. The site analysis may include plans and elevations.

This task also forms the basis of their Pecha Kucha presentation in Part 3.



Building a Case for Change

Students identify an aspect of their chosen building or facility that they would like to see improved, changed or adapted for better current use.

They build an argument for their proposed change including:

- Identified need
- Images showing area of need
- Proposed change (may include drawings, text, plan, Photoshopped images etc).
- Feasibility comment (how 'doable' is the suggestion?)

Part 3 Sharing Stories

Students present their Biography of a Building/Site Analysis and their Case for Change to an audience via the *Pecha Kucha** format. Aspects covered may include the current usage in relation to: sustainability, aesthetics, culture, safety and function (including accessibility).

The presentation will then identify the aspect chosen for improvement and the case for the recommended change. The change may be also illustrated through drawing, modeling, Photoshop etc.

Each presentation must have 10-20 slides of 10-20 seconds duration. The audience for the presentations should include a member of the local council who will assist in the assessment of each presentation. The presentations will also be peer assessed, and each team member will also award a mark to their partner and comment on their team's learning journey.



* **Pecha Kucha** is a Japanese term that can be translated as “chit-chat”. It is a format for presenting and sharing information. A presenter is allowed to show 20 images, each of which is displayed for exactly 20 seconds, and then talks about whatever project or event or idea is contained in those images. For the purpose of this unit, students, with teacher approval, may choose to reduce their Pecha Kucha to 10 slides of 10 seconds duration.

Key Assessment Tasks Overview

TITLE <i>Building the Future</i>	UNIT/CONTEXT Design and Technology Stage 3
<p>The Design Challenge</p> <p>How can we design better places to live, play and work? How can we build a better future? Can you inspire, inform and communicate your ideas in 6 minutes (maximum).</p>	<p>The Design Brief</p> <p>Create a Pecha Kucha that inspires, informs and communicates your ideas for improving our local neighbourhood.</p>
<p>Key performative assessment: <i>What will students do or produce?</i></p> <p>Students will design and produce an Information & Communication system (i.e. Pecha Kucha) to share their insights, understanding and creative ideas about a particular built environment or system (e.g. park, building, church, skate-park, transport system) significant to them and unique to their local neighbourhood.</p>	
<p>Criteria for assessing learning</p> <p>Students will be assessed on their ability to:</p> <ul style="list-style-type: none"> • evaluate a built environment (site or system) considering sustainability, aesthetic, cultural, safety and functional issues • use technology to store, record and retrieve information and data • create an information and communication product (PechaKucha) • demonstrate understanding of key architectural concepts • share recommendations, new insights, ideas and solutions 	

Foundation statements and process outcomes

Students independently plan, implement and manage the design process and evaluate the results using design criteria.

DMS3.8 Develops and resolves a design task by planning, implementing managing and evaluating design processes.

Students select, safely use and evaluate equipment, computer-based technology and other resources to meet the requirements and constraints of design tasks

UTS3.9 Evaluates, selects and uses a range of equipment, computer-based technology, materials and other resources to meet the requirements and constraints of investigation and design tasks.

Foundation statements and content/strand outcomes

Students consider the implications of design and production in relation to environmental, aesthetic, cultural, ethical, safety and functional factors.

BES3.1 Creates and evaluates built environments, demonstrating consideration of sustainability and aesthetic, cultural, safety and functional issues.

Students identify techniques used to engage audiences and convey meaning when creating information products.

ICS3.2 Creates and evaluates information products and processes, demonstrating consideration of the type of media, form, audience and ethical issues.

Task Content

Key skills & cognitive challenge (Verbs - HOTs)

Students will learn to independently plan, implement and manage and evaluate a design task; analyse and evaluate built environments; consider sustainability and aesthetic, cultural, safety and functional issues; create an information product "Pecha Kucha" and present to a specified audience; use computer-based technology, materials and other resources for research purposes; and evaluate the effectiveness of their product.

Key concepts (nouns)

Students will learn about:

Built Environments: Built environments and systems in the local neighbourhood; communities and neighbourhoods; needs and wants; sustainability and aesthetic, cultural, safety and functional issues

Design and Technology: The design process; environmental, aesthetic, cultural, ethical, safety and functional design factors; an information & communication product – Pecha Kucha; and working to a design brief

Information skills

Defining
Organising

Integrated ICT

Pecha Kucha (using Powerpoint)
Internet research

Prior teaching and learning

Experience using powerpoint; knowledge of the design process; knowledge of local neighbourhood; knowledge of some visual language (e.g. form, symmetry, colour, pattern); and experience drawing and reading different types of maps.

Understand (Big Ideas)

Transferable generalizations and understandings

Built Environments: Built environments are systems; people create, construct, modify and adapt structures and spaces for a wide range of purposes.

Information and Communication: Information and communications are fundamental to most human activity. They can be used to collect, store and organize data and so assist in solving problems; technology is a tool for meeting wants and needs.

Design and Make (produce): The process of designing and making is used by people to satisfy their wants and needs.

Using Technology: The way we use technology can affect people, the environment and the future.

Knowledge integration

Meaningful links to other Key Learning Areas

Linking by 'big ideas': This unit focuses on the 'big idea' of systems: Systems are interrelated and have a structure. Students could undertake study in other KLAs by linking via this big idea. Students could study political, social systems or financial systems as part of HSIE; students could study systems and structures as part of Dance (Creative Arts); students could study planetary systems as part of Science (SciTech).

Linking by curriculum outcomes: Visual Arts; History (Change+Continuity S3)

Linking to literacy and numeracy (English and Mathematics Outcomes): Persuading, explaining, describing; Patterns and algebra; Space and Geometry

Task Marking Guidelines

TASK 1

Site Study & a Case for Change

Criteria (your ability to)	Grade indicator (How well?)
Analyse and evaluate a built environment (site or system) considering sustainability, aesthetic, cultural, safety and functional issues	<p>High: clearly identifies features of each aspect and analyses and evaluates their appropriateness</p> <p>Sound: identifies features of several aspects and makes evaluative comment</p> <p>Basic: comments on one aspect with little elaboration or evaluation</p>
Use technology to store, record and retrieve information and data	<p>High: confident use of information gathering , storage and retrieval technologies (images, text, websites, primary sources, data) to build a case for change</p> <p>Sound: use of some information tools to document a site and identify need for change</p> <p>Basic: limited use of technology, not used for a clear purpose</p>

Identify a need for change in a built environment and recommend a solution

High: clearly identifies a need for possible change and able to recommend a coherent, innovative and detailed solution

Sound: identified need for possible change and a clear solution presented

Basic: lack of clarity in identifying need for change or lacking a clear solution

Demonstrate understanding of key architectural concepts

High: evident understanding of architectural concepts and confident and appropriate use of architectural terminology in documenting site and a need for change


Sound: some demonstrated understanding of architectural concepts and terminology in documenting site and a need for change

Basic: little use of architectural concepts or terminology in documenting site or in identifying need for change

Task Marking Guidelines

TASK 2

Pecha Kucha presentation

Criteria (your ability to)	Grade indicator (How well?)
<p>Create an information and communication product (<i>Pecha Kucha</i>)</p> <p> Pecha Kucha examples</p>	<p>High: well-designed and sequenced <i>Pecha Kucha</i> with clear and purposeful links between images and oral presentation to present a coherent argument</p> <p>Sound: evidence of thought behind relationship of oral presentation and images to present an argument</p> <p>Basic: some relationship between image and oral text</p>

Demonstrate understanding of key architectural concepts

High: evident understanding of architectural concepts and confident and appropriate use of architectural terminology in presentation of site study and coherent 'case for change'

Sound: some demonstrated understanding of architectural concepts and terminology in presentation of site study and 'case for change'

Basic: few architectural concepts addressed or terminology used in presentation of site study or 'case for change'

Share recommendations, new insights, ideas and solutions

High: coherently presented and supported recommendations, insights and innovative solutions showing depth of understanding

Sound: clear recommendation with some supporting material and effective solution

Basic: unsupported recommendation , uncertain solution

Teaching/Learning Sequence

Part 1 Building Understanding

PRE-ASSESSMENT AND BACKGROUND KNOWLEDGE

Purpose

To find out what students already know, understand and can do prior to teaching the unit.

Activity

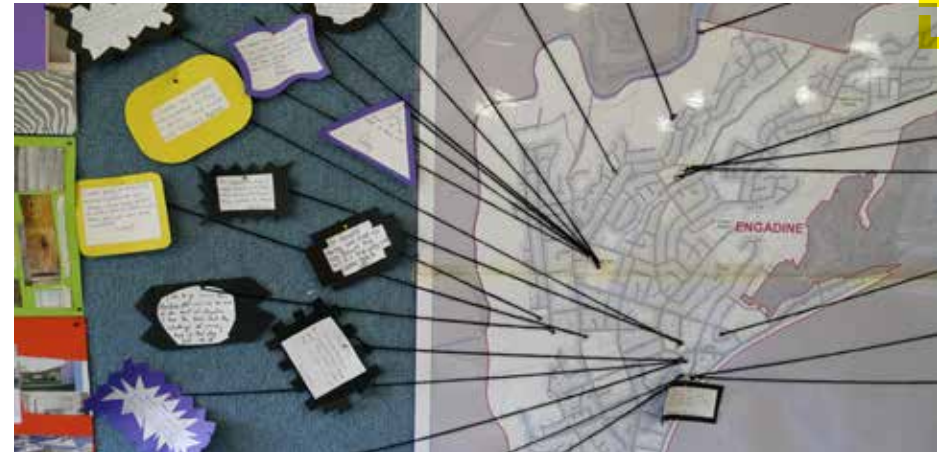
Memory mapping

1. Read Nadia Wheatley and Donna Rawlins' *My Place* to students.
2. Discuss how spaces and places have changed in the local neighbourhood.
3. Students draw a map of the local neighbourhood from memory and respond to following questions:
4. How has your neighbourhood changed?
5. What things would you include as part of the built environment?
6. What factors do you think contribute to changes in the built environment?
7. What does an architect do? What does a town planner do?
8. What are some important things for an architect or town planner to consider when designing a built environment?

Notes

This task should not be marked or assessed. The teacher should use student responses diagnostically to inform modifications to the units in terms of student readiness, interests and learning profile. See "Building On – Enrichment and Extension" for ways to modify this unit in response to the needs of your students.

8. What does an architect do?



ENGAGE.

Purpose

To engage students with the topic at an affective level

Activity

The Big Map

1. Obtain a map of the local neighbourhood (LEP map) from your council and enlarge to wall size if possible.
2. This Big Map will be developed, annotated, added to and act as an information storehouse as students work through the unit.

Activity

Happy Mapping

1. Students identify places on the Big Map that remind them of happy times, positive experiences and/or places of significance to them, (e.g. park, library, oval, skate park, family or friend's home, cinema, pool etc)
2. Students add one short anecdote to the map that has some particular significance to them. This may be a 'random act of kindness', happy memory or other incident that had some impact on them. An overall 'emotional map' is then overlaid on the Big Map through discussion and general agreement.

Teaching/Learning Sequence

EXPLORE.

Purpose

To introduce elements of the built environment (sustainability, aesthetic, cultural, safety and functional) and architectural concepts and vocabulary.

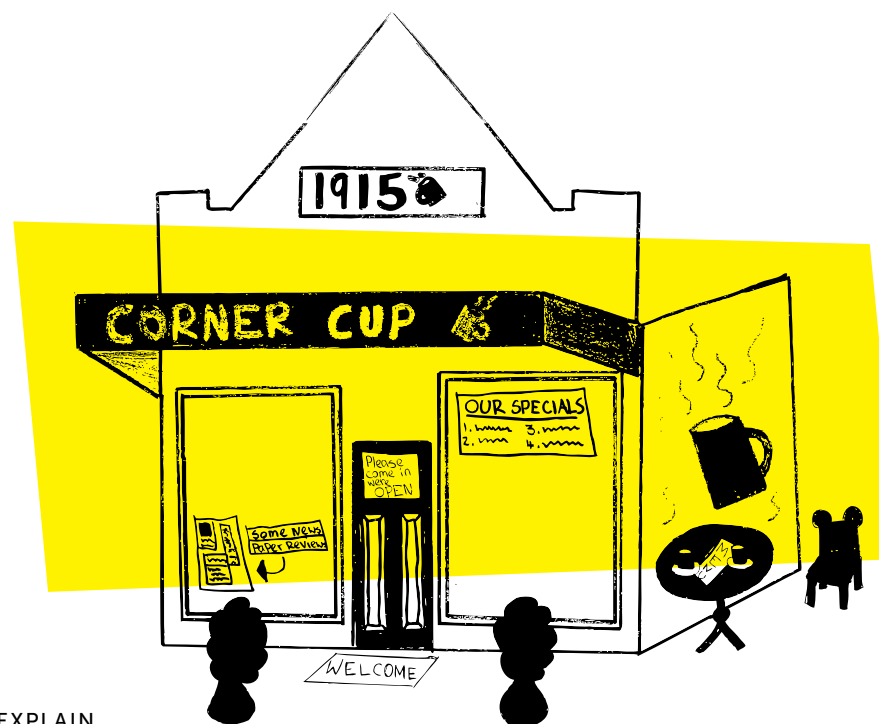
Activity

Neighbourhood Walk

1. Students explore their local neighbourhood through the eyes of an architect or town planner who introduces key architectural vocabulary, tools and planning concepts. (see [Glossary](#) pages 16-17 and [Resources](#) pages 18-19)
2. The architect or town planner will select one or several buildings to analyse in depth as a model for the next task (Student Site Study and Biography of a Building).

Extension

Add an additional frame e.g. architectural or historical frame.



EXPLAIN.

Purpose

To explain and interpret a specific built environment in relation using new knowledge, skills and understandings

Activity

Site Study/Biography of a Building

1. Students select a site of significance to them. Student may use the place indicated in the Happy Mapping activity or another choose a different site.
2. Each student undertakes a Site Study creating an annotated image/poster to be added to the Neighborhood Big Map. The image/poster can include annotations, drawings and explanations and will be used to inform the next activity and/or
3. Students create a written biography of a building or system (eg transport) with appropriate visuals (images/diagrams/plans etc.) to be added to the Big Map (eg around edges of map with arrows to site or system).

Extension

Students selects 2 sites, compare and contrast

Teaching/Learning Sequence

Part 2 Building a Case for Change



ELABORATE.

Purpose

To develop critical judgements about the built environment

Activity

1. Students select one aspect (e.g. sustainability, aesthetic, cultural, safety and functional) of their chosen site or system they would like to see changed or adapted.
2. They build a case for their recommended change. This may include written argument, explanation, drawings, plans, digitally altered images etc



I remember having my first
chocolate ice-cream sundae.
It was delicious.

Mikaela

Part 3 Sharing Stories

EVALUATE.

Purpose

To meet a design brief

1. Student are presented with the design brief: Create a Pecha Kucha that inspires, informs and communicates your ideas for improving your chosen site in your local neighbourhood.
2. This activity draws on all previous experiences and is the key performative task for the unit.
3. Students present their Biography of a Building and their Case for Change to an audience via the Pecha Kucha format. Aspects covered may include the current usage in relation to: sustainability, aesthetics, culture, safety and function.
4. The presentation will then identify the aspect chosen for improvement and the recommended change. The change may be also illustrated through drawing, modeling, Photoshop etc.
5. Each presentation must have 10-20 slides of 10-20 seconds duration. The audience for the presentations should include a member of the local council who will assist in the assessment of each presentation. The presentations will also be peer assessed, and each team member will also award a mark to their partner and comment on their team's learning journey.

Glossary A - P

Arterial street	A pathway that facilitates movement
Built environment	Human-made surroundings that provide the setting for human activity
Circulation	The flow of people through a building
City block	Smallest area that is surrounded by streets
City grid	The street make up of a city
Edge city	Concentration of business, shopping and entertainment outside a traditional urban area in what had recently been a residential suburb or semi-rural area
Edge conditions	Conditions that make up an edge city such as shopping centres, retail strips, industrial zones etc.
Elevation	A scale drawing of the side, front, or rear of a structure
Floor area ratio	A ratio defined by local councils that determines allowable floor space area in relation to size of block
Green space	Areas of park, nature, community playing fields
Greenfield land	Unfenced open fields, urban lots or restricted closed properties kept off limits to the general public by a private or government entities.
Identity	The defined character of a place

Infill	A building or development that replaces another between two existing buildings
Intersections	A place where two road / circulation paths meet
Local community	A community has been defined as a group of interacting people living in a common location. The word is often used to refer to a group that is organized around common values and is attributed with social cohesion within a shared geographical location, generally in social units larger than a household.
Local nature reserve	A nature reserve usually zoned or held by local council for parkland or wetland development
Master plan	A comprehensive long-term strategy
Orientation	Location or position relative to the points of the compass.
Parkway	Broad landscaped highway, often divided by a planted median strip.
Pedestrian routes	Defined routes for pedestrian friendly walking
Place making	Three variables of sense of place are: legibility, the perception of and preference for the visual environment, the compatibility of the setting with human purposes
Plan	A drawing or diagram made to scale showing the structure or arrangement

Glossary P - Z

Plot	A measured area of land; a lot.
Pocket park	A very small park in a usually large city / mixed use development
Promenade	A public place for dedicated to social public walkway
Public open space	A public place for dedicated to public activities
Reserve	A piece of land kept on hold by the local councils for green public space
Site analysis	A series of drawings, images that convey the main elements of a site
Streetscape	The overall character of a street



Subdivision	When a block of land is divided into separate sections of land
Terrain	The surface features of an area of land; topography
Transport nodes/ interchange	A zone of where transport hubs meet (e.g. bus and train interchange)
Typology	The study or systematic classification of types that have characteristics, features or traits in common
Urban sprawl	Where a city spreads in area footprint
Urban village	An urban village is an urban planning and urban design concept. It refers to an urban form typically characterized by: Medium density development, Mixed use zoning, The provision of good public transit, An emphasis on urban design - particularly pedestrianization and public space
Urban voids	Spaces of opportunity in a city grid
View sharing	Designing to ensure views can be shared across developments
Village green	A village park consisting of a plot of grassy land
Vistas / view corridors	A distant view or prospect, especially one seen through an opening, as between rows of buildings or trees
Zoning	A section of an area or territory established for a specific purpose, as a section of a city restricted to a particular type of building

Resources

Online

What Does an Architect Do?

Google Earth www.google.com/earth/index.html

Near Map www.nearmap.com

Historic Houses Trust www.hht.net.au

State Library of NSW www.sl.nsw.gov.au

National Library of Australia www.nla.gov.au/what-we-collect/maps

NSW Net www.nswnet.net

Department of Planning www.planning.nsw.gov.au

NSW Housing Code housingcode.planning.nsw.gov.au

Department of Transport and Infrastructure www.infrastructure.gov.au

Urban Taskforce www.urbantaskforce.com.au

e-Plan www.lpi.nsw.gov.au/land_titles/eplan

Books

Urban Space, Rob Krier

My Place, Nadia Wheatley and Donna Rawlins

The Design of Sydney – Three decades of change in the city centre,

Peter Webber

Council Services

Your local council will be a useful source for much of the information you will need for this unit. Your council's website is a good place to start and the main branch of your local library will also be able to provide useful information.

Which council area am I in?

The 'Council Search' tool enables you to identify which council area your suburb or town is in. It also provides a web link to your local council services: www.dlg.nsw.gov.au/dlg/dlghome/dlg_suburblookup.asp?ba=b



How do I find maps of my area?

Most councils provide a range of maps of their area online. They often relate to the Local Environment Plan (LEP) produced by each council. A LEP is a legal instrument that imposes standards to control development and reserve land for open space, schools, transport or other public purposes, as well as control advertising and protect trees and vegetation (for more information, go to: www.planning.nsw.gov.au/lep/pdf/guide_preparing_local_environmental_plans.pdf)

The LEPs provided by councils might include zoning maps and heritage conservation area maps. Councils may also provide suburb maps and ward maps. Ask to speak to the Senior Strategic Planner at your local council to request a PDF version of the LEP without colour hatching applied to use in your classroom activities. The PDF file can then be taken to a printing centre and printed to A0 size.

Look at Randwick Council's LEP page for examples of the maps available: www.randwick.nsw.gov.au/Places_for_people/Building_and_development/Planning_strategies_and_controls/Local_Environment_Plan/index.aspx

Resources

Are there other useful mapping tools?

In addition to sources like Google Maps, the NSW government has provided extensive geospatial information online through the 'Spatial Information Exchange' (six.nsw.gov.au/wps/portal).

Mapping information is freely available to the NSW public through 'Six Lite' (lite.maps.nsw.gov.au). Users can search for individual properties on satellite images anywhere in NSW. Those searching for Sydney locations can toggle between contemporary aerial photos and the same view taken in 1943. (See the [Six Lite help guide](#)).

Are there sources for the history of your local area?

One of the most important sources for information about how an area has changed over time will be your local studies librarian. Most councils have someone in this role in the council library. They may be able to help you to access locally written histories about an area, they may have photographs of their council area, as well as archival maps and plans, local newspaper indexes and other sources.

Your council archives are also a possible source of information about buildings in the council area. These may include early plans and elevations.

Local Historical Societies can be worth investigating, particularly if there is no local studies service available in your area. You can locate your nearest historical society through an online directory prepared by the Federation of Australian Historical Societies: www.history.org.au/New%20South%20Wales.html

Are there pictures available of my area?

Your local council may have an online image database of you area such as that provided by North Sydney Council: photosau.com.au/stantonpictures/scripts/home.asp

If your council does not provide local images online, don't forget to check with your local library.

You can also search for online images at the State Library of NSW: acms.sl.nsw.gov.au

Trove, Australia's online research tool is also very useful: trove.nla.gov.au

You can also search historical NSW newspapers for information about your area on Trove.

Are there plans and elevations available of buildings in my area?

This is likely to depend on the building chosen, its location and resources available through the council. Some councils make plans available through their archives, such as North Sydney Council: www.photosau.com/StantonBuildingPlans/scripts/home.asp

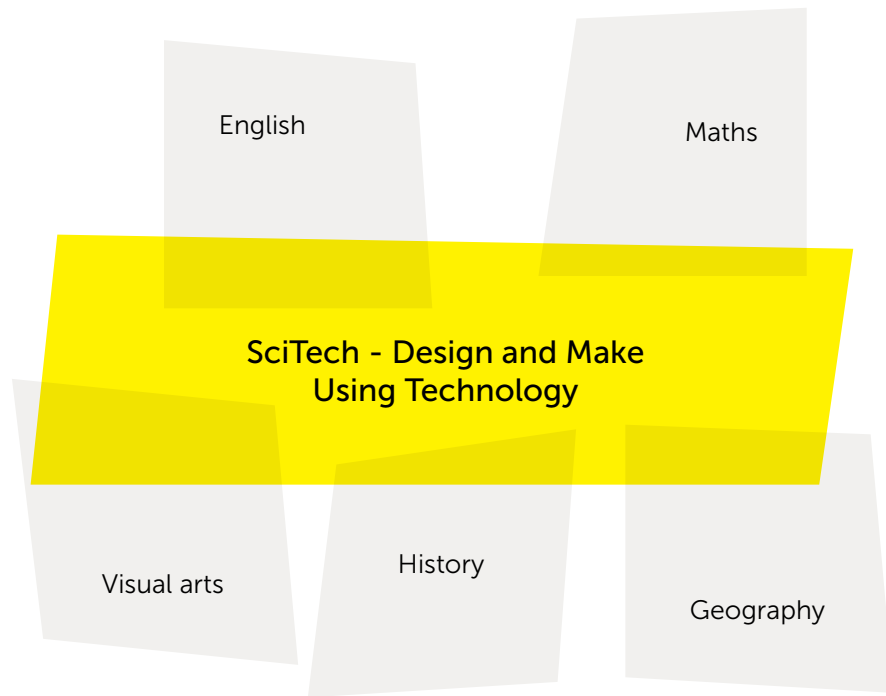


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Right next to Forbe's Creek is my grandma's house. Here we make things, eat yummy desserts and meals. She always likes it when I stay over.

Sean

Cross-KLA Integration



The Design and Technology (*SciTech – Design and Make and Using Technology strands in K-6 syllabus*) core unit offers many authentic interdisciplinary opportunities for the integration of other Key Learning Areas as students move through the core unit:

History (*Change and Continuity*) aspects include students exploring the history of their neighbourhood, changes over time and impacts of change on people and places. Historic houses and other sites may be chosen for the Site Study and the Case for Change focused on adaptive reuse.

English: There are many opportunities for the demonstration of syllabus outcomes in English, including historical narratives, the 'biography of a building', personal stories or poetry relating to a sense of place and the written and oral components of the two key assessment tasks.

Visual Arts: Opportunities for the demonstration of syllabus outcomes in Visual Arts include student sketches and photography during their site study, graphic communication opportunities in their Case for Change (e.g. photographs, plans, elevations) their A4 visual presentation contributions to the Big Map and the visual design elements of their Pecha Kucha.

Geography: Opportunities for the demonstration of syllabus outcomes in Geography include mapping components (using Google Maps, NearMap, council maps, their own sketch maps etc). Other curriculum aspects include ecological sustainability and socio-cultural influences on the natural and built environment.

Mathematics: Opportunities for the demonstration of syllabus outcomes in Mathematics include the Working Mathematically, Space and Geometry and Measurement strands inherent in mapping, scale drawing, survey data, historical timelines and timing aspects of the Pecha Kucha.

Syllabus Links

The current (as at February 2013) NSW Science and Technology K-6 syllabus is found here: k6.boardofstudies.nsw.edu.au/go/science-and-technology.

The *Building the Future* unit enables students to demonstrate Outcomes from the current syllabus.

This unit may be implemented in its existing form in 2013 and 2014.

Future Proofing

The Building the Future Unit is designed to be readily aligned to the Science and Technology Outcomes in the NSW BoS Syllabus for the Australian Curriculum (for optional implementation 2014, mandatory implementation 2015).

The Board of Studies overview of the NSW Syllabus for the Australian Curriculum is here: k6.boardofstudies.nsw.edu.au/go/science-and-technology.

The *Building the Future* unit focuses on the Built Environments strand, as an aspect of the Made Environment in the (NSW Syllabus for the Australian Curriculum) Science and Technology syllabus:

The Built Environments (BE) – students develop their understanding about places and spaces, and their uses. People create, construct and modify their surroundings for a wide range of purposes. The environments people build are an important part of our communities and culture.

NSW BoS Syllabus for the Australian Curriculum Stage 3 Outcomes met by the unit (A student):

ST3-14BE (Built Environments)

Describes systems in built environments and how social and environmental factors influence their design

ST3-5WT (Working Technologically)

Plans and implements a design process, selecting a range of tools, equipment, materials and techniques to produce solutions that address the design criteria and identified constraints

ST3-2VA (Values and Attitudes)

Shows a willingness to engage in finding solutions to science-related personal, social and global issues, including shaping sustainable futures

ST3-1VA (Values and Attitudes)

Shows interest in and enthusiasm for science and technology, responding to their curiosity, questions and perceived needs, wants and opportunities

ST3-2VA (Values and Attitudes)

Demonstrates a willingness to engage responsibly with local, national and global issues relevant to their lives, and to shaping sustainable futures

NB: The unit could focus centrally on the Built Environments and Working Technologically (Stage 3) Outcomes, while addressing one or more of the Values and Attitudes outcomes.

NSW Syllabus for the Australian Curriculum Outcomes:
syllabus.bos.nsw.edu.au/science/science-k10/outcomes/

Credits



HISTORIC HOUSES TRUST



Education &
Communities

This unit is the culmination of collaboration between:

The NSW Architects Registration Board

The Historic Houses Trust of NSW and

Sydney Region, NSW Department of Education and Communities

The pilot schools were:

Bondi Beach Public School
Brighton-le-Sands Public School
Daceyville Public School
Engadine West Public School
Oatley West Public School
Sutherland Public School
Tharawal Public School
Undercliffe Public School
Waverley Public School

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