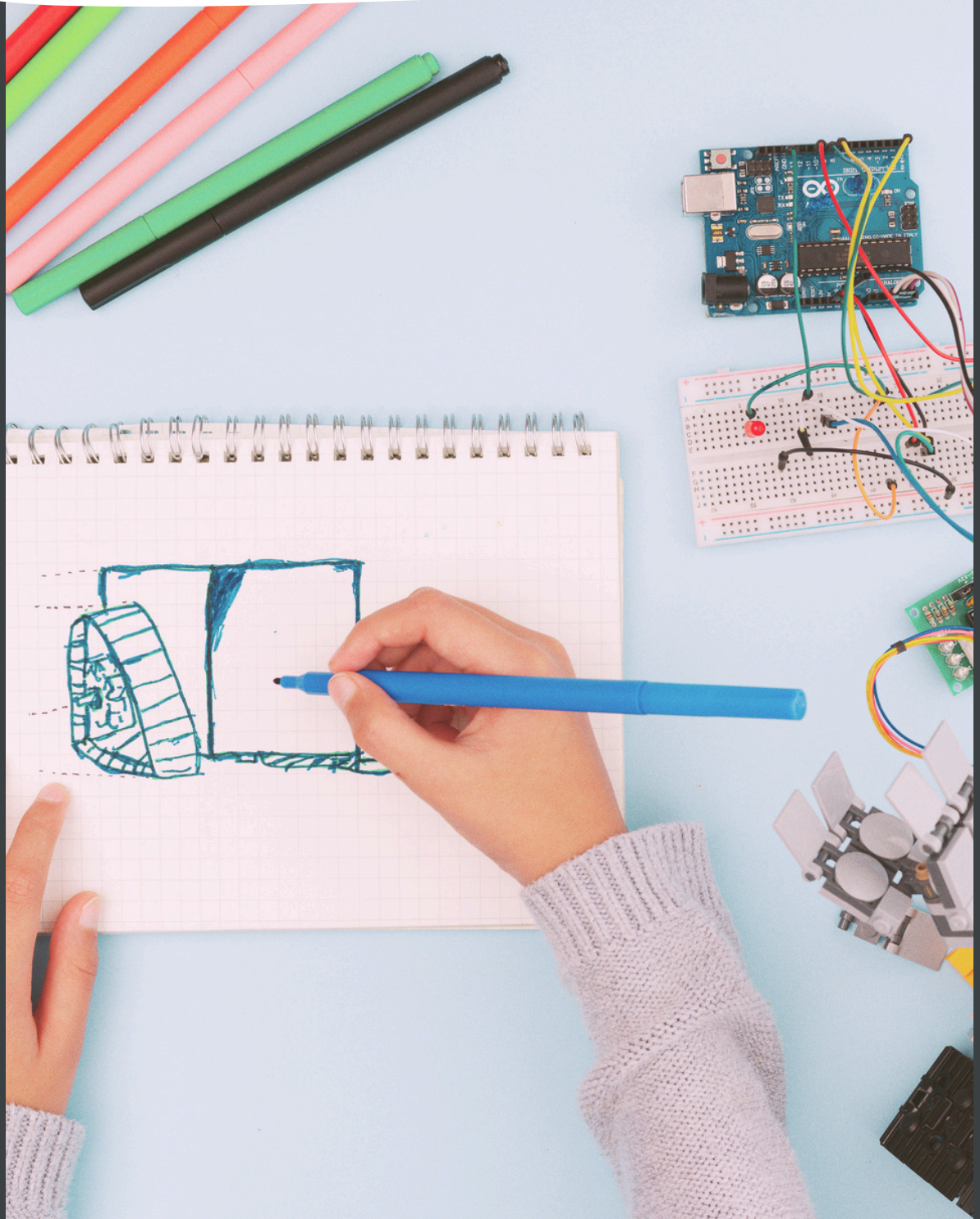


Design. Build. Invent

Term 3 Online Invention Program

Where ideas take shape



Lions Homeschool Hub



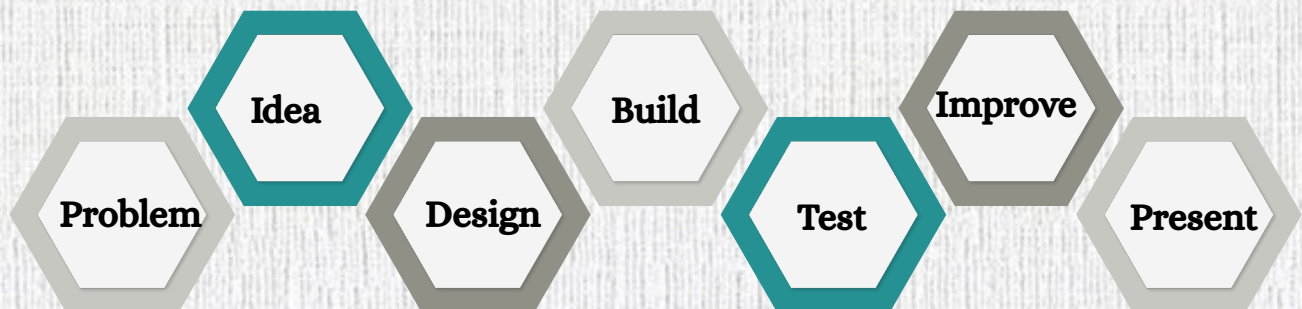
Design. Build. **Invent.**

F r o m P r o b l e m t o I n v e n t i o n

Design, Build, Invent is a guided Term 3 program where students identify a real-world problem and work through the design and technology process to create an invention or working prototype.

Across the term, students will brainstorm, research, sketch, plan, build, test, refine and present their ideas.

The teaching and collaboration happen online, while students complete the hands-on making in their own space using materials suited to their individual project. Even though children are building in their own space, they will still be guided by an educator and part of the group where they can discuss, ask questions, show their work, gain feedback from their peers etc.





WEednessdays

How it works

Online guidance. Hands-on learning.

9:00- 10:10

Explicit Design and Technology teaching led by Ash.

Students learn the design process, develop their plans and make informed decisions about their project. Amanda will also be there to help differentiate learning - extending or supporting the kids

10:20-11:10

Students work independently on their invention in their own space while remaining connected online. Students may need 1:1 feedback or support, work in a group with others and discuss and collaborate where needed. Ash, Amanda and Mark will all be present to assist the kids with their work.

11:25-12:15

Students continue building, testing and problem-solving with educator feedback and support.

A reflection in their Design and Technology journal will also be completed.

During the practical sessions, three Lions educators are available to answer questions, discuss challenges and support students as they work. Students are not expected to sit and watch a screen for the entire morning. The online space provides teaching, community and support while the practical making happens at home.

Choose Your Program



Wednesday Project Program

10 Wednesdays starting July 22

- Design and Technology teaching
- Individual invention project
- Building, testing and refining
- Support from three educators
- Peer discussion and feedback
- Final presentation
- Design, Build, Invent workbook

Complete Inventor Program

9 Mondays + 10 Wednesdays starting July 22

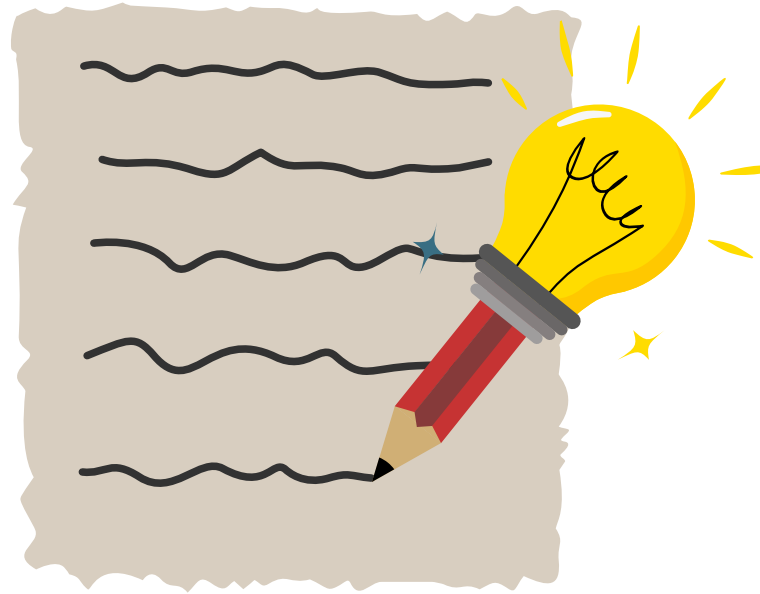
Everything in the Wednesday program
+ on Mondays we will:

- deeper idea development
- creative problem-solving
- identifying the intended user
- branding and product identity
- persuasive communication
- creating and presenting a pitch

Families can choose the focused Wednesday project or the complete Monday and Wednesday experience.

One project.

Many areas
of learning



While Design & Technology sits at the heart of the program, each invention project naturally draws together learning from across the curriculum.

Design & Technology

Students will identify a real-world problem, generate and communicate ideas, plan their design, select materials and tools, build a prototype, test how well it works and make improvements based on feedback.

English

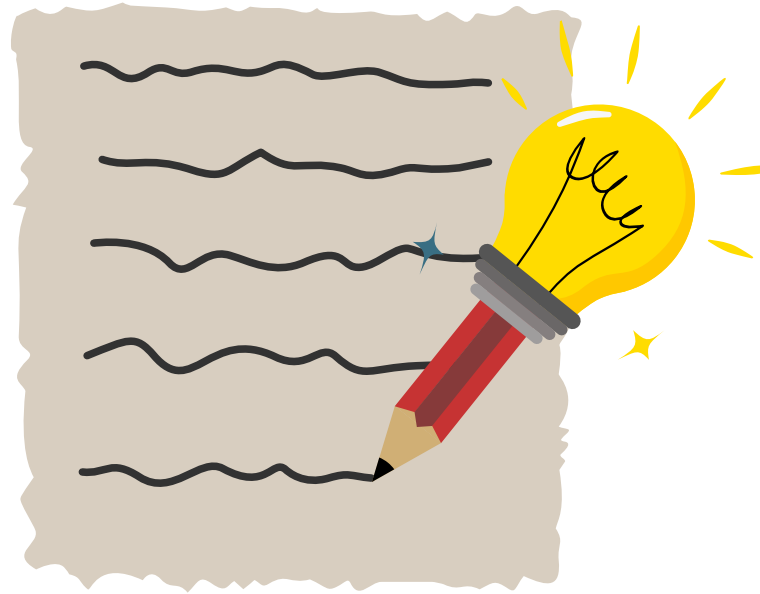
Students will use persuasive language to explain why their invention matters, write product descriptions, create advertisements and develop a clear and engaging pitch for their final presentation.

Mathematics

Depending on the invention, students may use measurement, scale, budgeting, cost comparisons, data collection, geometry and calculations connected to materials, size and construction.

One project.

Many areas
of learning



Science

Many projects will involve scientific thinking as students explore forces, movement, energy, materials, sustainability, structures, electricity or other concepts relevant to their design.

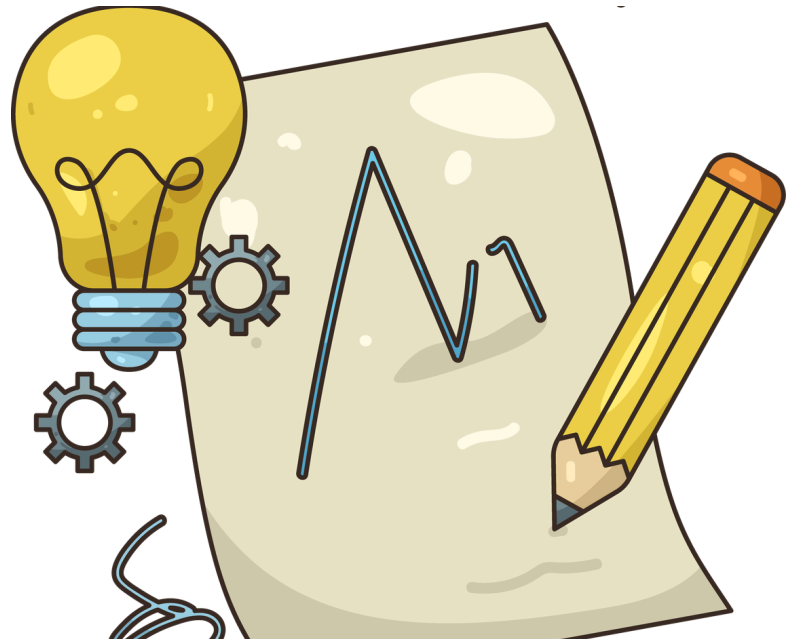
Creative Thinking and Communication

Throughout the project, students will solve problems, respond to setbacks, make decisions, collaborate with others and communicate their ideas with increasing confidence.

The exact learning will look different for every student because it grows from the invention they choose to create.

The Journey

01



1. Identify

Notice a real problem, need or opportunity.

2. Imagine

Generate many possible solutions.

3. Decide

Choose an idea that is meaningful and achievable.

4. Design

Research, sketch, plan and select materials.

5. Build

Create an invention or working prototype.

6. Test and Refine

Gather feedback, solve problems and make improvements.

7. Present

Explain the invention, its purpose and how it developed.

More than an Invention 02



Creativity and innovation

Developing original ideas and exploring different possibilities.

Practical problem-solving

Working out what to do when an idea does not work as expected.

Planning and organization

Breaking a larger project into manageable stages.

Persistence

Testing, adjusting and continuing through setbacks.

Independent decision-making

Considering options and making thoughtful design choices.

Communication

Explaining ideas, listening to feedback and presenting confidently.

Collaboration

Sharing progress, discussing challenges and learning alongside others.

Students are supported at their own level, with scaffolding or extension depending on their age, experience and confidence.

A complex mind map centered on a crumpled yellow paper ball, illustrating the creative process. The map branches out into various stages and concepts:

- SEARCH**: Represented by a magnifying glass icon. Includes mathematical notations: $a=b$, $c=140-2a$, $a=25$, $c=180-2a$, and $a=130$.
- INVEST**: Represented by a line graph icon.
- TAX**: Represented by a pie chart icon.
- STRATEGY**: Represented by gears, a bar chart, and envelopes.
- IDEA**: Represented by a lightbulb icon.
- SCAM**: Represented by a dashed line with a circle, labeled "START A" and "B".
- THINK**: Represented by a lightbulb inside a box.
- PARTNERSHIP**: Represented by gears.
- IMPROVE**: Represented by a bar chart.
- ANSWER**: Represented by an exclamation mark.
- MESSAGE**: Represented by a megaphone.
- CREATIVITY**: Represented by a lightbulb and the word "UNLOCK".
- RESEARCH**: Represented by a magnifying glass and the time "10:00".
- PLAN**: Represented by a bar chart.
- TEAMWORK**: Represented by gears.
- LEARN**: Represented by a triangle with "63%" written next to it.
- TIME**: Represented by a clock. Includes mathematical notations: $4x+4-B$, $a>3$, $a<3$, and $a=3$.
- ALARM**: Represented by a clock.

Mathematical formulas are also present:

$$\sum_{i=1}^n x_i + \Delta y_i$$

$$\frac{(i+j)^2}{\sum x^2}$$

Included in the program

- 10 Wednesday project mornings
- 9 Monday sessions for students choosing the complete program
- explicit educator-led teaching
- three educators supporting the practical sessions
- a guided project from idea to final presentation
- small-group collaboration and feedback
- the complete Design, Build, Invent workbook including Design & Technology and other relevant curriculum outcomes
- planning, testing and reflection tools
- support before and throughout the term
- a final opportunity to present or pitch the finished invention

Families provide the materials needed for their child's individual invention. Materials will vary depending on the project chosen.

Making the Project Achievable

04



Making the project achievable

Every student will develop a different invention, so the materials, tools and level of family involvement will vary.

Families may need to help source materials and provide supervision when students use tools or equipment. Lions educators will guide the design process, but parents remain responsible for safety within the home environment.

- Is the project realistic within the term?
- Are the required materials affordable and accessible?
- Can the student safely create it with the available adult support?
- Can they produce either a functioning invention or a working prototype?

Students do not need a finished design before joining. They will be guided through developing and refining their idea.

Every invention starts with a problem

Inventors begin by noticing something that could work better. Ask your child to look at their own life, another person's experience or the wider world.

Daily life

- What frustrates or annoys you?
- What takes too long?
- What is difficult, messy or inconvenient?
- What would make your hobbies or routines easier?

Someone else

- Does someone you know find something difficult?
- Could life be made easier for a family member, friend, neighbour or pet?
- Is there something they wish existed?

The wider world

- Is something wasteful, unsafe or unfair?
- Could something be more accessible?
- Is there an environmental or community problem you care about?



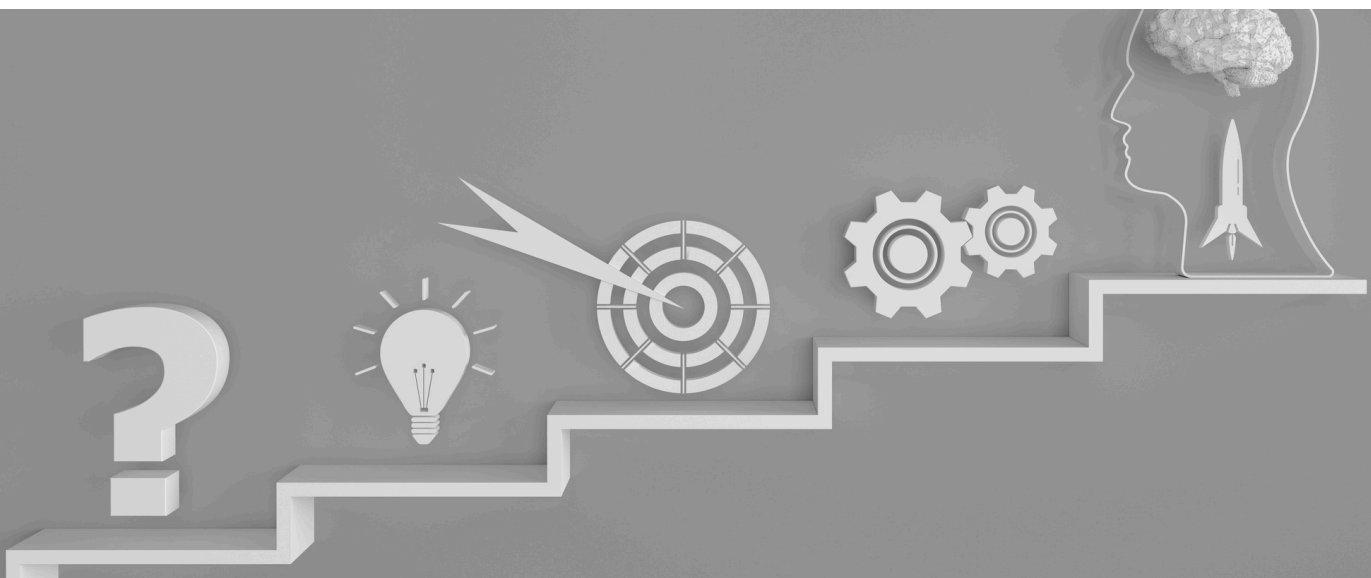
Mini Invention Challenge

A problem I have noticed:

Who does it affect?	Why is it worth solving?	Three possible solutions:

N o i d e a i s t o o w i l d y e t .

Throughout the term, students are guided by our educators through each stage of the process, from identifying a problem and developing ideas to planning, building, testing and refining their invention. The complete workbook supports this learning and helps students capture their thinking, decisions and progress along the way.



Frequently Asked Questions



What are the program options?

Families can choose:

Wednesdays only

10 Wednesday project days focused on Design & Technology, building, testing and refining an invention or prototype.

Mondays and Wednesdays

9 Monday sessions plus 10 Wednesday project days. Mondays extend the project through idea development, creative problem-solving, branding, communication and pitching.

Which option is best for a child who mainly wants to invent?

Wednesday is the core invention day and the most important option for a child who is motivated by designing and making.

The combined Monday and Wednesday program provides a fuller experience, supporting students to strengthen their idea, understand who it is for, develop its identity and communicate it confidently.

What time are the sessions?

Wednesdays: 9:00 am–12:15 pm

Mondays: 9:00–12:15pm

How many weeks does the program run?

10 Wednesdays starting July 22 finishing September 23

9 Mondays starting July 27 finishing Wednesday September 23

Frequently Asked Questions



What happens if my child misses a session?

Explicit teacher led lessons can be recorded and any tasks can easily be accessed at any time from Google Classroom

Can we enrol in Mondays only?

Unfortunately no. Monday is designed to support and extend the Wednesday work. Monday sessions are only available as part of the complete Monday and Wednesday program rather than as a standalone option.

Will families need to provide materials?

Yes. Each student will create a different project, so materials will depend on the invention they choose.

Families will be responsible for sourcing suitable materials and supervising the use of tools or equipment at home. Educators will help students choose ideas that are realistic for the available time, materials, budget and level of adult support.

Does my child need an invention idea before the term begins?

Students need to start the term with some ideas and problem, frustration or need they would like to explore. Our educators will guide them through generating their current ideas, choosing an achievable direction and developing their design. Ideally having an idea earlier is best.

Is this a one-term program?

Design, Build, Invent is a complete Term 3 program with a finished invention or working prototype as the goal.

Students need access to an adult when tools, equipment or materials require supervision. The level of support will depend on the child's age, independence and chosen project.

Choose your program and enrol

Wednesday Project Program

10 Wednesdays

9:00 am–12:15 pm

Design and Technology
teaching, hands-on
project development,
testing, refining and final
presentation. 3 educators
to support students.

\$ 850 for the term

\$90 per week

Pay per term

Pay per week

Choose your program and enrol

Complete Inventor Program

10 Wednesdays + 9 Mondays

9:00 am–12:15 pm

The full Wednesday invention project plus idea development, problem-solving, branding, persuasive communication and pitching.

3 educators to support students Wednesdays, 2 educators Mondays

\$ 1350 for the term

\$ 140 per week

Pay per term

Pay per week

Places are limited to ensure students receive meaningful educator support.

Meet the Educators

Amanda- Education Leader

Amanda is the Education Leader of Lions Homeschool Hub, with 30 years of teaching experience across public, private, international and remote community settings. She holds a Bachelor of Education and a Master of Literacy and brings particular expertise in literacy, student engagement and strengths-based learning.

Her approach is grounded in relationships, trust and a deep understanding that children learn best when they feel known, supported and valued. At Lions, Amanda guides students through project development, communication and presentation while helping each child build confidence in their own ideas and abilities.

Ash - D & T Educator

Ash is in her second year at Lions, bringing a strong foundation in numeracy and literacy alongside her passion for creativity, music and design. She is also currently studying a Bachelor of Music.

Ash leads the explicit Design and Technology learning within the program, guiding students through the design process as they develop ideas, make decisions, solve problems and bring their inventions to life.

She is passionate about creating safe, inclusive learning environments where students feel confident to be themselves, take creative risks and express their thinking in their own way.

Mark - Maths & Science Educator

Mark brings more than 20 years of experience teaching mathematics and science across secondary schools in Australia and the UK, as well as at tertiary level training future teachers.

He will join students during the Wednesday project sessions, using his science and problem-solving expertise to support inventions that involve areas such as forces, movement, structures, materials, energy, measurement or testing.

Mark helps students think beyond whether something simply works, encouraging them to explore why it works, identify problems, test ideas and use evidence to make thoughtful improvements.

Places are limited to ensure students receive meaningful and expert educator support.