

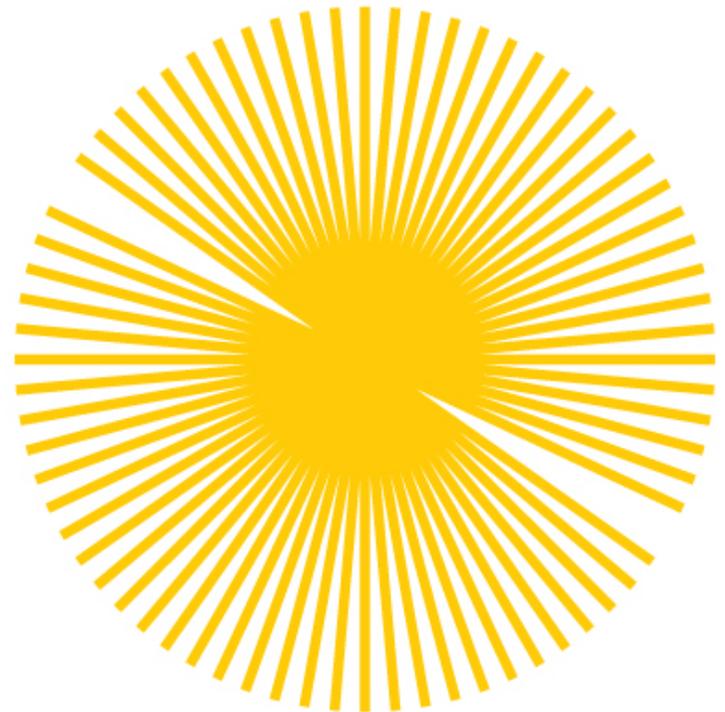
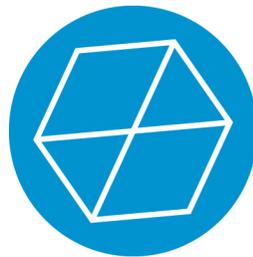
DESIGN

EMERGENCY

Party Planners

Stage 2 Teaching notes

Sally Drury: Glebe Public School



Party Planners

Syllabus Links

Working Technologically

Applies a design process and uses a range of tools, equipment, materials and techniques to produce solutions that address specific design criteria ST2-5WT

UT S2.9 Selects and uses a range of equipment, computer-based technology, materials and other resources with developing skill to enhance investigation and design tasks.

Information

Describes ways that information solutions are designed and produced, and factors to consider when people use and interact with information sources and technologies ST2-15I

IC S2.2 Creates and evaluates information products demonstrating an understanding of the needs of particular audiences.

Products

Describes how products are designed and produced, and the ways people use them ST2-16P

PS S2.5 Creates and evaluates products and services considering aesthetic and functional factors.

Quality Teaching Dimensions

Intellectual quality:

- Deep knowledge
- Deep understanding
- Problematic knowledge
- Higher order thinking
- Metalanguage
- Substantive communication

Quality learning environment:

- Explicit quality criteria
- Engagement
- Social support
- Student self-regulation
- High expectations
- Student direction

Significance:

- Background knowledge
- Cultural knowledge
- Knowledge integration
- Connectedness
- Narrative

General Capabilities

Literacy

Numeracy

Information and communication technology capability

Critical and creative thinking

Personal and social capability

Ethical understanding

Intercultural understanding

DESIGN EMERGENCY

What is Design Emergency?

Design Emergency is a program that introduces students of all ages to design, and design thinking skills. The program helps students understand the way designers work and equips them with the same tools to help them improve the lives of their family, school and wider community. Students taking part in the Design Emergency program make prototypes, create personas, use their imagination and think outside the box. The program provides opportunities for students and teachers to work with practicing designers.

It will fulfill a number of syllabus outcomes and support Quality Teaching dimensions.

Literacy, Numeracy, Science and Technology, Creative Arts and HSIE

How to use this document

This template document offers teachers a place to write their own program and lesson plans that directly connect to the design thinking process.

On the left hand side of the page are a number of activities that take you through the stages of the design thinking process. The process itself is not strictly linear and teachers can re visit activities or whole stages of the process if necessary to gain greater insights or find more creative solutions.

It is not necessary to complete all activities especially in the Discovery stage. Chosen activities will be dependent on the nature of the challenge, time and resources.

It is very important that this is a living document so please don't hesitate to email any changes or additions you think are necessary to a.mauer@object.com.au

Documenting your Design Emergency journey

All designers document their process, usually in a journal. Students may also like to document their design journey via a blog, wiki or video

For more information on design thinking visit

<http://www.designthinkingforeducators.com>

<http://digitaleskimo.net/approach/considered-design>

<http://dschool.stanford.edu/>

Assessment

Formative Assessment task (s)

Draw and label how you think an object is designed, made and used, e.g. a lunch box, a football or drink bottle.

Include how and why you think it has changed over time

Summative assessment task(s):

- Multimodal electronic journal entries recording the process of designing, producing and marketing a product (text, voice, images)
- Flow chart recording the process product production
- Peer assessment on contribution to group tasks - jointly constructed rubric
- Communicating marketing ideas - using technology

Design Emergency Methodology

Title	Activity	In Class Design Tasks		
Introduction to Design	<p>As a class discuss and create an inspiration cloud or mind map about design. Students may also like to create a collage about design.</p> <p>Introduce students to the Design Emergency Methodology</p> <p>Design Emergency Methodology</p> <p>Identifying – How do I Identify an issue?</p> <p>Discovering – How do I find out about the current situation?</p> <p>Interpreting – How do I interpret my discoveries to find the core problems?</p> <p>Imagining – How do I generate ideas that could provide possible solutions?</p> <p>Experimenting – I have an idea how do I build it?</p> <p>Developing – How do I develop my experiments so they can be realised?</p>	<p>Formative assessment: in a flow chart record all the steps taken by someone to make a new object.</p> <p>What is a product? Have a range of real products from the past, present and images of futuristic objects on display (include objects that have not changed like a violin)</p> <p>What does a designer do? Brainstorm using Bubbl.us</p> <p>How does the design of a product impact on our daily life? A tea pot that drips from the spout, a toaster that cannot fit thick bread...</p> <p>How do you select the most effective design? Add to collaborative brainstorm</p> <p>How does a producer communicate their product with the community? In pairs students explore advertisements – current and historical, to identify the key message and describe the language, images and position of both to communicate the message. Share with class using information to support and elaborate on their point of view</p> <p>Student directed questions</p> <p>What is a product? What does a designer do? What is a party? What makes a party successful / what doesn't work at a party? How much do you think it cost to organize and run a party? How do you think children of other cultures celebrate / party?</p> <p>Introduce students to maxjournal app for students to record the process throughout the unit</p>		
		Time	Tools	Syllabus Links
		2 x 40 min lessons	Virtual brainstorm Bubbl.us D.E.S.I.G.N. Gecko Press Word as Image Ji Lee Maxjournal app	ST2-1VA shows interest in and enthusiasm for science and technology, responding to their curiosity, questions and perceived needs, wants and opportunities ST2-5WT using creative thinking techniques, including brainstorming, mind-mapping, sketching and modelling

Identifying

Title	Activity	In Class Design Tasks		
Identifying an Issue and setting the Design Goal	<p>Students need an issue and a design goal that inspires them, motivates them and has meaning in their lives.</p> <p>The issue is generally a simple identified problem such as 'the sports equipment is messy, broken, dirty and not used'</p> <p>The design goal is the ultimate motivation behind why the students want to fix the problem.</p> <p>Find places (physical or virtual) in the school environment or community and identify issues that are experienced in these places.</p> <p>Select by group or class the place and issue that is most interesting or popular. This is your Issue.</p> <p>Ask the class what excites them about improving this area.</p> <p>Ask why, why, why, why, why? The purpose is to ask directed "why" questions in response to each consecutive answer 3 – 5 times. This technique helps create a scaffold between the Issue and the Design Goal.</p> <p>Usually the last answer to your 'why' question will be a goal. Ask 'why' to a few different students to see if you can uncover a few different goals.</p> <p>Choose three goals and construct them into a sentence.</p> <p>Display the Issue and the Design Goal on the Design Emergency Wall in the classroom to be referred to.</p>	<p><u>Setting the scene</u></p> <p>Local walk to warehouse that includes products and objects that are artistic, antique, represent another time or constructed from recycled materials.</p> <p>Discuss the range of products and how the products have been produced</p> <p>Each student selects and objects observed on the excursion and maps the process from design to user and the possible reasons for the use of materials. Then sketches alternative designs and records possible materials for alternative construction.</p> <p>In pairs student use the information on the back of a product and the Powerhouse's Junior Designer 'The life of a Product' flow chart work out the environmental impact of each product</p> <p>Who likes having a party? Are all parties fun? Record ideas</p> <p><u>Goal Setting</u></p> <p>Students set goals using the IDEO 5 whys (DE pg 6) exploring why is our key idea important.</p>		
		Time	Tools	Syllabus Links
		3 x 40 min	Virtual brainstorm Bubbl.us Maxjournal app	ST2-5WT using creative thinking techniques, including brainstorming, mind-mapping, sketching and modelling EN2-1A interpret ideas and information in spoken texts and listen for key points in order to carry out tasks and use information to share and extend ideas and information (ACELY1687) ST2-16P examine the process used to produce an existing product by creating a flowchart from design to producing the finished product

Discovering

Now that the students have decided on their Issue and the Design Goal/s they want to achieve they can set to work on Discovering.

In Discovering designers research the current situation by collecting information that will allow a greater understanding of the Issue and the users.

Designers use empathetic research to help them understand the user. Getting into the shoes of the users allows a better understanding of the current situation. This is user-centred design. Watching what people do, asking questions and observing how they interact with their environment gives the designer clues about what the user thinks and feels. It also helps them learn about what they need.

Designers avoid trying to find solutions at this stage.

For example one issue may be that the sports equipment is broken, a possible solution is to buy more sports equipment. This quick and easy solution may not be the correct resolution to the Issue; you need to discover why the sports equipment is broken in the first place.

Title	Activity	In Class Design Tasks		
Share what you know	<p>Chances are students already know something about the issue.</p> <p>How:</p> <ul style="list-style-type: none"> • They can share and document what they already know as a group or individually. • Ask students to write one piece of information on a post it note and read it out loud. Get some feedback from others. • Make sure students don't make assumptions or attempt to find solutions. They should try and stick to facts. • Figure out areas and issues that they don't know about. • Group the post-it notes together to help plan the discovery research. 	<p>Students design open-ended questions to ask each other about their party experiences and then interview each other digitally recording the interview relating to their experiences of parties.</p> <p>Students interview students from other classes</p> <p>Part of homework will be to interview family members about their party experiences; this can be done with pen and paper if technology is not available.</p> <p>Entry in multimodal journal</p>		
		Time	Tools	Syllabus Links
		1 x 40 min	Post-it notes Whiteboard Linoit.com Maxjournal app	ST2-5WT using a range of research techniques to access information relevant to the task EN2-1A interpret ideas and information in spoken texts and listen for key points in order to carry out tasks and use information to share and extend ideas and information (ACELY1687)

Title	Activity	In Class Design Tasks		
<p>Create to Discover</p> <p>‘Thinking with your hands’</p>	<p>Create to Discover helps students’ expand their understanding of the current situation. This gives them a fresh perspective by revealing new opportunities, possibilities and highlighting problem areas that weren’t apparent.</p> <p>How:</p> <ul style="list-style-type: none"> • Students need to choose an option which best suits their issue, for example: <ul style="list-style-type: none"> ○ A model of the space where the Issue takes place (e.g. the playground, the sports rooms or canteen); ○ A role play (what is currently happening) ○ A story board or flowchart showing the events that take place, • 30 Minutes will be enough time for students to create. It is a very quick exercise. • Discuss and Capture any learnings that were discovered. Students are to keep their creations for future reference. 	<p>As a class brainstorm all aspects of a party; in small groups students role play 1 aspect of a party that is positive and 1 that is negative.</p> <p>Record ideas and reactions to role play - not all students may agree and all ideas and responses are to be considered and respected</p> <p>Incursion SITA - what everyday products are made from and which can be recycled</p>		
		Time	Tools	Syllabus Links
		<p>2 x 40 min lesson</p>	<p>Butchers paper Post-it notes Whiteboard Bubble.us Maxjournal app</p>	<p>ST2-16P identify the component parts of a product and explain how the parts are designed to work together</p> <p>ST2-16P explore the ways existing products can be reused and recycled to incorporate environmental considerations, eg products designed from recycled PET bottles</p> <p>ST2-5WT exploring design situations and/or existing solutions relevant to the needs and wants of themselves and others</p>

Title	Activity	In Class Design Tasks		
<p>Observe and Capture</p>	<p>Observe and Capture is going out into 'the field' and being immersed into the context of the current situation.</p> <p>Discuss the importance of observing the user and their environment. Observing how people interact with their environment gives us clues about what they need. E.g. What things work? What things need improving? What is the mood or feeling?</p> <p>Discuss the different methods of capturing information or data that would be most useful in understanding the user and their needs. For example:</p> <ul style="list-style-type: none"> • Recording times, • measuring distance • taking notes • filming • graphing peoples movements • quoting conversation • sketching etc. <p>Discuss what tools students will need in order to capture this information. For example:</p> <ul style="list-style-type: none"> • camera • notebook • post-it notes • pencils • recording devices (video and audio) <p>How:</p> <ul style="list-style-type: none"> • This activity can be done in groups or individually. • Have students follow the A-E-I-O-U activity sheet. • Students should use a variety of tools and methods to capture their observations. • Encourage the students to capture both positive and negative observations. Students need to capture as much as they can and not just rely on their memories. The more they record, the more discoveries they have to work with. 	<p>Observe and Capture (DE pg 11)</p> <p>Students participate in a traditional party and party games to research information in relation to the proposed design task. A camera is set up to record the party to assist in the reflection of what worked and didn't work during the party.</p> <p>Games include: pin the tail on the donkey, musical cushions, pass the parcel, balloon races -</p> <p>Other; party bags - purpose and function, invitations - sending and design, pictures - record of the event, cake design, party decorations Entry in multimodal journal Reflection and collaborative recording of information on a T chart what worked / what could be improved followed by whole class reflection and collaborative discussion, record the positive and negative experiences including who was excluded by any of the games or activities? Due to cultural knowledge, physical ability, social skills...</p> <p>Show recording if necessary Entry in multimodal journal</p>		
		Time	Tools	Syllabus Links
		2 x 40 min lessons	A-E-I-O-U Activity sheet camera notebook post-it notes pencils recording devices (video and audio) Maxjournal app	ST2-5WT using a range of research techniques to access information relevant to the task EN2-1A understand that social interactions influence the way people engage with ideas and respond to others for example when exploring and clarifying the ideas of others, summarising their own views and reporting them to a larger group(ACELA1488)

Title	Activity	In Class Design Tasks		
Interviews	<p>Interviews give us a first hand account of how the users feel about the Issue, what they like, what they want to see improved and why. It is important to talk to the user so we don't assume what they need.</p> <p>Students are given the Interview activity card to work from. The guide has open-ended questions to ask the interviewees. However, it is advised to brainstorm additional questions that are specific to the Issue.</p> <ul style="list-style-type: none"> • Discuss with the class the importance of interviewing a range of different people for diversity in responses. They may want to interview their parents, students from different age groups, teachers or other staff. • Students may want to practice interview questions with other class members. The students might like to role-play by pretending the classroom is a TV studio and they are reporting for the nightly news! • Remind the students to act just like the reporters on TV. A good reporter listens, takes notes, smiles, encourages, doesn't interrupt and is inquisitive. • Students keep their captured interview answers in their document portfolio. 	<p>In small groups students share their interviews from prior lesson, homework and wider school community and record key positives and negatives</p> <p>Add to ideas</p>		
		Time	Tools	Syllabus Links
		1 x 40 min lesson	Interview activity cards Butchers paper Maxjournal app	EN2-1A use information to support and elaborate on a point of view ST2-5WT using a range of research techniques to access information relevant to the task

Title	Activity	In Class Design Tasks		
Constructing Characters	<p>Constructing characters is a way of understanding the user. They act as 'stand ins' for real users to help guide students in making decisions. Characters or personas represent a larger group not individuals.</p> <p>Students might create a number of characters or personas based on observations of many different people or users. When Constructing Characters students should focus on:</p> <ul style="list-style-type: none"> • what motivates them, • what interests them, • what they think, • how they feel and, • how they behave. <p>How:</p> <ul style="list-style-type: none"> • Use interviews, observations or what they already know about their users • Collate their findings under the headings above • Use visuals such as collages or drawings • Draw a character in their journals or trace around a classmate • Have them speak directly using speech bubbles or annotate their qualities • Describe their interests and qualities in a story 	<p>Constructing Personas (DE pg 9)</p> <p>Considering the collaborative feedback from the interviews and the post party experience students collaboratively construct characters to identify who may be the end user of their product.</p> <p>In their collaborative groups students share with the whole class their characters and after each presentation students are given opportunities to give constructive feedback.</p> <p>Display personas and add personas to maxjournal</p>		
		Time	Tools	Syllabus Links
		1 x 40 min	Constructing Character Examples activity sheet Befunky tool	ST2-5WT using techniques, including labelled drawings, modelling and storyboarding, for documenting and communicating design ideas ST2-15I use common digital technologies and applications to organise and communicate information for a specific task, eg word processing and digital presentation software

Interpreting

Students come back with the stories of their Discoveries. These stories will be interpreted to help uncover the problems that have created the Issue. Interpreting will uncover clues, themes and connections. It involves sharing, sorting, and condensing the Discoveries to provide a specific direction for generating ideas later.

Description	Activity	In Class Design Tasks		
<p>The Detective Board</p>	<p>The students now have a collection of Discoveries after observing; capturing and interviewing that need Interpreting. The Detective Board is a tool that can be used to share stories, unpack and view all of the Discoveries at once to more easily find connections, groupings and themes. The Detective Board aims to synthesise and condense all of the Discoveries into meaningful findings and insights.</p> <p>The Detective Board is a collection of all of the Discoveries in one place. It is a form of data visualisation on a wall or space in the classroom that can be referred to during the rest of the Design Emergency. It is a collection of images, notes, graphs, maps, quotes, diagrams, sketches etc.</p> <p>Create a large empty space wall in your classroom. This is your Design Emergency wall.</p> <p>Have students present all of their Discoveries to the class and add them to the wall. It is important for all students to present to gain different perspectives of the same situation.</p> <p>Encourage the students to discuss, ask questions and listen carefully in order to capture details and subtle differences.</p> <p>Use post it notes for additional findings that were uncovered while presenting, highlight important quotes, key words and reminders.</p> <p>As a class discuss and group the Discoveries into similar themes, ideas and issues. Look for both positive and negative aspects of the current situation.</p>	<p>IncurSION - Annette Design Emergency and Designer</p> <p>Using the information from the discovery phase students collaboratively brainstorm aspects of the party that can be designed or produced differently to improve the party experience - all ideas accepted and recorded on the Design Emergency space.</p> <p>Themes are identified and grouped</p> <p>Students identify which theme they would like to tackle.</p> <p>Students tackling the same theme work collaboratively to construct a concise sentence using the identified heading including both the positive and negative aspect of the problem.</p> <p>Initial work on design brief</p> <p>Entry in multimodal journal</p>		
		Time	Tools	Syllabus Links
		1 x 40 min	Whiteboard Post-it notes Linoit.com maxjournal	ST2-16P identify the component parts of a product and explain how the parts are designed to work together ST2-5WT working individually and collaboratively to develop a design brief that identifies simple design criteria relating to requirements that make the proposed solution useful and attractive while having minimal impact

	<p>Circle the groups and use headings to synthesize the findings in that group e.g. the sports equipment room headings might include – large space, well lit, lots of equipment, disorganised, broken equipment, poor access, dirty, fights etc.</p> <p>Students vote for which headings that they see most important to tackle.</p> <p>Construct a concise sentence using the chosen headings. The sentence should include both positive and negative aspects of the problem. e.g. "The sports equipment room is a large space that can accommodate all of our sports equipment. We know the students would like to use the sports equipment, however it is disorganised and broken."</p> <p>Explore further into the problem/s by asking the students consecutive directed 'why' questions about the sentence. See example/figure 2. Asking at least 3 - 5 directed 'whys' will uncover the Insight to the problem.</p>			<p>on the environment</p>
<p>The Design Emergency</p>	<p>Defining the Design Emergency is a pivotal step in design thinking. It gives a clear direction and finds the core problem/s of the Issue. The Design Emergency is the challenge that the students will be tackling.</p> <p>Defining the Design Emergency is a step-by-step process. This may be difficult for some students as it is using higher order thinking.</p> <p>Transform the Insight, which was found through the Detective Board exercise, into the Design Emergency using this sentence structure:</p> <p>How can (who) design the (what) so that (why)?</p> <p>e.g. How can Year 6 design the sports room experience so that students are responsible for the care and organisation of the sports equipment and can easily retrieve and return it in good order?</p> <p>Display the Design Emergency in the classroom. This is the challenge the students will tackle.</p>	<p>Incursion - Annette Design Emergency and Designer</p> <p>In their groups students develop an insight into the problem using why questions. Why is this an issue for you? Why, Why, Why does this matter? The why questions are student directed</p> <p>In groups students transform the insight into a design Emergency using the sentence structure How can (who) design the (what) so that (why)? E.g. How can year 3 design a party bag so that party bags are more environmentally friendly?</p> <p>Display the Design Emergency statement</p> <p>Add to design brief</p>		
		<p>Time</p> <p>1 x 40 min</p>	<p>Tools</p> <p>Portfolios maxjournal</p>	<p>Syllabus Links</p> <p>EN2-2A plan and organise ideas using headings, graphic organisers, questions and mind maps</p> <p>ST2-5WT working individually and collaboratively to develop a design brief that identifies simple design criteria relating to requirements that make the proposed solution useful and attractive while having minimal impact on the environment</p>

Imagining

Up until now students have been focused on defining the Design Emergency. Now it is time to explore ideas for possible solutions. Imaging is the time when students generate lots of ideas and no idea should be discounted as being too improbable. Outlandish ideas often spark innovation.

Before Getting Started

Here are IDEO's guidelines for a successful brainstorm:

- Defer judgement; no idea is too simple, too crazy, too expensive!
- Encourage wild ideas; This may spark a great idea from someone else
- Build on the ideas of others; think AND rather than BUT.
- Stay focused
- One conversation at a time
- Be visual; draw your ideas as opposed to just writing them down.
- Go for quantity; the more ideas the better, they will be narrowed down late

Title	Activity	In Class Design Tasks		
Warm Up Activity	Students work in small groups. They are given an object (e.g. paperclip, egg carton, bottle, CD) and asked to come up with as many different uses for it as they can think of. This exercise aims to gain confidence in the students to generate ideas quickly and without fear of judgement.	<p>Students work in small groups. They are given an object (e.g. paperclip, egg carton, bottle, CD) and asked to come up with as many different uses for it as they can think of. This exercise aims to gain confidence in the students to generate ideas quickly and without fear of judgement</p> <p>Record language choice and use to express ideas and concepts</p> <p>Students could film their ideas into a mini advert</p> <p>Share mini adverts with whole class and add to maxjournal</p>		
		Time	Tools	Syllabus Links
		1 x 40 min	5 objects (e.g. paperclip, egg carton, bottle, CD) maxjournal	EN2-10C identify creative language features in imaginative, informative and persuasive texts that contribute to engagement EN2-10C identify and discuss how vocabulary establishes setting and atmosphere

Title	Activity	In Class Design Tasks		
Thinking outside the box	<p>Generating ideas is an important step in design thinking and how students can explore possibilities to tackle the Design Emergency.</p> <p>Thinking outside the box is an interactive brainstorm exercise. Students individually brainstorm ideas on their box and present them to the class. Ideas are then pushed further through a class brainstorm.</p> <p>The students are given the Brainstorm Box activity sheet (best printed at A3). Don't construct the boxes until they have completed all the sides.</p> <p>If the Design Emergency encompasses a range of problems you may want to break it down by asking students to focus on different aspects to brainstorm.</p> <p>The brainstorm box has six sides for the students to fill in and decorate. There is a space to fill in the Design Emergency, the Design Goal, some Discoveries and 3 remaining sides for 3 ideas.</p> <p>Students present to the class one by one when their boxes are finished and constructed.</p> <p>Encourage discussion around the ideas being presented.</p>	<p>In their theme groups students brainstorm all possible solutions to the defined problem.</p> <p>Students then place their brainstorming sheet on the floor and rotate around to other groups - reading and adding ideas</p> <p>Students return to their original brainstorming page and discuss as a group the added information and any ideas that have come from looking at other samples.</p> <p>At this stage the focus is to generate ideas not to judge</p> <p>Add to design brief</p> <p>Entry in multimodal journal</p>		
	<p>Conduct a class brainstorm. Now that the initial ideas have been recorded on the boxes encourage the students to push ideas further and think outside the boxes.</p> <p>Record all ideas and display or hang the boxes in the classroom for inspiration.</p>	Time	Tools	Syllabus Links
		1x 40 min	Brainstorm Box Activity Sheet maxjournal	<p>EN2-1A interpret ideas and information in spoken texts and listen for key points in order to carry out tasks and use information to share and extend ideas and information</p> <p>EN2-2A experiment and share aspects of composing that enhance learning and enjoyment</p> <p>ST2-5WT working individually and collaboratively to develop a design brief that identifies simple design criteria relating to requirements that make the proposed solution useful and attractive while having minimal impact on the environment</p>

Title	Activity	In Class Design Tasks		
<p>Imagining another place</p>	<p>Imagining Another Place asks what can we learn and replicate in our design by drawing inspiration from somewhere else.</p> <p>Imagining Another Place is referred to by world renowned designer Bruce Mau as 'working the metaphor' and is also known as using an analogous environment. Working the metaphor involves researching other seemingly unrelated environments and understanding how people behave and experience that place.</p> <ul style="list-style-type: none"> • Students are to consider other possible environments or places that have similar properties to their Design Emergency. • E.g. the sports room was imagined as a sports equipment shop. Students used the metaphor of a retail experience to begin brainstorming ideas such as a sales desk; a credit card (borrowing card); students as shop attendants; organizing the equipment like a shop; etc. • Note: it might prove difficult for students to find the metaphor and teachers might need to assist or direct them. • Brainstorm ideas or create another box (Thinking Outside the Box activity sheet) using the inspiration of this new place to help them solve The Design Emergency. What can be learnt from this metaphor? 	<p>A similar place may be; Holiday care or being on holidays</p>		
		Time	Tools	Syllabus Links
<p>Crowdsourcing</p>	<p>When we crowdsource we get fresh ideas from people not directly involved in the project.</p> <p>Crowdsourcing is an open call for ideas. Crowdsourcing can be anything from a suggestion box in the school office, setting up a social networking page, asking an expert or putting out a call for ideas in the school</p>	<p>Students engage in crowd sourcing, take their idea and possible solutions to the playground, to get fresh ideas from a wider range of users.</p>		

Title	Activity	In Class Design Tasks		
	<p>newsletter.</p> <p>Students research different types of crowdsourcing on the internet.</p> <p>Discuss different types of crowdsourcing to find a method that best suits the Design Emergency.</p> <p>Set up their crowdsourcing process and ask "How might we...?" questions based on the Design Emergency and collate the responses and ideas that come in.</p> <p>Asking an expert is another form of Crowdsourcing. The Design Emergency might have particular obstacles or areas of expertise that the students may need additional advice on.</p>			
		Time	Tools	Syllabus Links
		1 x 40 min	Linoit.com Butchers paper maxjournal	ST2-5WT Students generate and develop ideas by using creative thinking techniques, including brainstorming, mind-mapping, sketching and modelling ST2-5WT using a range of research techniques to access information relevant to the task

Title	Activity	In Class Design Tasks		
Selecting	<p>It is important that the students choose which ideas they want to prototype. This will give the students ownership of the idea and maintain their engagement and energy.</p> <p>The selected ideas will be carried through into the Experimenting stage. When selecting the ideas to test keep in mind the Design Emergency.</p> <p>Here are a few selection techniques to choose from:</p> <p>Post it voting; each student silently votes for the idea/s they like best, so they aren't swayed by peer's votes, and then places their votes on the board and explain why they made that choice.</p> <p>Arrange all of the ideas into 4 categories and have each student vote for their favourite idea in each category. Categories may include the long shot, the wise choice, the easy to please, the brave.</p> <p>A ballot box</p> <p>Be realistic about how many ideas you will take into the Experimenting stage. You may like to create groups to focus on particular ideas.</p> <p>Create a space on the Design Emergency Wall for a 'Parking Lot' of all the ideas that weren't chosen. The students may need to come back to these ideas if their initial ideas aren't successful.</p>	<p>Students in their groups discuss and select the idea they want to prototype.</p> <p>Other ideas are stored in the 'parking lot' displayed on the design board</p>		
		Time	Tools	Syllabus Links
		1 x 40 min	Butchers paper maxjournal	<p>EN2-1A interpret ideas and information in spoken texts and listen for key points in order to carry out tasks and use information to share and extend ideas and information (ACELY1687)</p> <p>EN2-1A use interaction skills, including active listening behaviours and communicate in a clear, coherent manner using a variety of everyday and learned vocabulary and appropriate tone, pace, pitch and volume (ACELY1688, ACELY1792)</p> <p>ST2-5WT exploring a range of materials appropriate for the task</p>

Experimenting

As the name states this stage is genuinely about experimenting. In the Experimenting stage students play with their ideas through many different forms of prototypes. Prototypes are a physical representation of an idea that can be interacted with, tested and learnt from. Prototyping is about learning; learning what works and what doesn't. Prototypes are intended to be quickly and easily changed. Prototyping is like speed dating. It's non committal, interactive and quick, you learn what you like and want you don't, then move on. Encourage your students to speed prototype and not get caught up in decorating, being precious or perfecting it.

Title	Activity	Design Tasks		
<p>Making Prototypes and getting Feedback</p>	<p>Prototyping is about learning and testing ideas. A prototype can be anything from a model of the space, a diagram of a new system or process, a storyboard of the user's experience or a scenario acted out through role play.</p> <p>Making</p> <p>Define what needs to be learnt from the prototypes. Students should prototype with a question in mind. e.g. What is the best way for the sports equipment to be organised?</p> <p>Set a 'making' time limit.</p> <p>Ensure that the prototypes can be easily changed.</p> <p>Testing and Getting Feedback</p> <p>"I like... I wish... What if...?"</p>	<p>Students construct prototypes with a question in mind, e.g. What is the best material for the party bags to be made from?</p> <p>Prototypes may be a model, drawing or a storyboard and are time limited, it is to gather information not a polished finished product</p> <p>Students reflect using the I like.... I wish... What if.... model - Time limit</p> <p>Students rotate through others prototypes giving feedback (1 student must stay with their model to accept feedback and make adjustments to their prototype)</p> <p>Entry in multimodal journal</p>		
	<p>Students are to use this model to give their feedback.</p> <p>e.g. I like where the shelves are in the sports room model</p> <p>I wish there was away to see all the sports equipment choices I could choose from. What if the table was here instead, so it doesn't block the skipping ropes?</p> <p>Set a 'testing' time limit.</p> <p>Make sure that one or more of the makers stay with their prototype to observe and capture the feedback and make changes at the time, developing the prototype as they go.</p> <p>Remaining group members can move around to test other</p>	<p>Time</p> <p>2 x 40 min</p>	<p>Tools</p> <p>Fig. 4 Resources to make product prototype</p>	<p>Syllabus Links</p> <p>ST2-5WT working individually and collaboratively to develop a design brief that identifies simple design criteria relating to requirements that make the proposed solution useful and attractive while having minimal impact on the environment</p> <p>ST2-5WT exploring a range of materials appropriate for the task</p> <p>ST2-5WT safely and correctly using a range of tools and equipment, materials and techniques, eg cutting, combining, joining, shaping, assembling and finishing materials</p> <p>ST2-5WT refining ideas in responding to feedback from others</p>

Title	Activity	Design Tasks		
	prototypes and give feedback.			

Developing

In the Developing stage students reflect on their feedback and decide if any changes need to be made before finally presenting a solution to the Design Emergency.

Developing is the step that involves change, growth and refinement of ideas and prototypes. This is generally referred to as iteration, the act of repeating the process with the aim of approaching a desired goal. At this point you might find yourself iterating by creating more prototypes, refining your prototypes or visiting your 'parking lot' of ideas. The results of one iteration are used as the starting point for the next iteration.

Title	Activity	In Class Design Tasks
Have you solved your Design Emergency?	<p>This step encourages evaluation and asks the students if they have successfully solved their challenge. We also want to know:</p> <ul style="list-style-type: none"> If the idea works If they achieved the goal What changes to make If the user's needs were met Why it does or does not work Whether its objectives were met Its effectiveness <p>This is the time where students discuss, evaluate and develop their ideas and prototypes. This step may involve iteration and repeating previous steps. This stage of development will result in the final idea or prototype ready to be pitched.</p>	<p>Reflecting on the feedback to the prototype students develop their product.</p> <p>Pitch their idea to the school community - possibly place pitch into the newsletter / develop a poster to be displayed around the school</p> <p>Entry in multimodal journal</p>

Title	Activity	In Class Design Tasks		
	<p>Students share and select the best prototypes.</p> <p>Discuss the features and why those prototypes were chosen.</p> <p>Revisit the Discoveries made in the first step and compare and contrast the prototypes with them.</p> <p>Discuss and evaluate</p> <p>Concept evaluation - did we achieve our goal?</p> <p>Involves asking questions such as - What did we set out to achieve? What are the signs that show we have done this? What are we not doing that we intended to?</p> <p>Function evaluation - does it work?</p> <p>Involves asking questions such as - What's working? What's not working? How could we improve things? Did we meet our users' needs?</p> <p>Iterate. After evaluating the prototypes are there any missing elements or mistakes that can be changed or altered? Do the students need to go collect more Discoveries? Can student Interpret something differently? Or is there an idea that everyone loved in the 'parking lot' of ideas that can be prototyped?</p>			
		Time	Tools	Syllabus Links
		2 x 40 min	Maxjournal Resources to make product	<p>ST2-5WT using established design criteria to evaluate the process, product or solution, and suggesting how their design solution could be improved</p> <p>ST2-5WT safely and correctly using a range of tools and equipment, materials and techniques, eg cutting, combining, joining, shaping, assembling and finishing materials</p> <p>ST2-5WT reflecting on the process followed and what could be done differently to ensure that the solution meets the needs of the user/audience</p> <p>ST2-5WT developing and applying a plan and sequence for production that considers, where relevant, time and resources</p>
<p>Pitch your Idea</p>	<p>Just like a real designer the students need to pitch their idea/s. By pitching the ideas/s they can motivate others to help out or implement the idea.</p> <p>A pitch is how the students communicate their idea and story. There are no rules on how the students can pitch their ideas, in fact the more creative the better. Some examples include a presentation at the school assembly, a letter in the school newsletter, a performance at lunch, an email, a YouTube video etc.</p> <ul style="list-style-type: none"> • Identify who to present the pitch to. Who can help • make your idea a reality? • Brainstorm creative ways to pitch the idea/s. • Use GROW to tell the story: 	<p>GROW activity sheet</p> <p>How do you communicate your product with the community? In pairs students explore advertisements - current and historical, to identify the key message and describe the language, images and position of both to communicate the message. Share with class using information to support and elaborate on their point of view</p> <p>Pitch their idea to the school community - possibly place pitch into the newsletter</p> <p>Entry in multimodal journal</p> <p>Peer and self reflection</p>		

Title	Activity	In Class Design Tasks		
	<ul style="list-style-type: none"> ○ Goal – What was the Design Goal the students set out to achieve? ○ Reality – What was the current situation? What was The Issue and Design Emergency? ○ Opportunity – What are the opportunities for change you are presenting? What is the idea? • What's next? – What needs to happen to make the idea a reality? 			
		Time	Tools	Syllabus Links
		2 x 40 min	Advertisements samples Text: Word as Image Ji Lee Butchers paper	EN2-4A skim a text for overall message and scan for particular information, eg headings, key words EN2-4A identify and explain language features of texts from earlier times and compare with the vocabulary, images, layout and content of contemporary texts EN2-4A recognise how aspects of personal perspective influence responses to texts EN2-4A interpret text by discussing the differences between literal and inferred meanings EN2-4A justify interpretations of a text, including responses to characters, information and ideas

Title	Activity	In Class Design Tasks		
Produce your idea and test it in the real market		<p>Give the school community the opportunity to experience the developed products by presenting a party planners display.</p> <p>Students and the community are invited to attend the display and each person has 2 tokens. Each person votes for the product they think improves a party experience for them and the best pitch</p> <p>Students reflect;</p> <ul style="list-style-type: none"> • Did we achieve our goal? • Does it work? <p>Entry in multimodal journal</p> <p>Peer and self reflection</p>		
		Time	Tools	Syllabus Links
		2 x 40 min	Self and peer reflection Products to share with the school community Tokens pitch	ST2-5WT using established design criteria to evaluate the process, product or solution, and suggesting how their design solution could be improved