

Metro Minds STEAM Challenge 2025

Years 7 to 10, your Metro Minds journey starts here.



Step 1



Form a team

Get a team together to solve a real challenge or opportunity that Sydney Metro may face as it revolutionises how Sydneysiders travel.

Some team members may have more than one job (maximum of six students per team). These might be:

The Organiser



Project manager

Manages the team, coordinates creation of a plan and ensures actions are completed on time.

The Inventor



Production manager

Responsible for prototype development.

The Informer



Research and development manager

Responsible for research and product/solution development.

The Questioner



Quality assurance manager

Responsible for quality control and testing.

The Art Director



Creative and design manager

Responsible for creative presentation and video pitch production.

The Wordsmith



Project administration manager

Responsible for quality documentation, information flow, photographs and finalising the concept brief.

Step 2



Webinars

Watch our pre-challenge and student webinars to learn more about the challenge and design thinking process

Explore

Research a challenge or opportunity. It could be from any area including:

- Customer needs and engagement
- [Metro trains](#)
- Engineering and construction
- [Health and safety](#)
- Heritage
- [Integrated transport](#)
- Environment and sustainability
- [Stations](#)
- Passenger access
- [New technologies](#)
- Future transport
- [Connecting communities.](#)



Work at Sydney Metro's new station at Orchard Hills.



Waterloo Station
community open day.

Step 3



Innovate

Use the design thinking process to develop your innovation and prototype.

To get more tips on design thinking, go to sydneymetro.info/metro-minds-steam-challenge

1 Empathise

Put yourself in someone else's shoes

- Find out more about Sydney Metro by visiting sydneymetro.info
- Look, listen and learn – think about your customer.

2 Define

Take what you have learnt and put it into words

- Discuss your research and observations.
- Choose a challenge statement or create your own. Go to sydneymetro.info/explore-the-challenges
- Write a driving question - this will be what your team will address/solve with your innovation.

3 Ideate

Ideate with your team – it's time to come up with ideas

- Brainstorm as many ideas as possible for an innovation that solves your identified problem.
- Be original: try to select an innovative idea that doesn't already exist and is realistic.

4 Prototype

Get hands-on

- Create a prototype, this can be a physical model, computer design or an artist's impression.
- Keep it simple: create an inexpensive, scaled-down model of your innovation.

5 Test

See if your idea works

- Hand the prototype over to a new user to see how they interact with it – show, don't tell.
- You may have to create multiple prototype versions and scenarios before you get it right.



Metro Minds STEAM Challenge winners from North Sydney Boys High School, 2024.



Meet our Metro Minds Ambassadors

Metro Minds STEAM Challenge provides students with a unique opportunity to connect with real-life Metro minds working on the Sydney Metro project.

How does the ambassador program work?

Coordinating teachers can book a Metro Minds ambassador school visit when they register for the competition forms.office.com/r/YAjPdQt09C

Ambassadors are invited to visit schools in person to mentor and guide students (from late-May to mid-June). Teams must be prepared to pitch their ideas live before they finalise their concept brief and video submission.

Catherine McAuley Westmead STEM club students.

Ask the experts

Metro Minds ambassadors include experts in engineering, design, planning, transport, customer service, sustainability, safety and place-making. The sessions provide an important opportunity for students to get feedback on their design-thinking ideas and learn more about the Sydney Metro project. Ambassadors will have a current Working with Children Check and can provide declarations prior to their visit.



Metro Minds STEAM Challenge Finalist, Our Lady of Mercy College, 2024.



Step 4



The pitch

We want to see your team and your innovation. Create a video to pitch us your idea. It could look like this, it's up to you.

Introduction

Introduce your team members – say hi!
What did your team do?

The challenge or opportunity

Explain the challenge or opportunity addressed: know your 'problem' statement.

Innovation

Present your idea and prototype.
Tell us how your idea has been developed, designed and tested.

Fit

Tell us how your innovative idea fits the Metro Minds STEAM Challenge brief.
Could it be realistically implemented?

Community value

Are you an exemplary local citizen?
Of course you are! Tell us the ways that your innovation will contribute to and serve the local community.

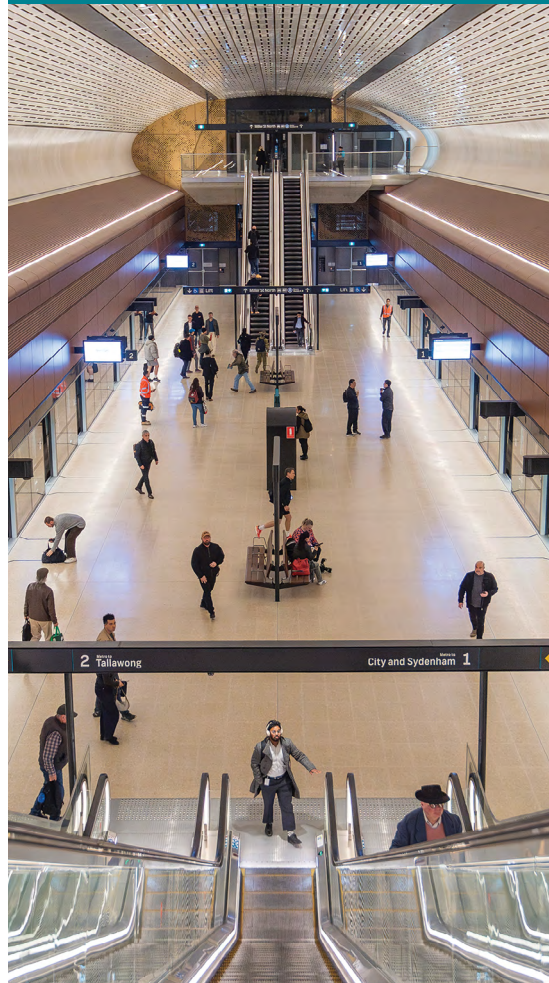
Sydney Metro opening day
at Victoria Cross Station.

Video tips



Your video pitch should be informative, interesting and engaging for the audience. Here are a few helpful hints for a successful pitch:

- Know your content
- Involve all team members
- Understand your audience
- Keep it simple
- Use visuals to support your pitch
- Be confident and speak clearly and expressively.



Step 5



Submit

Your Metro Minds STEAM coordinating teacher will be responsible for uploading your entry. However, before he or she uploads, ensure your team has:

- Checked carefully your concept brief outlining your team's design thinking process. **Remember, no more than 500 words.** This can be submitted as a PDF or Word document.
- Edited and previewed your video pitch to ensure your team has completed all of the challenge's components.
- Submitted video entries via Vimeo or YouTube.

Don't forget, submissions close online at 5:00pm (AEST) on 27 June 2025.



Checklist

- Form your team of four to six students and allocate real jobs. Go on, give your team a name.
- Is it OK? Has your parent or legal guardian given you permission to enter the Metro Minds STEAM Challenge?
- Check your coordinating teacher has registered your team.
- Read through the challenge judging criteria on our website.
- Research the Sydney Metro project and decide on your challenge theme.
- Establish your solution by following the first three stages of design thinking: empathise, define and ideate.
- Develop your prototype and test –hit repeat if you need to.
- Tap into our Metro Minds ambassador network through a school visit or online session.
- Plan and create a visual presentation to tell us your pitch.
- Film your video pitch (of up to five minutes) featuring all team members.
- Complete a concept brief (of up to 500 words) outlining your design thinking process.
- Check your brief and video pitch meet the judging criteria.
- If the pitch is one of the top eight from your school, ask your coordinating teacher to submit your concept brief and pitch presentation on the Metro Minds web page by **27 June 2025**.

The prize

Teams and their support crew will be chosen to attend the finalist event for their chance to pitch to our judges.

Finalists

\$600 prize for the team

\$300 prize for the coordinating teacher

\$300 prize for the school

Winners

\$1500 prize for the team

\$500 prize for the coordinating teacher

\$500 prize for the school

Timeline

Registrations open
29 November 2024

Registrations close
9 May 2025

Ambassador visits
26 May – 20 June 2025

Submissions due
27 June 2025

Finalists announced
23 July 2025

Finalists event
22 August 2025*



* Date to be advised and may be subject to change. Students must participate in Finalists event to be eligible as finalists.

Teacher info

The Metro Minds STEAM Challenge is a NSW Education Standards Authority (NESA) curriculum-linked, project-based learning experience which engages students in a real project of national significance.

It is relevant across multiple curriculum areas (including Science, Technology, Engineering, Arts and Mathematics) and supports 21st century learning. The competition is part of Sydney Metro's FastTracking the Future education program.

Teams entering the competition must have a teacher who acts as the coordinating teacher. The coordinating teacher is responsible for coordinating teams, organising parental permission and registrations and uploading team submissions to the Metro Minds web page by **27 June 2025**. The coordinating teacher can also win some great prizes!

Curriculum links

- English
- Mathematics
- Science
- Geography
- Design and Technology
- Industrial Technology
- Visual Arts
- Commerce

Find more information, including curriculum links, content descriptors and terms and conditions at: sydneymetro.info/metro-minds-steam-challenge