



Toolkit

- Module 3 -

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Welcome to the Broadening Horizons Program!

Educators and industry mentors, welcome! We are so glad you have decided to run Broadening Horizons with your unique group of learners. Broadening Horizons builds learning and career aspirations of students as they develop the skills needed in the future world of work. The program creates a link between the curriculum and the workplace, and provides real-world learning opportunities by connecting students with industry and community in a meaningful way.

What?

What is the Broadening Horizons program?

Broadening Horizons is a program for students from years 7 to 10 that strives to empower the next generation of Australia's workforce by connecting local industry and community organisations with schools. We aim to inspire and engage young people, expose them to diverse career opportunities, and prepare them for the future through collaborative partnerships and real-world learning experiences.

Why?

Why does the Broadening Horizons program exist?

The program was co-designed in response to some research undertaken initially in 2013, which showed that students in Gippsland face significantly increased challenges compared to their counterparts in metro Melbourne. Student engagement, high school completion rates and youth unemployment rates all stood out as signs that young people in Gippsland need attention and these challenges remain today.

To address these challenges, Broadening Horizons was co-designed by community leaders, government and local industry representatives, with the thinking that linking schools with industry would help to lift the aspirations of our young people by providing high-quality exposure to the world of work. We know that real-world learning experiences have the greatest impact when education providers and employers work together with students early and intensely. Moreover, by developing students' understanding of enterprise skills and how these skills will equip them for lifelong learning, we can better prepare younger people for the future world of work. And the research shows this to be the case.

What we do to respond as a program: We connect schools with industry through meaningful partnerships, with the aim that these partnerships ultimately play a role in shaping students' futures through exposure to authentic career education. This means that the program embraces real-work learning for young people to gain a sense of what they could do into the future. A key goal of the program is to open students' eyes to the wider world of work around them. We do this through

building aspiration, increasing school engagement with industry, parents and community, contributing to prosperity, and improving student engagement.

The program supports the development of the 6 C's, essential, transferable skills and mindsets required to navigate and succeed in the world of work. Broadening Horizons provides meaningful context for students to explore these.

What Are the 6 C's of Education?

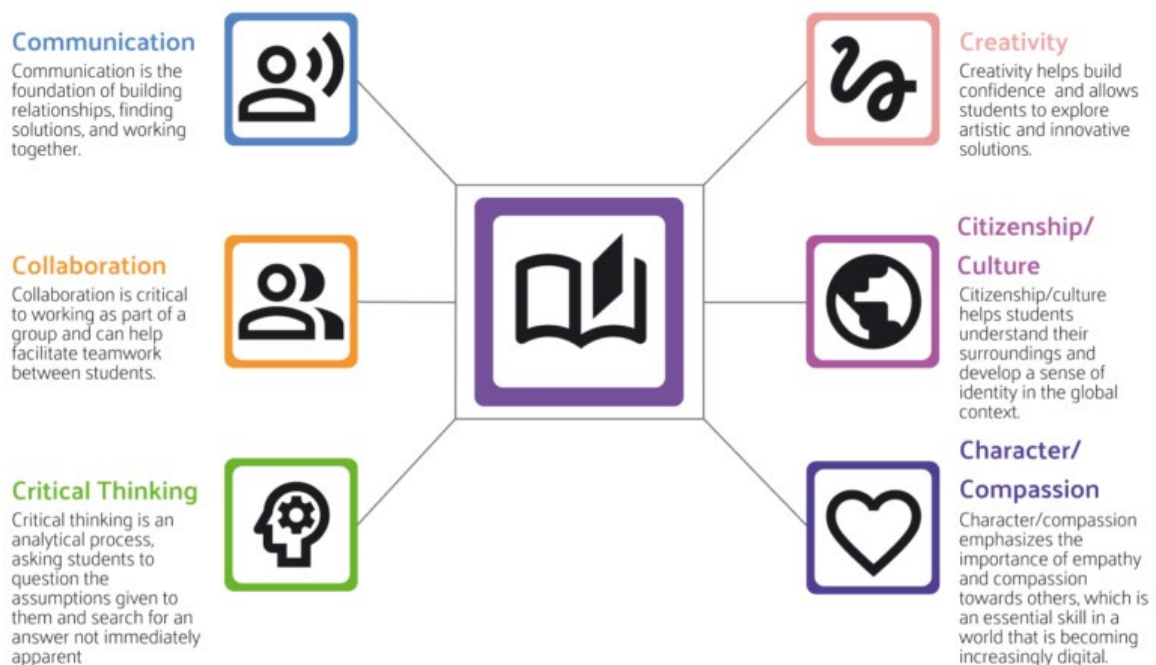


Image source: <https://ideascale.com/blog/6cs-of-education/>

How?

Broadening Horizons reimagined

The reimagined Broadening Horizons program supports students to engage in careers learning from from year 7 through to year 10. A scaffolded learning model underpinned by the design thinking process guides students through a series of modules, supporting them to develop, use and articulate the skills underpinned by the 6 C's within the context of an industry-posed real world challenge.

How is the Broadening Horizons Program Structured?

The Broadening Horizons Team have created a toolkit to support teachers and industry mentors to deliver the program. This toolkit includes:

- Sequenced session plans which can be used and modified to guide students through the key learning.
- Step by step activities to support industry and workplace mentors to engage with and support young people through the program.
- Links to relevant aspects of the Victorian curriculum.
- Scaffolded exploration of the design thinking process.

The Broadening Horizons Learner Journey is made up of three modules:

Module 1: Year 7 or 8 students learn more about themselves so they can discover, explore and feel excited about their future careers

Module 2: Year 9 students explore local career opportunities and experience industry immersion activities first hand

Module 3: Year 10 students engage in a tailored work experience program that aligns with career interests and priority sectors

Alternative Module 3: for in-school delivery or students who cannot attend traditional work experience

Each module is made up of six stages that take students on a journey of understanding their passions and interests, and the potential careers these may align with, to exploring local career and pathway opportunities and engaging in challenges faced by local industry today. Modules 3 and 3A include work experience as part of the delivery of the Broadening Horizons program.

This is the toolkit for Module 3 only.

Program Overview

Module 3

Objective: For year 10 students to engage in a tailored work experience program that aligns with career interests and priority sectors

Year 10 students will undertake small group placements with an industry of interest and explore real challenges faced by the industry or workplace. Working alongside an industry mentor, students will actively engage in and generate possible solutions. Industry partners are provided with potential solutions to ongoing challenges.

Module stages	Activities	Stakeholders
Stage 1: Immersion	<p>Module overview and introduction Broadening Horizons staff, teachers and industry to finalise delivery schedule.</p> <p>Design Thinking overview.</p> <p>Presentation of cross-industry problems and challenges.</p> <p>Students form small groups based on career interests that align with industry challenges.</p> <hr/> <p>Alternative for in-school delivery: A series of local and global industry challenges are presented. Students form small groups based on career interests that align with these challenges.</p>	Broadening Horizons staff Industry Teachers LLEN
Stage 2: Empathise and Define	<p>Empathise Groups work to understand the needs and desires of the people the challenge affects.</p> <p>Site visits.</p> <p>Define Groups work with industry representatives to define problem statements and construct a robust approach to the challenge.</p>	Teacher Industry representatives Broadening Horizons staff and LLEN (optional)
Stage 3: Ideate	<p>Generating ideas Students engage in idea generation, creative problem solving and solution finding, working with industry to understand how these are applied in a workplace setting.</p>	Teacher Industry representatives Broadening Horizons staff and LLEN (optional)
Stage 4: Prototyping	<p>Refining ideas How to refine possible solutions to be able to demonstrate these through a prototype.</p> <p>Prototyping Creation of a working model or clear demonstration of the idea or solution the group has developed to address the challenge.</p>	Teacher Industry representatives Broadening Horizons staff and LLEN (optional)
Stage 5:	<p>Test that the prototype accurately and effectively conveys the solution or idea.</p>	Teacher Industry representatives

Test and Refine	Feedback from industry representatives in groups for any refinement of idea or prototype.	Broadening Horizons staff and LLEN (optional)
Stage 6: Presentation	Presentation Groups present: <ul style="list-style-type: none"> • The industry challenge and the ideas/solution to address it. • The 6 C's skills they developed and utilised throughout Module 3 • Insights into work and how the experience has influenced career interests. 	Teacher Industry representatives Broadening Horizons staff LLEN

Suggested Stage timing

Stage	Timing	Running Total
Stage 1	Sessions 1 - 3	230 - 290 mins
Stage 2	Session 4 - 7	390 mins
Stage 3	Sessions 8 - 9	105 mins
Stage 4	Sessions 10 - 11	175 mins
Stage 5	Session 12	120 mins
Stage 6	Sessions 13 - 14	Minimum 70 mins
Total program timing	Approx. 1090 mins	

Got limited time? Feel free to make critical choices about the most relevant learning experience for your students.

Things to think about before launching the Broadening Horizons Program Alternative Module 3:

- Ensure industry partners are on board with a clear understanding of their role and times when they will be involved
- Any work experience requirements are in place
- Ensure supporting materials are available and ready

Further information and support

If you require further information or support please do not hesitate to contact the Broadening Horizons Team:

Broadening Horizons Team

Phone: 0408 811 258

Email jmatthews@bblllen.org.au

Stage 1: Immersion

The purpose of the Immersion stage is to ensure schools and industry have clear understanding and expectations for the delivery of Broadening Horizons and to give students an overview of the learning that happens throughout the program. This phase also gives students the chance to engage with real world challenges and consider these in relation to their own career interests.

Sessions

Sessions	Timing	Stakeholders
Session 1: We're on the same page! <ul style="list-style-type: none"> - Broadening Horizons staff, teachers and industry come together to finalise delivery dates, timing and engagement points 	60-120 mins	Broadening Horizons staff Teachers Industry partner
Session 2: What is Broadening Horizons? <ul style="list-style-type: none"> - Purpose of the program - What is design thinking? 	80 mins	Teachers Students
Session 3: Presenting the challenges Option 1: Local challenges presented by workplace/local government <ul style="list-style-type: none"> - What am I interested in? 	90 mins	Industry partner and/or teachers Students
Total stage timing (full delivery)	230 - 290 mins	

Stage 1 Curriculum links

Critical and Creative Thinking

- Questions and Possibilities ([VCCCTQ043](#)) ([VCCCTQ044](#)) ([VCCCTQ045](#))

Economics and Business

- Work and Work Futures ([VCEBW025](#))

Personal and Social Capability

- Development of Resilience ([VCPSCSE044](#))

Session 1: We're on the same page!

Session Focus:

How can we ensure teachers and industry mentors are clear on the expectations and delivery requirements for Module 3?

Session timing	60 - 120 mins
Outcomes	For school and industry partners to have a clear outline for the co-delivery of the Broadening Horizons Module
Additional materials required	Copy of the Toolkit Checklist of considerations Calendars and timeline

This toolkit may be used by the industry partner to run and facilitate the program as work experience or components may be co-delivered by the teacher at school and industry mentors during work experience. This will need to be decided and agreed upon at the beginning of the partnership, with clear allocation of sessions to each party.

Module 3 may be run by industry or schools or a combination of the two. Part of this initial session is to establish who is responsible for delivery of each session. If industry are leading the delivery, it is imperative that any learning needs or accommodations of participating students be communicated clearly and any additional supports provided.

Depending on whether schools are working with one or multiple industry partners, students might attend work experience as a whole class group, working in their small groups throughout, or each small working group may attend at different times with their industry mentor. This will need to be decided during this session.

Overview

The Broadening Horizons team will act as a 'broker' on your behalf, to bring a school and industry / community partner together to deliver the program to students. The success of Broadening Horizons relies on schools and industries engaging in the program as co-deliverers, with each playing a vital role throughout.

Step 1: Engage with the Broadening Horizons team to discuss the industry partner you hope or intend to work with.

Step 2: Partnership established.

Step 3: A meeting to go over and finalise the delivery schedule and the timing for work experience or workplace visits. This can be facilitated by Broadening Horizons staff. All parties should have a clear understanding of their roles and responsibilities before moving to session 2..

A checklist to consider for the initial meeting:

- Who are the key contacts in the partnership? Ensure correct details are exchanged.
- Have you and your partner gone through the relevant Module toolkit and developed a shared understanding of the program outline?
- Clear educator and industry requirements for the duration of the program outlined and agreed upon.
 - Will the industry mentors attend the school to present the challenge or will it be presented by the educator?
 - What level of engagement at each stage works for the industry partner and the school? Including virtual vs. in person engagement.
 - Mapping this out at the beginning is strongly encouraged.

Type of industry engagement for this partnership

- Work experience
- Industry in school
- Virtual work experience
- Hybrid (online and in person)

Have you and your partner established when workplace visits or work experience will take place?

The following checklist will also appear at the beginning of Stage2 , however it may be useful to consider during this session (the first two are required for all work experience arrangement)

What will be needed for the work experience arrangement?

- Ministerial form
- Students complete occupational health and safety (OHS) training (either through [safe@work](#) or [A Job Well Done](#) for students with disability or additional need)
- Virtual work experience - laptops or tablets, internet connection
- Hybrid (online and in person) - laptops or tablets, teacher accompaniment to workplace and/or ministerial form

Session 2: What is Broadening Horizons Module 3 all about?

Session Focus:

How can we practise design thinking to get an understanding of the process we will use throughout Broadening Horizons?

Session timing	80 mins
Learning outcomes	Understand key information about Broadening Horizons Begin to understand the design thinking process
6 C's in action	Communication Collaboration Creativity
Additional materials required	Slides with Broadening Horizons overview and design thinking process Workbook or folder Paper Pencils/pens

Session Sequence

Introduction 10 mins

It's time to tune your students into Broadening Horizons and how it works.

- Students will be taking part in work experience that allows them to solve or address a real problem or challenge that industry is facing.
*Or potentially a broader problem or challenge in the community that students will explore through an industry lens.
- The learning is led by the students, with teachers and industry guiding them through the design thinking process to create innovative and creative solutions to address the challenge.

Key instruction 15 mins

What is Broadening Horizons Module 3?

Broadening Horizons Module 3 is for year 10 students to engage in a work experience program that aligns with career interests and immerses them in local challenges.

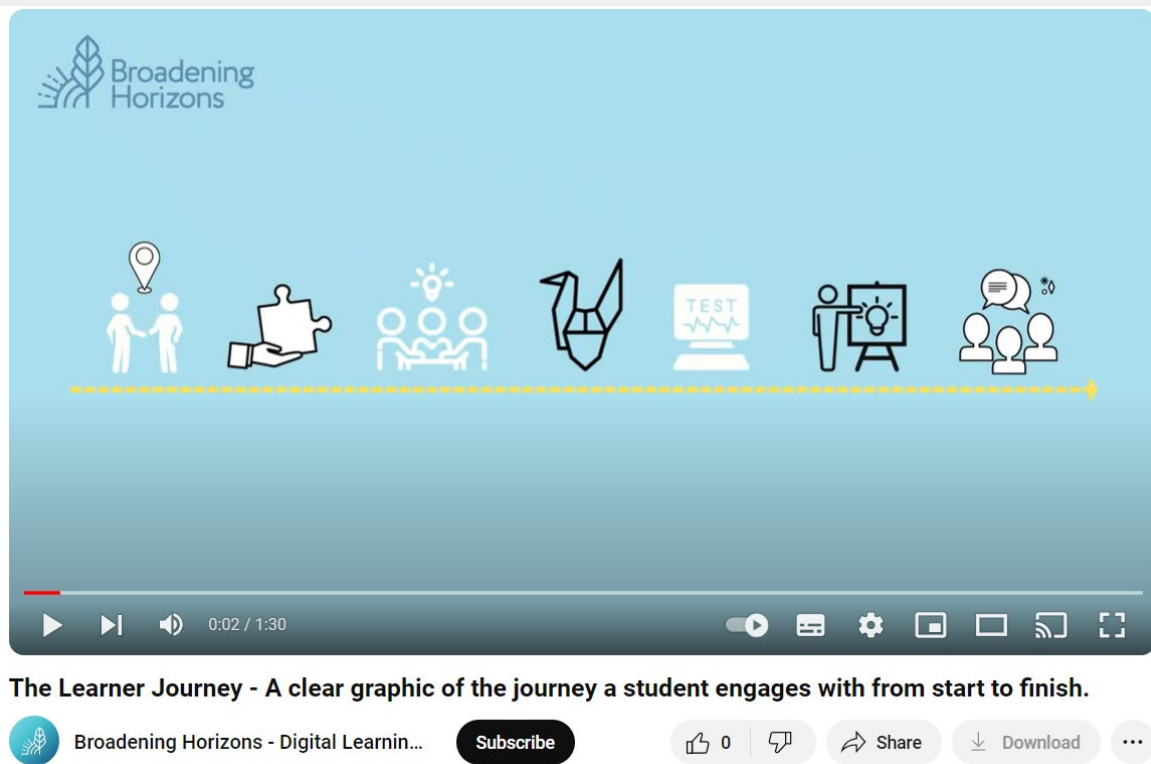
- The Module 3 of Broadening Horizons allows students to explore real challenges faced by local workplaces in small groups.

- Students will explore who is impacted by the challenge and generate possible solutions to be presented back to local industry.

Watch: The Learner Journey - A clear graphic of the journey a student engages with from start to finish

Please note: Industry touchpoints and visits may vary and should follow agreed upon in session 1.

<https://www.youtube.com/watch?v=4kVvU24YxKw>



After watching the Learner Journey, facilitate a short discussion with students:

- What are students curious or unsure about?
- What are students looking forward to in the Broadening Horizons program?

Design Thinking - what is it?

The way we approach solving a problem in Broadening Horizons is by using a design thinking framework.

- This is used in a lot of workplaces to address and solve complex problems and challenges, design products or services or to best meet customer needs.
- By using the design thinking process, students are gaining skills and experience that are really valuable in the workplace.

What it is:

Design thinking is a problem-solving approach that involves understanding the needs and desires of users to create innovative solutions. It is a human-centred process that involves empathy, experimentation, and iteration. Here's an overview of the five steps of the design thinking process:

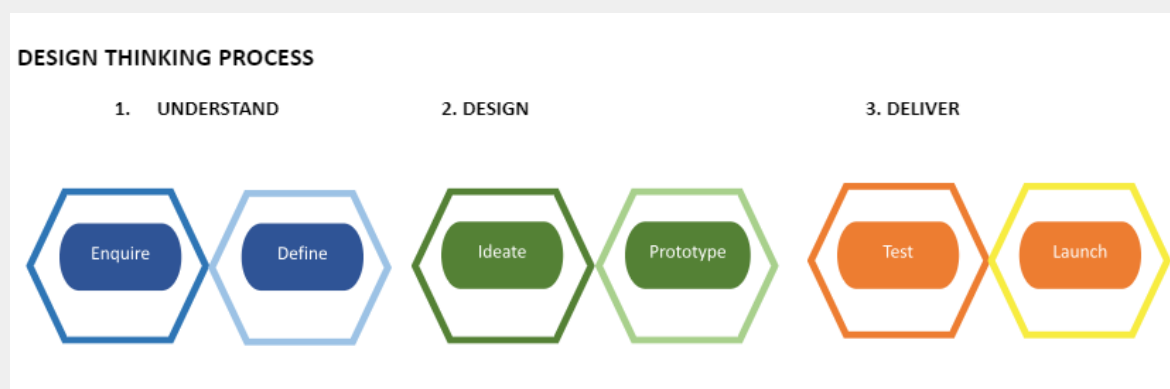
Empathise: The first step is to understand the needs and desires of the users. This involves observing, interviewing, and empathising with the users to understand their perspectives.

Define: The second step is to define the problem statement based on the user's needs and desires. This involves synthesising the information gathered in the empathise phase to create a clear problem statement.

Ideate: The third step is to generate a wide range of creative ideas to solve the problem. This involves brainstorming, sketching, and exploring different possibilities.

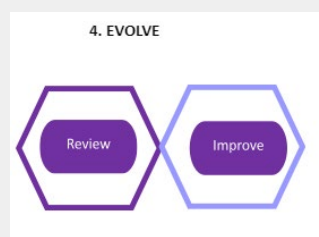
Prototype: The fourth step is to create a rough prototype of the solution. This involves building a simple, low-fidelity version of the solution to test and refine.

Test: The final step is to test the prototype with users and gather feedback. This involves iterating on the prototype based on user feedback and refining the solution until it meets user needs and desires.

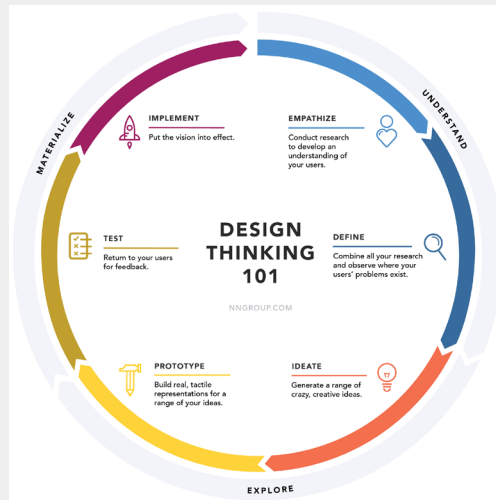


At any stage you might go back to an earlier part of the process or revisit one of the steps to try and generate new ideas or re-define your problem or challenge again.

In fact, once you get to the test and refine stages, taking feedback and going back to your prototype again, or even back to ideate a bit more, is really important. You may choose to extend the final phase of the project and have students review their final presentation then go back and identify areas for improvement.



It may sound and look like a linear process when you see it like this, but actually it isn't. You may prefer a cyclical representation to emphasise the iterative nature of the design thinking process, or even create one of your own!



Source: <https://www.nngroup.com/articles/design-thinking/>

Student exploration

45 mins

Students are now going to have the chance to experience the design thinking process in a rapid, condensed activity. They will move through each phase of the design thinking process. You may like to display each phase as they move through the process so students are aware which aspect of design thinking they are engaging in.

The Backpack Challenge

Share the following with your students:

You have been approached and asked to design a new backpack that better suits the needs of teenagers. This will be a rapid session and will give you a taste of the way the design thinking process can be used to address a challenge.

Depending whether this session is being delivered in the classroom or during work experience, you can choose to do any or all of the activity as a whole class group or with students in smaller groups. The instructions below have a combination of working in pairs and smaller groups for some parts of the process and as a whole class for others. Decide what will work best for the learners in your group and adapt any instruction as necessary.

Step 1: Empathise (5 minutes)

Understand the needs and challenges of the users.

Have students pair up and interview each other about their backpacks. Ask questions like:

- What do you like/dislike about your current backpack?
- What challenges do you face with your backpack?
- What would you like to change about your backpack?

Step 2: Define (3 minutes)

Identify the core problem based on the insights gathered.

Summarise the key pain points on the whiteboard. For example:

- Heavy and uncomfortable
- Lack of organisation
- Not stylish enough

Create a group problem statement. For example "How might we create a comfortable, organised, and stylish backpack for students?"

Step 3: Ideate (5 minutes)

Generate a range of ideas to solve the problem.

Conduct a rapid brainstorming session. Have students shout out ideas, and write them on the board.

Some ideas might include:

- Built-in USB charger
- Adjustable straps for comfort
- Multiple compartments for better organisation
- Customizable design options

Step 4: Prototype (5 minutes)

Create a simple version of one or more of your ideas to explore potential solutions.

Split students into small groups and give them paper and markers to sketch their backpack ideas.

Each group should create one quick sketch incorporating their best ideas.

Step 5: Test (5 minutes)

Gather feedback on your prototypes to refine your ideas.

Have each group present their backpack sketch to the class.

The class can provide feedback on each design:

- What do they like?
- What could be improved?
- Would they use this backpack?

Conclusion

Discuss how students can use the feedback to improve their designs. Emphasise that the design thinking process is iterative, and they can keep refining their ideas based on user feedback.

What did you find useful about this process? What was challenging about this process?

What skills were used during today's session?

Bonus Activity

If you have extra time or would like to add an activity, have students create their own design thinking process map. There are a number of examples online if they need inspiration or you might like to challenge students to get creative and see if they can capture their own understanding of design thinking in a unique way.

You might like to display these around the classroom or choose one that represents the group to display.

Reflection

10 mins

NOTE: Depending on the needs of your students, you may choose to really zoom in on how they used the identified 6 C's stated in lesson focus. You can also expand the reflection to include other skills used.

How did we utilise communication, collaboration and creativity to get an understanding of the design thinking process we will use throughout Broadening Horizons?

- Encourage students to provide specific examples of when these skills were used. They may like to record these as part of the reflection.

It is highly recommended that students have a dedicated Broadening Horizons workbook or folder to record and retain their reflections and work throughout.

Broadening Horizons Passport!

The Broadening Horizons Passport allows students to record their skills development throughout the program. It is strongly encouraged that students document a skill they have developed and utilised at the end of each session, including an example of how or when they were using this skill.

Create a poster!

Students create a poster to record their highlight at the end of each stage. They may choose to draw, print an image, write a word, anything that captures and demonstrates their favourite learning or even the biggest challenge.

Students will be prompted at the end of each stage to add to their poster so by the end of the Broadening Horizons program, they will have a visual record of the highlights and challenges of their journey.

Session 3: The challenges

Session Focus:

How can we engage meaningfully with a real world challenge?

Session timing	90 mins
Learning outcomes	For students to meet industry mentors and/or engage with a current challenge in the workplace or community
6 C's in action	Communication Collaboration Creativity Citizenship/Culture Character/Compassion
Additional materials required	Slides with challenges clearly outlined Any materials required by industry partner Workbook or folder Butchers paper Textas

Session Sequence

Introduction

This session will give students the opportunity to engage with real challenges faced by industry or the community and choose which one they would like to explore throughout the program. This may also be the first industry touchpoint if the program has been delivered in school up to this point, when your industry partner visits the school to present the challenges (if this was decided in session 1).

Challenges are presented by the industry partner, as agreed upon in session 1.

Key instruction

30 mins

The challenges will be presented to the students. Please allow time for questions or any level of interactivity that you feel will benefit their engagement and understanding.

Note: Ensure the needs of the cohort have been clearly communicated so the industry mentor is able to present the challenge in an accessible and engaging way.

Engaging with young people can be daunting when it's not something you do everyday, so check in with the industry mentors to see if there's any further support they may appreciate during this touchpoint if a co-delivery model has been agreed upon (e.g. preferred way of presenting, whether you to co-deliver the challenge to demonstrate that educators and industry mentors are working in partnership to deliver Broadening Horizons etc.)

Guide for industry mentors

Be sure to have discussed any needs of the students you will be presenting the challenge to with the educator so you can be best prepared to deliver the industry challenge in an accessible and engaging way.

Depending on the size of the cohort you will be presenting to, you may want to present multiple challenges your industry or workplace is currently facing (it is recommended that you present at least two challenges regardless of group size).

- Provide a brief overview of your industry or workplace (core business, number of employees, any other interesting facts that students will find engaging)
- Present the challenge with an explanation about why this is a challenge/problem in your particular industry/workplace
- If the challenge is complex, be sure to break it down into simple terms and check in with the group along the way to ensure they understand
- Encourage questions and discussion about your industry/workplace and the challenges presented

If you are running the program as part of the work experience placement, mentors may decide to discuss and present the challenges in a way that compliments other work experience activities. E.g. If students are rotating through different areas of the workplace, they may be presented with challenges from the different areas.

Student exploration

50 mins

Students are now going to have the opportunity to consider the challenges they have been presented with and align these with potential career or personal interests.

Industry mentor role

- If you are staying for or running this component of the session, you and the teacher may like to pre-arrange to co-deliver this activity.

- Students may find aspects of this activity tricky, especially considering career options that align with their interests. It is recommended that you move between groups to provide insight into different jobs and career possibilities (there are many career pathways that students are not even aware of).

Aligning your interests with the challenge.

Step 1: Identify Career or Personal Interests (10 minutes)

Provide each student with a piece of butcher's paper (or they might want to use their workbooks) and textas.

- Ask students to think about and list their career and personal interests, hobbies, and passions. These can be broad or specific, such as engineering, sports, music, technology, animals, art, etc.
- Encourage students to write or draw their interests on the paper, creating a mind map or a simple list.

Step 2: Consider the challenges (2 minutes).

Write the challenges that have been presented on the board or display them on a screen.

- You may want to briefly recap each challenge.

Step 3: Align Interests with challenges (15 minutes)

Students identify a challenge that has caught their attention and form small groups.

- **Note:** If this session is being run at school prior to work experience, let students know that these will be the groups they will work with for the rest of the Broadening Horizons program and encourage them to choose a challenge that interests them, rather than the challenge their friends are choosing.

Give each group a sheet of butcher's paper.

- Each group brainstorms how their personal interests can be aligned with this challenge.
Example: If the challenge is about new energy, a student interested in animals might identify wildlife conservation as something they care about or a potential career path and want to explore how this industry might contribute to better outcomes for wildlife.

Students may want to move to a different group if they feel their career or personal interests are not aligning with the first challenge they chose.

Have each group create a visual map or chart that shows the connections between their interests and the chosen challenge.

- Encourage creativity in how students present their alignment, using drawings, keywords, and arrows.

Step 4: Group Presentations (15 minutes)

Each group presents their interest-challenge alignment map to the class OR each group displays their map on a table or wall and students move around the class and look at each one.

- Encourage students to ask questions and provide additional ideas on how to connect personal interests with the challenge.

Conclusion (5 mins)

Class discussion:

- What specific aspect of the challenge are you excited to explore further?

Reflection

10 mins

NOTE: Depending on the needs of your students, you may choose to really zoom in on how they used the identified 6 C's stated in lesson focus. You can also expand the reflection to include other skills used.

How did we utilise communication, citizenship/culture and character/compassion to engage meaningfully with a real world challenge?

How did exploring the different ways to connect your interest with the challenge encourage collaboration and creative thinking?

Create a poster!

Students can create a poster to record their highlight at the end of each stage. They may choose to draw, print an image, write a word, anything that captures and demonstrates their favourite learning or even the biggest challenge.

Students will be prompted at the end of each stage to add to their poster so by the end of the Broadening Horizons program, they will have a visual record of the highlights and challenges of their journey.

Broadening Horizons Passport!

The Broadening Horizons Passport allows students to record their skills development throughout the program. It is strongly encouraged that students document a skill they have developed and utilised at the end of each session, including an example of how or when they were using this skill.

Stage 2: Empathise and Define

The purpose of the empathise and define stage is for students to begin building their

understanding of the challenge they will be addressing throughout the program. This includes working to empathise with the needs and requirements of those impacted and engaging in work experience to be able to define the challenge more clearly in a workplace context.

Sessions

Sessions	Timing	Stakeholders
Session 4: Give me the facts! <ul style="list-style-type: none"> - Desktop research - How to find reliable and varied sources 	120 mins	Teachers Students
Session 5: Interviewing to empathise <ul style="list-style-type: none"> - Understanding the needs and requirements of others - What makes a good interview? 	135 mins	Teachers Students
Session 6: Work experience <ul style="list-style-type: none"> - Students learn about the world of work as they are supported to deepen their understanding of the challenge 	Varied Classroom component : 50 mins minimum	Industry partner Students Teachers
Session 7: Defining the challenge <ul style="list-style-type: none"> - Insights gained through workplace conversations and research are used to define the challenge into problem statements 	85 mins	Industry partner Students Teachers
Total stage timing (full delivery)	390 mins	

Stage 2 Curriculum links

Critical and Creative Thinking

- Questions and Possibilities ([VCCCTQ043](#)) ([VCCCTQ044](#)) ([VCCCTQ045](#))

Economics and Business

- Work and Work Futures ([VCEBW025](#))
- The Business Environment ([VCEBB024](#)) ([VCEBW026](#))
- Enterprising Behaviours and Capabilities ([VCEBN027](#))

History

- Historical sources as evidence ([VCHHC123](#))

Personal and Social Capability

- Development of Resilience ([VCPSCSE044](#))
- Relationships and diversity ([VCPSCSO048](#))
- Collaboration ([VCPSCSO051](#))

Session 4: Give me the facts!

Session Focus:

How might we further investigate our challenge using reliable and varied sources?

Session timing	120 mins
Learning outcomes	For students to understand how to undertake effective desktop research and evaluate information sources
6 C's in action	Critical thinking Communication Collaboration Citizenship/Culture Character/Compassion
Additional materials required	Slides Computers or tablets with internet access and access to reliable search engines and databases Paper Textas

Session Sequence

Introduction

10 mins

Now that students have identified the challenge they are interested in addressing and formed groups, they will undertake research to gain more insight into the challenge and the relevant industry.

- Recap the last session with the students. You may like to do this as a quick discussion about the highlights of the session and ask groups to re-share the challenge they have selected.

Key instruction

5 mins

A really great way to gain more insight into a topic is through desktop research. As with any type of research, it is really important to think about where the information is coming from and whether or not the source is credible. Students will undertake desktop research to find out more information about their chosen challenge and the industry the challenge has come from. They will need access to computers or tablets and the internet.

What is Desktop Research?

Desktop research means using your computer (or any device with internet access) to find information on a topic. Instead of going to a library or conducting experiments, you gather data and facts from online sources and databases.

Why is Desktop Research Important?

- Easy Access: You can find a lot of information without leaving your home or classroom.
- Up-to-date Information: The internet has the latest news and updates.
- Variety of Sources: You can get information from articles, videos, reports, and more.

Student exploration

100 mins

In order to conduct good desktop research, students need to know how to identify credible sources and be able to find reliable, up to date information. The following activity will give students the opportunity to learn how to conduct good desktop research using reliable sources and proper evaluation techniques.

Researching a topic

Step 1: Choose a Topic (5 minutes)

Working in their challenge groups, assign each group a different topic.

Example topics:

- The impact of social media on teenagers
- Renewable energy sources and their benefits
- The history and significance of space exploration

Step 2: Brainstorm Keywords (5 minutes)

Have each group brainstorm a list of keywords and phrases related to their topic.

- Example for renewable energy: "solar power," "wind energy," "renewable energy benefits," "sustainable energy sources."

Step 3: Finding Sources (10 minutes)

Introduce students to reliable search engines and databases (e.g., Google Scholar, government websites, educational institutions).


Have each group use their keywords to find 3-5 reliable sources. Guide them to look for:

- Websites ending in .edu, .gov, or .org
- Articles from reputable news outlets or academic journals

Step 4: Evaluating Sources (10 minutes)

Teach students how to evaluate sources using the CRAAP test (Currency, Relevance, Authority, Accuracy, Purpose).

Evaluating Sources with CRAAP

ima	C Currency - the timeliness of information When was the information published or posted? Has the information been revised or updated? Is the information current or out of date? Are the links functional?	ir
Ha	R Relevance - the importance of the information for your needs Does the information relate to your topic or answer your question? Who is the intended audience? Is the information at an appropriate level? Have you looked at a variety of sources?	
so	A Authority - the source of the information Who is the author/ publisher/ source/ sponsor? Are the author's credentials or organisational affiliations given, and what are they? What are the author's qualifications?	
St	A Accuracy - the reliability, truthfulness, & correctness of the content Where does the information come from? Is it supported by evidence? Has it been reviewed? Can you verify any of the information in another source? Does the language seem unbiased?	
Ea	P Purpose - the reason the information exists What is the purpose of the information? Do the author's sponsors make their intentions clear? Is this information fact/ opinion/ propaganda? Is it objective, impartial & unbiased?	

Step 7: Reflection (5 minutes)

Discuss what the students learned about conducting desktop research.

- Ask them what challenges they faced and how they overcame them.

Researching the challenge (45 mins)

Using the same process, students will now undertake desktop research into their chosen challenge and industry.

Remember to follow the steps for good desktop research:

Look at your challenge and industry

1. Why this is a challenge(not just for the industry but more broadly)
2. Who this impacts and why?
3. What has been done before to try and address the same or similar challenge (anywhere in the world).

Brainstorm Keywords:

- Think of words related to your challenge and these questions

Search for Information:

- Use search engines like Google or educational websites to find information. Try to use reliable sources like:
 - Websites ending in .edu (educational institutions)
 - Websites ending in .gov (government sites)

- Well-known news sites or academic journals

Evaluate Your Sources:

- Make sure the information is trustworthy (CRAAP).

Ask yourself:

- Is the information current?
- Is it relevant to your topic?
- Is the author an expert?
- Is the information accurate?
- Why was this information written? (To inform, persuade, sell something?)

Take Notes:

- Write down important points, facts, and quotes. Always note where you found the information.

Organise Your Findings:

- Put your notes in order. Group similar ideas together. Make sure you can explain what you've learned.

Students should record their findings in their workbook or folder and ensure all websites are noted.

Reflection

10 mins

NOTE: Depending on the needs of your students, you may choose to really zoom in on how they used the identified 6 C's stated in lesson focus. You can also expand the reflection to include other skills used.

How did researching the challenges utilise the 6 C's and which of these do you think were most important for this session (and why)?

Remember to record a skill you've developed or used in your Passport and add a session highlight to your Poster!

Session 5: Interviewing to empathise

Session Focus:

How might we better understand the needs and requirements of others in order to effectively address our challenges?

Session timing	135 mins
Learning outcomes	Understanding empathy and the importance in considering ways to address challenges Knowing how to formulate effective interview questions and conduct a successful empathy interview
6 C's in action	Communication Collaboration Citizenship/Culture Character/Compassion
Additional materials required	Slides Paper Pens Workbook/folder

Session Sequence

Introduction

2 mins

We are now in the **empathise** phase of Broadening Horizons. You might like to display the design thinking process and remind students that this is the first phase.

During this session, students will gain a better understanding of empathy and the importance of empathising when trying to address challenges or problems.

Key instruction

8 mins

What is empathy?

You might like to ask the group to share their understanding of empathy.

- What does it mean?
- What do students think it means in relation to their challenge?

Empathy is generally described as the ability to take on another person's perspective, to understand, feel, and possibly share and respond to their experience.

- Why might this be an essential part of the design thinking process?

An effective way to better understand someone else's perspective or experience is through interviews. But what makes a good interview?

- Ask the class what makes an interview good vs. bad

You want to understand the needs of the people affected by your challenge in order to come up with a good solution.

Student exploration

115 mins

Students are going to have the opportunity to practise conducting empathy interviews to gather insights about the needs, feelings and experiences of others.

Empathy Interview Role Play

Step 1: Introduction to Empathy Interviews (10 minutes)

Explain what empathy interviews are and why they are important.

- **Empathy Interviews:** A method to understand users' experiences, feelings, and needs by asking open-ended questions.
- **Importance:** Helps to create solutions that truly address people's needs.

Step 2: Choosing a Topic (5 minutes)

In their challenge groups, students select a topic. Example topics:

- Challenges managing screen time.
- Experiences with after-school activities.
- Preferences and challenges in choosing a healthy snack.

Step 3: Develop Interview Questions (10 minutes)

Students brainstorm and develop a list of open-ended questions related to their chosen topic.

- Encourage questions that explore feelings, motivations, and experiences.

Example questions for managing screen time:

- Can you describe a typical day of screen use for you?
- What do you enjoy most about engaging with technology? Why?
- What are the biggest challenges you face with managing screen time?

Example questions for after school Activities:

- What after-school activities do you participate in?
- What do you like most about your favourite after-school activity?
- Are there any challenges you face with your after-school activities?
- How do you balance your school work and after-school activities?
What new activities would you like to see offered after school?

Step 4: Role-Playing Interviews (20 minutes)

Students are to form pairs and assign roles (interviewer and interviewee).

- Each pair conducts a 5-minute interview based on the developed questions.
- After the first round, switch roles and conduct another 5-minute interview.
- Encourage interviewers to take notes and listen actively without interrupting.

Step 5: Share and Reflect (15 minutes)

Gather students in their challenge groups to share insights and key points from their interviews.

- Discuss as a group:
 - What did they learn about the interviewee's experiences and feelings?
 - Were there any surprising insights?
 - How did it feel to be the interviewer and the interviewee?

Step 6: Synthesizing Insights (10 minutes)

Each group can create a summary of common themes and insights from their interviews.

- Encourage students to think about how these insights can be used to design better solutions or address the challenges discussed.

Crafting empathy interview questions

Before students go on work experience this activity will support them to write questions they can use to gain insight into the ways the challenge impacts people in the workplace or their thoughts on the challenge.

The workplace notes in the next session will also highlight that the students have these and provide an opportunity for workplaces to run a structured interview session for students and staff to get to know one another.

As students learned during the empathy interview role play, good empathy interview questions are:

- Open ended:
- Explore feelings, motivations and experiences.

Open-Ended Questions: Encourage detailed responses and deeper insights. They typically start with "How," "What," "Why," "Tell me about," etc.

Closed-Ended Questions: Can be answered with a simple "yes" or "no," or a specific piece of information.

Step 1: What do you want to know? (10 mins)

Working in their challenge groups, students are to look at the information they gathered during their desktop research and consider:

- What experiences or perspectives about the challenge are missing?
- What aspects of the challenge require more information?

Step 2: Creating the questions (20 mins)

Each group is to come up with ten to twenty open-ended questions that effectively explore the

needs, feelings and experiences of people affected by their chosen challenge.

Step 3: Feedback (15 mins)

Ask each group to pair up with another group. Groups share their challenge and their empathy interview questions and offer feedback if needed.

Note: constructive feedback is not criticism. Offering feedback is making a suggestion for improvement or an alternative.

Conclusion

By the end of this activity, each group should have a set of robust and thoughtful empathy interview questions.

Reflection

10 mins

NOTE: Depending on the needs of your students, you may choose to really zoom in on how they used the identified 6 C's stated in lesson focus. You can also expand the reflection to include other skills used.

How does the empathise phase of design thinking draw on character/compassion?

Remember to record a skill you've developed or used in your Passport and add a session highlight to your Poster!

ACTION REQUIRED!

Prior to commencing work experience, students must satisfactorily complete occupational health and safety (OHS) training, either through:

- [safe@work](#)
- for students with disability or additional needs – [A Job Well Done](#)

It is the responsibility of the principal to determine which OHS program is the most appropriate for the student to undertake.

Teachers may like to complete this training at the end of session 5 or at a separate time in preparation for session 6.

Session 6: Work experience

Session Focus:

How might we gain insights into industry and the workplace while understanding the impacts of our challenge?

Session timing	Varied Classroom component: 50 mins minimum
Learning outcomes	Experiencing a workplace environment Engaging with industry mentors to further explore the challenge
6 C's in action	Communication Collaboration Citizenship/Culture Character/Compassion
Additional materials required	Butchers paper Textas Workbooks/folders

Session requirements

Prior to commencing this session:

What is needed for the work experience arrangement established in session 1?

- Ministerial form
- Virtual work experience - laptops or tablets, internet connection
- Hybrid (online and in person) - laptops or tablets, teacher accompaniment to workplace and/or ministerial form

Session Sequence

Introduction

This session is run by the industry partner but will look different for every group. Module 3 will run as agreed between the Broadening Horizons team, school and industry in session 1.

Because the work experience arrangement will be different for each school, if the program isn't being delivered by industry mentors during work experience, the remaining industry touchpoints will be highlighted in the toolkit as taking place either during subsequent work experience visits or through industry mentor visits to the school, to the school/industry partner's discretion.

Key instruction

Guide for industry mentors for work experience

The students were presented with a challenge impacting either your industry or the community more broadly and have prepared a series of questions so they can conduct empathy interviews during this first work experience.

There are a number of ways these interviews can be facilitated to best suit your workplace setup and environment. Some suggested approaches include:

- Staff who are happy to engage with the students can approach them and offer to be interviewed.
- A rotating interview set-up, where a few staff take the time to sit with each group and then after 10 minutes, rotate to another group to answer their questions.
- Designated time for staff to meet the students and be interviewed.

While it is important for students to engage in the workplace and learn about the industry, in order for their challenge to feel meaningful, it is essential they are given the opportunity to see the way the challenge impacts the industry while immersed in it.

Student exploration

40 mins

When back in the classroom or during a session time of work experience, in their groups students are to:

- Write their challenge in the centre of a piece of Butcher's paper.
- Gather their desktop research, interview responses and any other information they gathered during their work experience visit
- Around the challenge written in the middle of the butcher's paper, students write everything that the group knows so far (why it's a problem/challenge, who is impacted and why, any solutions that have been tried before) so that all the information relating to the problem is in one place.

Once each group has done this, be sure they keep them in a safe place as they will need these for either their next work experience visit or the next Broadening Horizons session.

Reflection

10 mins

NOTE: Depending on the needs of your students, you may choose to really zoom in on how they used the identified 6 C's stated in lesson focus. You can also expand the reflection to include other skills used.

Which of the 6 C's did you notice being utilised in the workplace and how?

Remember to record a skill you've developed or used in your Passport and add a session highlight to your Poster!

Session 7: Defining the challenge

Session Focus:

How might we use our insights to define the challenge into a problem statement?

Session timing	85 mins
Learning outcomes	Consolidation of information and insights Development of a focused problem statement
6 C's in action	Communication Collaboration Critical thinking Creativity Character/Compassion
Additional materials required	Slides Butchers paper Textas Workbook/folder

Session Sequence

Introduction

This session may involve students working with industry mentors to define the challenge in the workplace context or as an activity in the classroom. The process is the same, so this session can be followed by educators and industry mentors wishing to deliver these activities.

During this session, groups take any insights gained through workplace conversations and research to define problem statements and construct a robust approach to the challenge.

Key instruction

30 mins

Students will need to have the butchers paper from the end of the last session with them (it has their challenge written in the middle and all the insights and information they have gathered through research, work experience and interviews so far)

Now that students have a really good understanding of a number of aspects of their challenge, it's time to start zooming in on the specific aspect of the challenge they want to focus on addressing. This will allow students to define their challenges into "How Might We" statements.

To do that, we're going to use the 5 Whys technique.

5 Whys

To be able to create a specific and user focused "How Might we" statement, we need to ensure we get to the root cause of the problem we are trying to address.

The 5 Whys is a process that involves identifying the main problem or challenge you are trying to address and asking 'why' it is occurring. After one answer is given, you ask "why" again and keep asking why with each answer until you get to the root cause of the problem.

It is challenging to do so don't worry if you're feeling a bit confused at this point!

Example 1 (have these on a slide so that one 'why' appears at a time so participants can see how the questioning unfolds)

Problem: A student is consistently forgetting to bring their lunch to school.

Why is the student forgetting to bring their lunch to school? Because they are rushing in the morning to get ready.

Why are they rushing in the morning? Because they are not getting enough sleep at night.

Why are they not getting enough sleep at night? Because they are staying up late to watch TV and play video games.

Why are they staying up late to watch TV and play video games?

Because they have trouble falling asleep and are using electronics to help them relax.

Why are they having trouble falling asleep? Because they are drinking caffeinated beverages like soda and energy drinks late in the day.

Root Cause: The student is consistently forgetting to bring their lunch to school because they are rushing in the morning due to not getting enough sleep at night, which is caused by staying up late to watch TV and play video games. This behaviour is partially driven by consuming caffeinated beverages late in the day that interfere with their ability to fall asleep.

By using the "5 Whys" technique, we were able to identify the underlying cause of the student's lunchtime problem and develop a targeted solution. In this case, the solution might involve having a conversation with the student about the importance of good sleep hygiene, including avoiding caffeine late in the day, and setting up a consistent bedtime routine that allows them to wind down before bed.

Example 2

Problem: A restaurant is receiving a large number of customer complaints about slow service.

Why is the service slow? Because the kitchen is taking too long to prepare the food.

Why is the kitchen taking too long to prepare the food? Because the menu is too complicated and the kitchen staff is not properly trained to prepare all the items.

Why is the menu too complicated? Because the restaurant owner wanted to offer a wide variety of options to customers.

Why did the owner want to offer a wide variety of options? Because they thought it would attract more customers and increase revenue.

Why did the owner think that a wide variety of options would increase revenue? Because they did not conduct market research to understand what customers really wanted and what their competitors were offering.

Root Cause: The restaurant owner did not conduct proper market research to understand what customers wanted and what their competitors were offering, leading to a complicated menu that the kitchen staff is not properly trained to prepare.

By using the "5 Whys" technique, we were able to identify the underlying cause of the slow service problem and develop a targeted solution. In this case, the solution might involve simplifying the menu, providing proper training for the kitchen staff, and conducting market research to understand what customers really want and what competitors are offering.

Your own 5 Whys

In their groups, students read their challenge aloud.

Ask the group to identify the main issue or problem that the challenge is addressing (remember to include any user information your group has gathered). Then, ask "why" this challenge is occurring and each group is to use the 5 Whys to identify the root cause of the challenge they are addressing.

Let students know that sometimes it won't take 5 whys it might take 3 or they may get to the 5th why and hit a dead end and need to go back to the third or second why and try a different angle. That's ok!

Once each group has identified a root cause of their challenge (note that many challenges will have a number of root causes), students should write their root cause at the bottom of their butcher's paper.

Student exploration

45 mins

Turning the problem students are addressing into a "how might we" question is an essential part of the design thinking process and is the outcome we want from the define phase.

What is a “how might we” statement?

A "How Might We" statement is an open-ended question that is used to frame a problem or challenge in a way that inspires creative solutions. It is a question that challenges designers or problem solvers to think more broadly and expansively about a problem or opportunity, and to generate ideas that might not have been considered otherwise.

A “How Might We” statement typically follows a specific format: "How might we [verb] [noun] [adjective] [for whom]." For example, "How might we create a more efficient transportation system for commuters in the city?" or "How might we design a more inclusive playground for children of all abilities?"

The “How Might We” statement is a key part of the design thinking process, as it helps to frame the problem or challenge in a way that is user-focused and inspires creative thinking.

What makes a good “how might we” (HMW) statement?

It is understood by everyone in the team:

- 1) The “how might we” question must be broad enough to allow creative freedom
- 2) The HMW question must be narrow enough for us to be able to solve it with the existing resources

Below are a series of “how might we” questions to share with the students. Ask them to identify whether they are a good or bad example and why (**put the question only on the slide, not whether it’s bad or good - keep that for your own reference**)

For each of these, give students time to point out what they think makes each question good or bad and why, before sharing any further information.

Bad HMW question: How might we make a better chair?

This HMW question is too broad and lacks focus. It does not provide any information on the user or the problem to be solved. The question is not likely to inspire creative or effective solutions.

Good HMW question: How might we design a chair that is comfortable and supportive for people who work at a desk all day?

This HMW question is specific and user-focused. It addresses a clear problem faced by a specific user group. The question is also open-ended, allowing for creative solutions that could address the problem in a variety of ways. Point out to the participants that the user group is specified as ‘people who work at a desk all day’, not simply ‘people who work all day’. The more information we have about the people facing the problem, the more targeted and effective a possible solution can be.

Bad HMW question: How might we create a new app?

This HMW question is too general and lacks focus. It does not provide any information on the user or the problem to be solved. The question is not likely to inspire creative or effective solutions.

Good HMW question: How might we design an app that helps elderly people stay connected with their family and friends?

This HMW question is specific and user-focused. It addresses a clear problem faced by a specific user group. The question is also open-ended, allowing for creative solutions that could address the problem in a variety of ways.

In general, a good “how might we” question should be specific, user-focused, and open-ended. It should address a clear problem or pain point and challenge the designer to come up with creative and effective solutions.

Students can see from these examples why it is important to establish the root cause of the problem before resting their “How Might We” statement, as it allows them to be both more specific and more user focused.

Turning our challenge into a “How Might We” statement

Keeping in mind all we know about what makes a good “How Might We” statement, groups are now to look at all the information we have in relation to our challenge (original problem posed by industry or teacher, extra information we have discovered in our research and interviews) and construct a “How Might We” statement.

This can be quite tricky so it’s really important your group is open to many suggestions and once again, you will need to draw on those consensus skills to come to an agreement for your final ‘How Might We’. You will probably come up with a couple before you land on the right “How Might We” statement and that’s ok!

As you begin to develop your “How Might We” statements, test them against the following criteria to ensure they are really robust and productive:

Is the question open-ended?

A good “How Might We” question should not assume a particular solution, but should instead leave room for creative and unexpected answers. Students should make sure that their question is open-ended and encourages a range of potential solutions.

Is the question specific?

A good “How Might We” question should be focused on a specific problem or need. Students should make sure that their question is not too broad or general, but instead focuses on a particular user or

context.

Is the question user-focused?

A good “How Might We” question should be centred on the needs of the user or community. Students should make sure that their question is not solely focused on their own needs or preferences, but instead takes into account the needs and perspectives of others.

Is the question relevant?

A good “How Might We” question should be relevant to the topic or challenge at hand. Students should make sure that their question is related to the challenge they are trying to address and does not veer off into unrelated territory.

Is the question inspiring?

A good “How Might We” question should inspire creativity and innovation. Students should ask themselves whether their question is likely to generate interesting and exciting solutions, or whether it is too predictable or unoriginal.

Once each group has their “How Might We” statement, go around the room and have a representative from each group share their “How Might We” with the whole group or move around the room and look at the statements written out.

Reflection**10 mins**

NOTE: Depending on the needs of your students, you may choose to really zoom in on how they used the identified 6 C’s stated in lesson focus. You can also expand the reflection to include other skills used.

Add to your poster!

Students can add to their poster to record their highlight at the end of each stage. They may choose to draw, print an image, write a word, anything that captures and demonstrates their favourite learning or even the biggest challenge.

Remember to record a skill you’ve developed or used in your Passport and add a session highlight to your Poster!

Stage 3: Ideate

The purpose of the Ideate stage is for students to engage in idea generation so they can begin to

creatively problem solve their challenge and consider a variety of potential solutions.

Sessions

Sessions	Timing	Stakeholders
Session 8: How we ideate - Different approaches to ideation	45 mins	Teachers Students
Session 9: How might we... ideate - Ideating “how might we” statements	60 mins	Teachers Students Industry Partners
Total stage timing (full delivery)	105 mins	

Stage 3 Curriculum links

Critical and Creative Thinking

- Questions and Possibilities ([VCCCTQ043](#)) ([VCCCTQ044](#)) ([VCCCTQ045](#))

Personal and Social Capability

- Development of Resilience ([VCPSCSE044](#))
- Collaboration ([VCPSCSO051](#))

Session 8: How we ideate

Session Focus:

How might we practise ideation to more effectively address complex challenges?

Session timing	45 mins
Learning outcomes	Understanding different approaches to ideation
6 C's in action	Creativity

Collaboration
Communication

**Additional materials
required**

Paper
Textas
Pens
Workbooks/folders

Session Sequence

Introduction

The ideation phase of design thinking allows students to explore different approaches to brainstorming and creative problem solving. Educators and industry mentors are welcome to substitute any ideation activities with their own or add more and extend the session.

Key instruction

15 mins

One of the biggest challenges when it comes to ideation is not getting caught up in what is realistic or what will or won't work. To help students get used to this unrestricted thinking and brainstorming, they will need to work in their groups for the following activity

Object activity

Give each group a random object (a fork, a pencil, a stapler, a book, etc.). Alternatively, have the image of an object on a slide in front of the whole class.

Ask each group to brainstorm as many different uses for that object as they can think of within 2 minutes.

- Encourage them to think creatively and come up with as many ideas as possible.
- After the 2 minutes is up, set the timer again and challenge each group to come up with even more ideas, the more 'out there' the better.
- Can repeat a third time, encouraging completely unrestricted thinking, anything's possible!

After the ideation period is over, have each group share their favourite idea and the most out-there idea with the bigger group.

Group discussion:

What did this activity teach you about ideation? What surprised you?

Student exploration

20 mins

Following on from the object activity, students have the opportunity to engage in another ideation activity that takes a different approach to idea generation. You may like to include the example below on a slide or a handout for students to refer to.

SCAMPER

SCAMPER is a technique that stands for Substitute, Combine, Adapt, Modify, Put to another use, Eliminate, and Reverse. It encourages thinking about existing products or ideas in new ways.

Activity:

Use the same everyday object (e.g., a pencil) from the object activity.

Ask students to think of ways to innovate the object using the SCAMPER method:

- **Substitute:** What materials can be substituted? (e.g., replace wood with recycled plastic)
- **Combine:** What can you combine it with? (e.g., a pencil with an eraser)
- **Adapt:** How can it be adapted for a new use? (e.g., a pencil that can write underwater)
- **Modify:** How can you modify it to improve it? (e.g., a pencil with a comfortable grip)
- **Put to another use:** Can it be used in another way? (e.g., a pencil as a hair accessory)
- **Eliminate:** What can you eliminate to simplify it? (e.g., a pencil without an eraser)
- **Reverse:** How can you reverse or rearrange it? (e.g., a retractable pencil)

You might like to ask students to share back their favourite new use for the object following SCAMPER.

Discussion:

What are the benefits of these different approaches to ideation?

Do you think one approach is better than the other? Why/why not?

Reflection

10 mins

NOTE: Depending on the needs of your students, you may choose to really zoom in on how they used the identified 6 C's stated in lesson focus. You can also expand the reflection to include other skills used.

What is the role of creativity in ideation?

Remember to record a skill you've developed or used in your Passport and add a session highlight to your Poster!

Session 9: How might we...ideate

Session Focus:

How might we apply ideation to our “how might we” statements?

Session timing	60 mins
Learning outcomes	Identify possible solutions or ways to address the challenge Understand how to use ideation to generate creative solutions
6 C's in action	Creativity Collaboration Communication Critical thinking
Additional materials required	Butcher's paper Textas Pens Workbooks/folders

Session Sequence

Introduction

Now that students have had the chance to practise their creativity and practise different techniques of ideation, it's time to look at their How might we? statements and apply the same creative thinking to these.

Industry partners may like to attend this session to work with the students if this session is being delivered at school or teachers and industry partners may determine that this session is delivered by industry partners during work experience.

Key instruction

15 mins

On a piece of butcher's paper, each group writes their “How Might We” statement in the middle. Each group needs to clear their tables to ensure their statements are in the middle, post-its (if you're using them) and textas next to it.

Reverse brainstorm (worst ideas)

While ideation is all about coming up with creative solutions to complex problems or challenges,

another technique often used during the ideation process is called reverse brainstorming. This is when you take your problem and try to come up with ways to undermine it or make it impossible to solve.

For example, if your “how might we” statement is ‘how might we encourage more people to live sustainably?’, the reverse brainstorming question would be, ‘how might we discourage people from living more sustainably?’

- Why do you think this is a useful approach to ideation?
- It allows us to consider the potential problems and also lets us consider why the negatives are negative and what the reverse might be.

On a new piece of butcher’s paper, reframe your how might we? statement into a reverse brainstorming question.

Once each group has done this, they have 5 minutes to brainstorm around the reframe/reversed “how might we” statement.

Ask groups to share back their idea that makes solving the problem most impossible.

Student exploration

40 mins

Ideating for our “how might we” statements (15 mins)

Students have now experienced different ways of ideating or brainstorming and it is time to start looking at their “how might we” statements to decide which approach to ideation each group is going to use to begin generating creative solutions.

Option here for participants to choose the way they want to ideate:

- Two minute frenzy/object activity approach (same as the object activity from the last session). The group sets a 2 minute timer and in that time write as many ideas as they can, then set another 2 minute timer and try to come up with even more ‘out there’ ideas, then again for the third time, putting any ideas, no matter how wild and seemingly impossible, down.
- SCAMPER (as practised in session 8)
- 100 ideas- Students try to generate 100 ideas in 10 minutes.

Students can put their negative brainstorming butcher's paper to the side and have the “how might we” statement on a new piece of butcher’s paper in the centre of the group.

Every group now has 10 minutes to brainstorm using their chosen ideation technique.

Round robin (10 mins)

How might we statements

- Each group has ideated their own “how might we” statement

- Now students walk around to the other groups —1 minute at each table— and ideate the other group’s “how might we” statements
- Students return to their own statement and look at all the additional ideas around the “how might we” statement

Reaching consensus (20 mins)

Look at all that you’ve brainstormed and the contributions from others. Across all of them, choose 3 ideas that jump out at you as interesting or innovative.

You now need to categorise/identify these as:

One **sure thing**- an idea that is doable and possible right now

One **gem** - it’s innovative and will require some work to make it happen, but one your table really thinks could be something

One **aspirational** - an idea that might be possible with some consideration and imagination or might seem impossible but there’s something in the idea that could be possible.

You’ve got 5 minutes to come to a consensus on your table about these.

On a clean sheet, write your how might we question at the top with your sure thing, gem and aspirational idea underneath. We will be using these next session.

Reflection

5 mins

NOTE: Depending on the needs of your students, you may choose to really zoom in on how they used the identified 6 C’s stated in lesson focus. You can also expand the reflection to include other skills used.

How did you utilise critical thinking during this session?

Add to your poster!

Students can add to their poster to record their highlight at the end of each stage. They may choose to draw, print an image, write a word, anything that captures and demonstrates their favourite learning or even the biggest challenge.

Remember to record a skill you’ve developed or used in your Passport and add a session highlight to your Poster!

Stage 4: Prototyping

The purpose of the Prototyping phase is to refine possible solutions generated in the ideation phase so a prototype can be developed.

Sessions

Sessions	Timing	Stakeholders
Session 10: How refined! <ul style="list-style-type: none"> - How to refine possible solutions to be able to demonstrate these through a prototype 	25 mins	Teachers Students Industry partners
Session 11: Prototyping <ul style="list-style-type: none"> - Creation of a working model or clear demonstration of the idea or solution the group has developed to address the challenge. 	150 mins	Teachers Students
Total stage timing (full delivery)	175 mins	

Stage 4 Curriculum links

Critical and Creative Thinking

- Questions and Possibilities ([VCCCTQ043](#)) ([VCCCTQ044](#)) ([VCCCTQ045](#))

Design and Technologies

- Generating ([VCDSCD061](#))

Personal and Social Capability

- Development of Resilience ([VCPSCSE044](#))
- Collaboration ([VCPSCSO051](#))

Session 10: How refined!

Session Focus:

How might we refine our ideas from the last session to generate a solution to prototype?

Session timing	25 mins
Learning outcomes	Understand the process of refining ideas
6 C's in action	Creativity Collaboration Communication Critical thinking
Additional materials required	Butcher's paper Textas Pens Workbooks/folders

Introduction

Following on from session 9, this session will introduce another tool that can be really useful when trying to refine ideas or reach consensus. Students will revisit their sure thing, gem and aspirational ideas and have one last opportunity to change these.

Industry partners may like to attend this session to work with the students if it is being delivered at school or teachers and industry partners may determine that this session is delivered by industry partners during work experience.

Key instruction

15 mins

"Yes, and" activity.

Start by explaining the concept of "Yes, and" to the group. The goal of the activity is to build upon the ideas of others in a positive and collaborative way.

This is a classic improv game that teaches the value of accepting each other's ideas and cooperating with one another. The game may be played in pairs, in small groups or with the whole group in a circle.

First, demonstrate this yourself by making a simple statement. Tell students that you are going to make up a conversation between two people in which every sentence (except the first one) starts with the words "Yes, and..." (you will need someone to demonstrate this with)

Example:

"The river is full of fish." (opening statement)

"Yes, and one of them is enormous."

"Yes, and he's swimming toward us."

“Yes, and he looks hungry.”

“Yes, and we are trapped in this boat.”

“Yes, and he looks more like a whale than a fish.”

“Yes, and now the motor won’t start.”

“Yes, and he’s about to swallow us.”

“Yes and I just remembered that this boat is also a plane.”

“Yes and lucky for you I just got my pilot’s licence.”

Check that students understand the way the activity works. Now it’s their turn in their pairs/small groups/large group.

Topic - Time travel

Imagine you have a time machine

Where and when would you go? What would you do and see? How would you use the time machine to make a positive impact on the world?

The other person in the pair must respond to the idea by saying "Yes, and..." adding to the idea in a positive way.

For example, if the first person says, "We could create a new app to help people learn a new language," the second person might respond, "Yes, and we could incorporate a feature that allows users to practise speaking with native speakers."

Continue the activity for a set time limit (e.g. 5 minutes), with each person in the pair taking turns sharing ideas and building upon the ideas of the other person.

Discussion:

- What do you think the game taught you about collaboration?
- What is the value of accepting each other's ideas and building on them?
- How did it feel to have your ideas accepted?
- What do you think the game taught you about communication?
- What do you think the game taught you about ideation?
- How they can apply the "Yes, and" technique in their team.

Student exploration

10 mins

Refine ideas from last session

At the end of last session students categorised three ideas as a sure thing, gem and aspirational.

Getting those out now, students see if there's anything about each one that they would like to refine or change at all. Keeping in mind the open, accepting approach to collaboration we just practised. Students may like to expand the idea a little more, add a new detail they've thought of since last session or leave it as is.

Reflection

5 mins

NOTE: Depending on the needs of your students, you may choose to really zoom in on how they used the identified 6 C's stated in lesson focus. You can also expand the reflection to include other skills used.

Remember to record a skill you've developed or used in your Passport and add a session highlight to your Poster!

Session 11: Prototyping

Session Focus:

How might we identify the idea we'd like to develop into a prototype?

Session timing	150 mins
Learning outcomes	Working together to reach consensus about which solution to move to prototype
6 C's in action	Creativity Collaboration Communication Critical thinking
Additional materials required	Butcher's paper Textas Pens Paper Scissors Cardboard Glue Sticky tape Workbooks/folders

Introduction

One of the best ways to gain insights in a design thinking process is to carry out some form of prototyping. This method involves producing an early, inexpensive, and scaled down version of the product in order to reveal any problems with the current design. Prototyping offers designers the opportunity to bring their ideas to life, test the practicability of the current design, and to potentially investigate how a sample of users think and feel about a solution or product.

Prototyping can be done using a variety of materials, such as paper, cardboard, or even digital tools. By creating a prototype, students can get a sense of how their design will function in the real world and make adjustments as necessary.

There is an optional prototyping activity for students to practise the prototyping process by building a board game. If you are short on time, you can skip the key instruction and move straight to the student exploration.

Key instruction

50 mins

Create a simple board game prototype.

Step 1: Introduce the concept of prototyping and its importance in the design process.

Discuss how prototypes can help test and refine a design before creating the final product.

Step 2: Brainstorm game ideas

Students brainstorm ideas for board games that they would like to create. They can consider different types of games such as strategy games, trivia games, or role-playing games.

Step 3: Plan and sketch out the design

Ask participants to plan and sketch out the design of their board game, including the game board, cards, pieces, and rules.

Step 4: Create a paper prototype

Provide students with paper, scissors, and any other materials they may need to create a paper prototype of their board game.

- Encourage them to experiment with different designs and make changes as necessary.

Step 5: Test and refine

Once the paper prototypes are complete, students can test them to see how well they work.

- Encourage them to make changes and refine their designs based on feedback from their classmates.

Participants could create a digital prototype if time allows or if one group has a particular approach they want to take.

Groups can showcase their board games to the class and each group has 10 minutes to allow them to play another group's game.

- Encourage students to provide feedback and suggestions for further improvement.

Conclusion

What was the benefit of going through the prototyping process?

How will that influence your approach to prototyping your idea for Broadening Horizons?

Student exploration

100 mins

Now that students know the purpose of a prototype and the fact that it is something they continue to test and change as they get feedback, it's time to think about what a prototype might look like for each of the ideas their group has come up with to address their 'how might we' statement.

Brainstorm what a prototype could look like for each idea (20 mins)

Get three pieces of paper or divide a piece of butcher's paper into three columns, with your **sure thing** idea at the top of one column/one piece of paper, your **gem** on another and your **aspirational** idea at the top of the third.

You are going to spend the next 20 minutes using the skills of ideation to plot out what a prototype for each idea could be. So that's about 7 minutes per idea to map out a high level outline of what a prototype could look like and how it might function to demonstrate your solution.

Remember, it might be a physical prototype made out of materials such as cardboard or wood, it might be a storyboard or sketch or it might be a digital solution. Whatever it is, write an outline of:

- What it is
- How would you create it?
- What would it demonstrate?

Choose which one you want to further develop (10 mins)

Now is the time for students to choose which idea they are going to develop into a prototype. They need to decide whether to use their sure thing, gem or aspirational idea and that will be the group's focus moving forward.

Tell students to choose something that excites them, and meets the needs of their user, and be sure that their group reaches consensus!

How will you create this? How can you best demonstrate your solution? (30 mins)

You need to develop the outlined idea you came up with earlier into a detailed plan for your prototype. This should include:

- A list or sketch of what it will look like
- Any materials you will need
- How you will create it
- The role each team member will play in creating the prototype

You may want to end this session here to give students an opportunity to gather extra materials or resources to build their prototype. Or ensure there are enough materials available.

Create your prototype (40 mins)

Each group should clearly outline who is responsible for which aspects of the prototype design so that each member has a role.

Each group needs to ensure the prototype clearly demonstrates the solution (or aspect of the solution) and ties back to the “how might we” statement.

Begin building the basic version of your prototype. Focus on the core features and functionality. It doesn't need to be perfect at this stage, but it should serve as a starting point for testing and refining that you can continue working on at the next session.

Depending on the complexity of your idea, you might need to create multiple prototypes for different aspects of the design.

For example, you might build a physical prototype to show the product and a digital prototype or storyboard to show the way it functions.

Educators may choose for students to develop their prototype entirely in class time or they may finish them outside class. The time allotted allows for students to make a start on building their prototype.

Reflection

5 mins

NOTE: Depending on the needs of your students, you may choose to really zoom in on how they used the identified 6 C's stated in lesson focus. You can also expand the reflection to include other skills used.

Add to your poster!

Students can add to their poster to record their highlight at the end of each stage. They may choose to draw, print an image, write a word, anything that captures and demonstrates their favourite learning or even the biggest challenge.

Remember to record a skill you've developed or used in your Passport and add a session highlight to your Poster!

Stage 5: Test and Refine

The purpose of the Test and Refine stage is to give students the opportunity to test their prototypes, practise providing and receiving feedback and refine their prototype if necessary to ensure it effectively conveys their group's idea.

Sessions

Sessions	Timing	Stakeholders
Session 12: Testing, testing <ul style="list-style-type: none"> Students test that their prototype accurately and effectively conveys the solution or idea. 	120 mins	Students Teachers Industry mentors
Total stage timing (full delivery)	120 mins	

Stage 2 Curriculum links

Critical and Creative Thinking

- Questions and Possibilities ([VCCCTQ043](#)) ([VCCCTQ044](#)) ([VCCCTQ045](#))

Design and Technologies

- Investigating ([VCDSCD060](#))

Economics and Business

- Enterprising Behaviours and Capabilities ([VCEBN027](#))

Personal and Social Capability

- Development of Resilience ([VCPSCSE044](#))
- Relationships and diversity ([VCPSCSO048](#))
- Collaboration ([VCPSCSO051](#))

Session 12: Testing, testing

Session Focus:

How might we test whether our prototype effectively conveys our idea?

Session timing	120 mins
Learning outcomes	Students will understand how to give, receive and apply feedback
6 C's in action	Creativity Collaboration Communication Critical thinking Character/compassion
Additional materials required	Prototypes created by students Tables and chairs for setting up stations Feedback forms (simple template) Pens and paper for notes Materials for refining prototypes (e.g., textas, tape, additional prototype materials)

Introduction

Testing prototypes is a crucial part of the design thinking process. Students learn to give and receive valuable feedback and have the opportunity to make adjustments to their prototype if necessary.

Key instruction

Explain to students that they will test their prototypes, gather feedback, and refine their designs based on user interactions during a prototype testing fair.

Student exploration

120 mins

Prototype Testing Fair

Step 1: Set Up the Fair (10 minutes)

Arrange the classroom into different stations, each designated for a group to showcase their prototype.

- Ensure each station has the necessary materials for testing (e.g., a table, paper for notes, pens).

Step 2: Prepare Testing Instructions (10 minutes)

Each group prepares a brief set of instructions or a scenario for how their prototype should be used or tested. Instructions should include:

- The purpose of the prototype.
- How to use the prototype.
- Specific tasks or challenges to be completed with the prototype.

Step 3: Test the Prototypes (30 minutes)

Split the class into two halves. One half will be testers, and the other half will stay at their stations to present their prototypes.

- Testers rotate around the room, spending a few minutes at each station using and interacting with the prototypes.
- Testers provide feedback using a simple feedback form that includes:
 - What they liked about the prototype.
 - Any challenges or difficulties they encountered.
 - Suggestions for improvement.

Step 4: Collect and Discuss Feedback (20 minutes)

Groups gather and review the feedback forms collected from testers.

Discuss as a group:

- Common themes in the feedback.
- Specific areas where the prototype performed well.
- Areas needing improvement based on tester experiences.

Step 5: Iterate and Refine (30 minutes)

- Groups brainstorm how to address the feedback and make improvements to their prototypes.
- Make necessary changes to the prototypes based on the feedback received.
- Prepare a brief presentation on what changes were made and why.

Step 6: Share and Reflect (20 minutes)

Each group presents their refined prototype to the class, explaining:

- The original design and purpose.
- Feedback received and changes made.
- How the changes improved the prototype.

Reflect as a class on the testing process:

- What did they learn about their designs?
- How did user feedback influence their improvements?
- What was the most surprising piece of feedback they received?

Conclusion:

This activity helps students understand the importance of user feedback in the design process and allows them to experience how iterative improvements can enhance their designs.

Reflection

5 mins

NOTE: Depending on the needs of your students, you may choose to really zoom in on how they used the identified 6 C's stated in lesson focus. You can also expand the reflection to include other skills used.

How did the test and refine phase encourage collaboration and critical thinking?

Add to your poster!

Students can add to their poster to record their highlight at the end of each stage. They may choose to draw, print an image, write a word, anything that captures and demonstrates their favourite learning or even the biggest challenge.

Remember to record a skill you've developed or used in your Passport and add a session highlight to your Poster!

Stage 6: Presentation

The purpose of the Presentation stage is for students to share their group's solution to the challenge posed at the beginning of program, as well as their Broadening Horizons journey

Sessions

Sessions	Timing	Stakeholders
Session 13: Preparing to present	70 mins	Students Teachers Industry partners
Session 14: Presentation and celebration	TBC	Students TEachers Industry partners Broadening Horizons staff

		Parents/wider school community
Total stage timing (full delivery)	Minimum 70 mins	

Stage 6 Curriculum links

<p>Critical and Creative Thinking</p> <ul style="list-style-type: none"> - Questions and Possibilities (VCCCTQ043) (VCCCTQ044) (VCCCTQ045) <p>Economics and Business</p> <ul style="list-style-type: none"> - Work and Work Futures (VCEBW025) - The Business Environment (VCEBB024) (VCEBW026) - Enterprising Behaviours and Capabilities (VCEBN027) <p>English</p> <ul style="list-style-type: none"> - Literacy: Interacting with others (VCELY486) <p>Personal and Social Capability</p> <ul style="list-style-type: none"> - Development of Resilience (VCPSCSE044) - Relationships and diversity (VCPSCSO048) - Collaboration (VCPSCSO051)
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Session 13: Preparing to present

Session Focus:

How might we best present our solution and Broadening Horizons experience to an audience?

Session timing	70 mins
Learning outcomes	<p>Students will consider how best to present their solution to a wider audience</p> <p>Reflecting on the Broadening Horizons program</p> <p>Identifying the skills developed throughout the program</p>
6 C's in action	<p>Creativity</p> <p>Collaboration</p> <p>Communication</p> <p>Critical thinking</p> <p>Character/compassion</p>

Additional materials required	Prototypes created by students Computers/Tablets Paper Pens Workbooks/folders Slides
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Introduction

Students having the opportunity to present their prototype and solution to the challenge is an important part of the Broadening Horizons journey. There is no “right way” to present and educators can decide what will be the most appropriate way for students to share their experience with the industry partners, teachers and peers.

Key instruction

5 mins

There are a variety of ways for students to share their prototypes, solutions and Broadening Horizons journeys with a wider audience. Some suggestions include (but are not limited to):

- An expo where groups each have a stall and industry mentors, teachers, parents and peers can walk around
- A pitch event - students prepare a pitch to present their idea in a concise, catchy way
- Video or digital presentation

The class may like to decide on the presentation format together or perhaps different groups can select different modes of delivery.

Whichever presentation mode is selected, it is essential groups include in their presentation:

- The industry challenge and the ideas/solution to address it.
- The 6 C's skills they developed and utilised throughout
- How the experience has influenced career interests.

Student exploration

60 mins

The time required to prepare for the presentations will vary depending on the chosen format.

For educators who are running a pitch event, the following will assist to create clear, concise pitches that cover all the information that needs to be included. It is beneficial for all students to learn how to convey information clearly and concisely.

Pitch briefing

Knowing how to pitch effectively is a valuable skill and a really important way to share your

solution and prototype with a wider audience.

Step 1: Understand the Basics

A pitch is a concise and compelling presentation where you present an idea, product, or project in a way that captures the audience's attention and communicates the key points effectively.

Step 2: Identify the Purpose

You need to understand that the purpose of your pitch will influence the content and style.

Step 3: Craft the Message

You need to be really clear when structuring your pitch:

- **Introduction:** Begin with a strong opening that grabs attention and introduces the main idea.
- **Body:** Present the core details of the idea. Keep it concise and organised, focusing on the most important aspects.
- **Benefits:** Highlight the benefits and positive impact of the idea and use your prototype to demonstrate how the idea works/what it looks like. Emphasise why it's worth considering.
- **Call to Action:** Conclude with a clear call to action. What do you want your audience to do next?

Know the Audience:

Explain the importance of tailoring the pitch to the audience's interests and needs. Discuss how understanding the audience helps shape the message and delivery.

Elevator Pitch Practice:

Introduce the concept of an "elevator pitch," a brief pitch that can be delivered in the time it takes to ride an elevator. Have participants practise condensing their idea into a short pitch, around 30-60 seconds.

Visual Aids and Clarity:

Teach students to use simple visual aids, such as slides or props, to enhance their pitch. Emphasise the importance of clear, concise language and avoiding jargon.

Body Language and Delivery:

Discuss the role of body language, eye contact, and tone of voice in effective communication. Encourage participants to practise speaking clearly and confidently.

Rehearse and Revise:

Allocating time to rehearse their pitches multiple times is essential. We will have time for this in the next session. Encourage peer feedback and self-assessment. Discuss how revisions can improve clarity and impact.

Feedback and Iteration:

Opportunities to present your pitches in front of peers and receive constructive feedback is a great way to ensure your message is clear and allow you to iterate and refine the pitch based on feedback.

Q&A Preparation:

Explain the importance of anticipating questions from the audience and preparing answers. Encourage students to think critically about potential questions related to their pitch.

Presentation framework overview

All presentations should tell a story as well as provide the solution the groups have come up with.

Presentations should include the following:

- Your group's Broadening Horizons journey
- Which industry or challenge have you been working with?
- What's the "how might we" statement?
- The ideation around the solution - share some of the ideas you might have considered and perhaps talk about the way you filtered through all the ideas
- What is the solution?
- Present the prototype and explain how it will work
- Next steps (what needs to happen next for the solution to be used or considered)

Each member of the group should play a role and take ownership over their part of the presentation.

Create a poster!

Alongside the presentation, Students will create a poster to record and capture highlights, challenges and demonstrate their favourite learning from the Broadening Horizons program. They can use the template provided or create their own using the prompts on the provided template.

Spend the rest of the session preparing your group's presentation using the framework above.

Reflection**5 mins**

NOTE: Depending on the needs of your students, you may choose to really zoom in on how they used the identified 6 C's stated in lesson focus. You can also expand the reflection to include other skills used.

What are the different ways you can use communication when it comes to presenting information?

Remember to record a skill you've developed or used in your Passport and add a session highlight to your Poster!

Session 14: Presentation and celebration

Session Focus:

How might we celebrate and share our achievements with others?

Session timing	TBC
Learning outcomes	Understanding how to communicate effectively Being able to present information in a clear, concise manner
6 C's in action	Creativity Collaboration Communication Critical thinking Character/compassion
Additional materials required	Prototypes created by students Computers/Tablets Paper Pens Workbooks/folders Slides Any other materials needed for the presentation

Introduction

Students having the opportunity to present their prototype and solution to the challenge is an important part of the Broadening Horizons journey. There is no “right way” to present and educators can decide what will be the most appropriate way for students to share their experience with the industry partner, teachers and peers.

The posters can be displayed around the room and students may like to talk to visitors as they arrive about their experiences using the posters as prompts.

Key instruction

TBC

Educators and industry partners to facilitate the groups' presentations of their Broadening Horizons journey.

Reflection

5 mins

Educators may like to run a whole group reflection session after the presentation. During this time, students can:

- Record any additional skills utilised or developed throughout the presentation
- Discuss program highlights and challenges

Remember to record a skill you've developed or used in your Passport!

VIEW ONLY