

BCE media release

Get ready, set, let's innovate! STEM MAD 2025 is here!

It's an exciting time of year for Brisbane Catholic Education (BCE) students, as creativity, curiosity, and compassion prepare to collide at the STEM 'Make a Difference' (MAD) competition on Wednesday 17 September.

From clever prototypes to bold ideas that tackle real-world problems, BCE schools are getting ready to bring their best to this year's competition.

We offer a sneak peek at some of the creative entries on display:

Queen of Apostles Primary School, Stafford

Prepare to be inspired by Queen of Apostles Primary School, Stafford's brilliant minds, as Year 6 students showcase their invention, 'Gutter Guard'.

Queen of Apostles Primary School Year 6 student Phoebe said Gutter Guard was a cover for a street stormwater drain, aimed to prevent rubbish from washing down the drain into the waterways.

She said Gutter Guard was a simple yet effective solution to a widespread environmental issue, addressing multiple challenges caused by debris entering stormwater drains, preventing street flooding, water pooling, environmental contamination, and blocked drainage systems.

Mater Dei Catholic Primary School Ashgrove West

Students from Mater Dei Catholic Primary School, Ashgrove West are also making waves with their invention 'Coral Corporation'.

Mater Dei Catholic Primary School Year 6 student Daniella said they had designed 3D printed frames that can be placed over coral to encourage coral growth.

With coral reef loss one of the leading environmental issues in 2025, and with reefs at risk of being wiped out by 2050, this invention provides a practical solution to support coral regeneration and protect marine biodiversity for future generations.

St Thomas' School Camp Hill

With their innovative creation, the 'CB Toolbox', students from St Thomas' School, Camp Hill are taking action to make a meaningful impact, empowering teenagers to seek help via an app that helps prevent cyberbullying and supports cyberbullying victims.

St Thomas' School Year 6 student Emily said their project was inspired by the alarming statistics, which showed a significant number of teenagers experience online harassment.

"Our product empowers teens to seek help, report abuse, and build resilience," she said.

Assisi Catholic College Upper Coomera

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The students from Assisi Catholic College, Upper Coomera, are busy saving lives with their invention 'Project Baywatcher', which can locate a person in trouble in the ocean. The drone is innovative in that it communicates to lifeguards on duty, and to the person in the water that help is on its way.

Another group has also been working on saving their school \$60,000 a year with their invention 'Water Guardians', which waters gardens and grass. They are proposing a pipe system that collects rainwater, which leads to water tanks and a filtration system under the school.

"Our secondary students have also been very busy," said Assisi Catholic College Principal John Frare.

"Team 'Neuroglide' has designed a medical glove which uses the concept of angular momentum to smooth out the actions of people who suffer from neurological issues such as uncontrolled shaking.

"Tasks like drinking a cup of coffee can be very problematic, and 'Neuroglide' seeks to solve this. 'Project Apollo' is another great idea from our secondary students.

"Drivers are constantly monitored for signs of sleepiness and medical emergencies.

"Many people die on the roads each year due to stroke, heart attacks, and other issues that the Apollo project can detect and offer feedback to the car being driven, as well as other cars around it.

"We are hopeful this invention could save hundreds of lives!"

Other exciting inventions

Other inventions to look out for at this year's STEM MAD competition include St Joachim's School, Holland Park's 'Echo VR', a game designed to help people with degenerative brain diseases like Alzheimer's. Through a levels-based game, participants can practice skills that help keep their brains sharp.

With animals at the forefront, Our Lady of the Angels' School, Wavell Heights, students have invented 'Bush Fire Rescue', a smoke detection device that opens and allows animals to bunker down during bushfires.

The students from St Joseph's Primary School, Bardon have invented an interactive teddy bear, 'Hug for Heart', which aims to comfort, connect, and reduce stress for children undergoing long hospital stays. Students from St Joseph's Primary School have also invented a 'Family News App' for aged care residents, with the aim of supporting them to feel more connected with family.

BCE Lead Education Advisor Rochelle Smith said her hope for STEM MAD this year was that every student walked away knowing "their ideas matter, their voice is valued, and their faith can be a driving force for positive change in the world".

"Each project showcased at STEM MAD is a beautiful expression of Imago Dei, our students recognising that they are designed by God and using their gifts to design for good," she said.

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“Whether through emerging technologies, AI, sustainability, or wellbeing innovations, these young people are responding to the world’s needs with compassion, creativity, and a deep sense of purpose rooted in their Catholic identity.”

About STEM MAD

Brisbane Catholic Education has been running STEM MAD since 2021. It equips BCE students with essential skills they will need now and into the future.

This year’s competition will attract 55 schools and nearly 100+ student teams, making this year’s showcase the biggest one yet!

Adding to the excitement, renowned science communicator Dr Karl Kruszelnicki will headline the event as keynote speaker, guiding students through five emerging career paths and inspiring them to harness their potential to make a meaningful difference in their world.

BCE has three sponsors for this year’s STEM MAD Competition

These are the main awards at STEM MAD 2025, and the winners of these awards will receive a bursary to attend the STEM MAD Nationals live in Adelaide in November.

- **Primary:** Proudly sponsored by Australian Catholic University and BCE - *Making a Difference through the lens of Catholic stewardship, solidarity, common good, citizenship, humanity and wellbeing.*
- **Secondary:** Proudly sponsored by Queensland University of Technology (QUT) and BCE - *QUT ‘STEM for the Real World’ Secondary award - Most outstanding application of Science, Maths and Technology to solve real world problems.*
- **Future is STEM:** Proudly sponsored by [Edtech Group](#) and BCE - Future Digital Leader Award - *STEM disciplinary understandings and skills.*
- **Executive Directors Award:** Proudly sponsored by BCE.