

Your school, your future

Your school, your future invites students to explore and understand their role as a user in their own school environment. Their research and understanding of their school environment will act as a catalyst for change and increased ownership of the school environment.

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BENCHMARKS

CURRICULUM AREAS

CROSS CURRICULUM PRIORITIES

TEACHING LEVEL

English, Mathematics, History, SOSE, Arts, Technology & Design
Asia and Australia's Engagement with Asia, Sustainability

3-6 + 7-10 *Depending on the context and approach, this unit could be adapted for late middle and/or senior school curriculum, but is ideally suited to middle school grades as a way to increase ownership of school spaces and foster critical understandings of their own role in the school environment.

EXPECTED DURATION

The unit length is ideally 4 – 5 weeks in duration, but could be extended to run the length of the school term. Each phase (inquire, ideation and implementation) could include the structured activities outlined here as well as team and individual studio extension and development time. Suggested outcomes could include individual or team concept panels, reports, rapid prototypes, oral presentations, digital photography, compositing, videography, etc. Sample design activities below envisage a typical class size of 25 – 28 students, working in teams of 4 – 5. Team size is flexible, but students should always work in groups, not individually.

EXERCISES

1. Site Audit
2. Site Mapping
3. Site Storming
4. Site-o-type

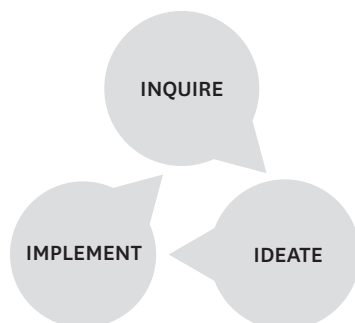
RESOURCES FOR COMPLETION

- Internet connection with access to Google Maps or Google Earth and Youtube
- Digital Cameras to document space and record user interviews
- Blank A3 (or larger) White Butcher Paper Sheets
- Pencil or pen for each student
- Measuring tools (ie. measuring wheel, tape measures, etc) to chart the space.
- Various presentation materials (such as coloured card, foam core and recycled materials) to develop concept posters, three-dimensional prototypes, etc.
- (Optional) 'Magic PPlan, iPhone app (for measuring)

RESOURCES FOR DOCUMENTATION

- Document student reflections in a folio or other method preferred by the teacher
- Digital camera or scanner to document and respond to design challenges
- Adobe CS or other photo and video editing software
- Blogging or other web-based responses.

DESIGN PHASES AND CAPABILITIES



Capabilities for creating successful learners, confident and creative individuals, and active and informed citizens.

Intercultural Understanding



Ethical Behaviour



Personal & Social Capability



Critical & Creative Thinking



ICT Capability



Numeracy



Literacy



[Visit Design Minds](#) for more info on design phases.

[Visit the Australian Curriculum website](#) for more info on general capabilities.

Site Audit



40 minute lessons x 3



Inquire

METHOD

All class exercise, students divided into teams for group work. Teams should be created by the teacher facilitator if at all possible.

ACTIVITY

Site Audit is a preliminary set of exercises designed to help students and teachers identify and interpret school spaces that students may wish to audit. The role of the user in the design process is introduced and students are scaffolded through the initial stage of the process with a focus on empathy, user needs and the importance of research.

Suggested steps.

- in teams on butchers paper, students identify and list areas of the school environment that they like as well as areas that they don't like. Areas/space shouldn't be defined by school rules, out-of-bounds, etc – the whole school grounds (including points of egress and transportation hubs) should be up for consideration.
- once teams have developed a list, each team shares out to the main board and teacher records areas, noting frequency of some areas.
- on a new sheet of butchers paper, each team will select one space that they like, and one space that they don't like and conduct a Strengths, Weakness, Opportunities and Threats (SWOT) analysis on each one. Teams should pick the spaces democratically, one method may be to distribute post-it notes to each team with each student placing a post-it note next to the area that they would like to review – the space with the most post-it notes being selected.
- once teams have completed SWOT analysis, each team will share-out their findings with the teacher recording analysis findings on main board, again noting frequency of some findings.
- at this stage, it is suggested that a guest expert attend the class, and speak about the spaces that the students have identified, and the challenges in developing safe, productive and engaging school environments. Suggested experts could include Senior Teachers, administration or Facilities staff.
- teacher introduces the role of the user in the design process. As students are the users already, they are encouraged to think about the spaces they have identified from different viewpoints (teachers, administration, facilities, students from other year levels or parents) and conduct another SWOT analysis from a different point of view. note: ultimately, students will design a space with one user in mind – however it is a useful exercise to consider the needs of others (empathy) when designing.

REFLECTION

- all research/brainstorming boards are collated into team folios.
- students given opportunity to photograph/document boards digitally.
- introduce some example school spaces from other countries in the region (Singapore, Japan, Pacific Islands, etc) consider similarities and differences – what might be some reasons for the difference in spaces? note: this is a rich area of exploration and discovery for students and can be dived into in a deeper way. Students could identify cultural and historical areas of interest and explore how schools operate in these spaces. Schools could also be examined from a historical perspective – and students could research and explore how the spaces have changed over time.

Prompts for reflection:

- How has your understanding of your school changed?
- How might you improve your school space for all students?

DOCUMENTATION

- Students set up group wiki or blog to record research, ideation, data collection, etc.
- Students update in real time and present findings progressively.

Site Mapping

 40 minute lessons x 3

 Inquire

METHOD

All class exercise, students divided into teams for group work. Teams should be created by the teacher/facilitator if at all possible.

ACTIVITY

Site Mapping builds on students' initial interpretation and analysis of school spaces. Having selected a space that they like and a space that they don't, in teams students will analyse the space and produce empirical data relating to each space. This data will be used to support ideation and implementation of design outcomes in the next phase of the design process.

Suggested steps.

Connections to other curriculum areas in this phase could include: English, Mathematics, History, SOSE, ARTS and Technology & Design. If possible, "experts" (i.e. other teachers, local community members, etc) should be brought in to support this process.

Teacher introduces a variety of collection methods for empirical data collection. These could include:

- developing a set of questions to interview users of identified spaces. Consider use of technology to support this process. Questions should be drafted in teams, and approved by teacher.
- developing a set of questions to interview an "authority" of the space with a view to identifying the history, culture or design problems of identified spaces and measuring the space (i.e. the volume of an area, the frequency of use, the average temperature, the length of time user's spend in the space on average, etc).
- charting the space (i.e. accurate blueprints, mud map, entry/exit points, etc) and documenting the space (i.e. photography – consider panoramic imaging, videography, timelapse, sketching, etc).

REFLECTION

All research/brainstorming boards are collated into team folios.

Students given opportunity to photograph/document digitally.

Prompts for reflection:

- How has your understanding of your space changed?
- Where your initial assumptions about the space proved correct by the data? If not, what are the differences?

DOCUMENTATION

Students continue to record data/findings in group wiki or blog to record research, ideation, data collection, etc. Students update in real time and present findings progressively.



Site Storming



3-6 40 minute lessons



Inquire/ Ideate

METHOD

All class exercise, students divided into teams for group work. Teams should be created by the teacher facilitator if at all possible.

ACTIVITY

Site Storming allows students' initial interpretation of the spaces to be validated or invalidated by the empirical data that has been collected. Their findings will form the basis for a "How might we...?" question that will be used to support ideation and implementation of design outcomes in the next phase of the design process.

Suggested steps:

- with teacher support, teams prepare collected data and share out with other groups. Teacher records data on the main board, noting frequency of some information and using data collected to validate each team's data (and unpacking possible discrepancies in data collection i.e. time of day, what day data collected, etc.)
- once all data is collected and organised, each team develops a "How might we...?" question to begin brainstorming process. A "How might we...?" should address the following things:

+ the user || the space || the desired outcome +

An example of this in a sentence: *How might we increase participation of Year 8 girls on the large oval?*

The question should be open ended and not assume the answer! An example of how not to ask this question is: *How might we get more year 8 girls to have fun running around the oval at lunchtime?*

In that example, the outcome is already defined – and doesn't take into consideration that the users (year 8 girls) might not have fun running around the oval at lunchtime!

Once teams have developed their "How might we...?" questions with support from the teacher, teams can begin the brainstorming process. Here are some helpful youtube videos on **how to** and **how not** to brainstorm. Some general rules for brainstorming might be:

- encourage wild ideas
- defer judgement
- one conversation at a time
- stay focused on the topic
- Go for quantity (at this stage – you can refine later)
- write everything down
- be visual

Once each team has finished brainstorming, they will need to narrow down their idea. To help refine the information, the team could start to refine with three ideas from their initial brainstorming:

- one wild idea
- one practical idea
- the darling

Once the team has narrowed it down to three ideas, they will need to choose one prototype. If they're having trouble narrowing it down, can they combine two ideas? The process should be democratic at all times – if groups are unable to come to an agreement verbally, then consider using post-it note voting to determine the most popular choice.

Site Storming

CONT.

REFLECTION

All research/brainstorming boards are collated into team folios.

Students given opportunity to photograph/document digitally.

Prompts for reflection

- How has your understanding of your space changed?
- At the start of the project, you were asked how you might improve the school space for all students. Has your answer changed or remained the same? Why?

DOCUMENTATION

Students continue to record data/findings in group wiki or blog to record research, ideation, data collection, etc. Students update in real time and present findings progressively.



Site-o-type



3-6 40 minute lessons



Ideate + implement

METHOD

All class exercise, students divided into teams for group work. Teams should be created by the teacher/facilitator if at all possible.

ACTIVITY

Site-o-type allows students' to create rapid prototypes that address their design solutions ("How might we question...?"). The rapid prototype will form a part of their final concept presentation to other teams and guest experts.

Suggested steps.

Now that each team has narrowed their design solution down to one idea, they will need to create a rapid prototype. The emphasis on the prototype should be as a proof of concept – not a working model. Where possible, everyday materials should be used to increase creative thinking and innovative design solutions (for more information on rapid prototyping, view Cooper-Hewitt's Ready, Set, Design **handout** and **video**), as well as IDEO's Prototyping for Elmo's Monster Maker iPhone App with a giant iPhone foam-core cut-out here).

Some general rules for rapid prototyping might be:

- build to think
- fail early to succeed sooner
- don't fall in love with your idea
- if a prototype fails are there elements you could still use?

Teacher should support students in packaging and presenting their research and findings on a concept panel to support the design solutions embodied in the prototype.

Presentation:

Guest experts and other staff, community members and other facilitators that have been involved throughout the design process should be invited back to hear the students present their design solutions. Guest should be encouraged to ask constructive questions – but try to avoid overly critiquing the design solutions. There should be no "winner" – just different design solutions.

REFLECTION

Students continue to record data/findings in group wiki or blog to record research, ideation, data collection, etc. Students update in real time and present findings progressively.

Prompts for reflection:

- How has your understanding of your school changed?
- How might you improve your school space for all students?

DOCUMENTATION

Students finalise their findings and document their design solution in the group wiki or blog to record research, ideation, data collection, etc. Students update in real time and present findings progressively.

