



# The Beacon Program

## 3 Year Overview



# The Beacon Program is promoting STEM careers for students

**Lumination, in partnership with BAE Systems Australia, launched the Beacon Program in 2022—a three-year initiative designed to inspire and engage students in years 4–6 through STEM education. By connecting classroom learning with real-world applications, the Beacon Program is shaping the future leaders and problem-solvers of tomorrow.**

Centred around the theme “Our Future World,” the Beacon STEM Program is particularly committed to supporting students aged 8–11 in lower socioeconomic areas. It leverages the United Nations Sustainable Development Goals (SDGs) and the Australian Curriculum Sustainability Cross-Curriculum Priority to create immersive and meaningful learning experiences. Through a choice of five-day intensives or ten-week programs, students delve into pressing global challenges, exploring how they can play a role in shaping sustainable solutions for an evolving world.

The program introduces emerging technologies and encourages hands-on exploration, fostering critical and creative

thinking, problem-solving, communication, and innovation skills. Importantly, Beacon sparks students’ curiosity about STEM subjects, encouraging them to imagine exciting futures in STEM careers. By targeting diverse communities, it seeks to break down barriers to education and create opportunities for students who may not typically have access to such programs.

Through practical career exploration and real-world problem-solving tasks, the Beacon Program not only ignites interest in STEM but also helps build a more inclusive and skilled workforce, paving the way for a brighter, more equitable future.



**“I do want to be an engineer now and try to create things that will help the environment.”**

**Dana**

Year 6 Student at Bexley Public School after completing the Beacon Program



## The results speak for themselves...

The Beacon Program is driving meaningful change, transforming the way students engage with STEM and building strong foundations for future career pathways.

By fostering curiosity and innovation, we've seen students grow in confidence, interest, and academic achievement. Female and First Nations student participation continues to rise, reflecting our commitment to inclusivity and ensuring diverse voices contribute to the future of STEM industries.

With a focus on cultivating the next generation of STEM professionals, the program not only inspires students to see themselves as future innovators but also supports the creation of robust talent pipelines. These results are a testament to the program's ability to ignite potential, empower young learners, and open doors to exciting career opportunities in STEM fields.



Hear from the teachers and students that took part in the Beacon Program

3,501

Total students

56

Teachers upskilled

61

Total schools

52%

Female students

Almost unheard of for a STEM program

Increased Interest in STEM Subjects

33%

Maths

30%

Science

18%

Digital Technology

48%

Male students

STEM Career Aspirations

65%

After program

36%

Before program



Total schools by State

19 19 12 11

SA

NSW

VIC

WA

Educator Confidence

85%

After program

64%

Before program

6%

First Nations student participation

90%

of total students

Showed Improvement in Student Outcomes

8.0

Average program rating out of 10



**“Watching the students use this technology to think outside the box, to create, design and build has been amazing.”**

**Nancy**

STEM and ICT Coordinator  
at Bexley Public School

# Learning Outcomes

The Beacon Program equips students with essential skills for the future, fostering creativity, critical thinking, and a passion for STEM, all aligned with the Australian Curriculum.

## Understanding Sustainability

Students have explored the United Nations’ Sustainable Development Goals (SDGs) and gained insight into real-world challenges, equipping them to ideate actionable and sustainable solutions.

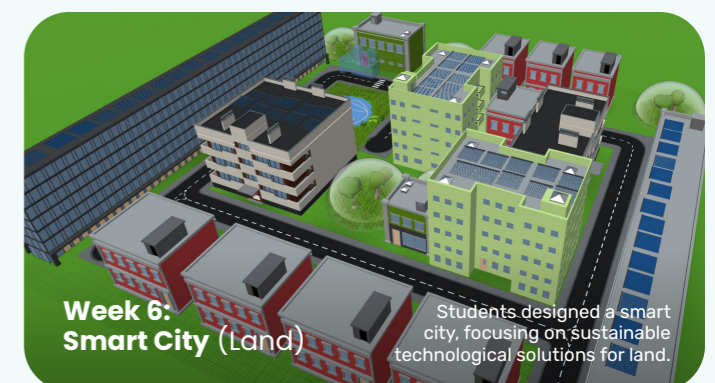
## Developing Design Thinking

Through the Design Thinking framework, students have created innovative solutions, such as smart city designs, ocean pollution machines, and air quality improvement devices.

## Enhancing Digital Technology Skills

Students have utilised immersive technologies like virtual reality, alongside tools such as IoT, AI, and 3D design software, to prototype and showcase their innovative solutions effectively.

### Student creation examples



# Reflections on the Beacon Program

With over 140 schools involved, Beacon's 10-week and holiday programs have had glowing feedback from teachers, students, and parents, showcasing its impact in sparking STEM passion and building future skills. Here's what they had to say.



**"The Beacon Program opens students eyes to what they can be, which impacts their attitude towards learning. If students are interested in what they're learning, retention rates will stay high."**

**Claudine**

Team Leader of Community Learning and Development at Salisbury Council, Participant of the Beacon Program



**"I want to be a scientist because I really want to create new creations for the world and I think it would be a good opportunity."**

**Alera**

Year 6 Student at Northfield Primary School after completing the Beacon Program



**"We've been using robots and we've been coding with Tinkercad and CoSpaces. We were making a sustainable, smart city. It's all about climate change and how to fight it."**

**Ansunya**

Year 5 Student at Bexley Public School after completing the Beacon Program



**"I think it's really important that all our students have access to this technology. The earlier we can give them access, the more pathways they can take in the future."**

**Sarah**

Teacher at Northfield Primary School, Beacon Program Participant



**"The Beacon Program gives students the freedom to explore a little bit more and look into what they find interesting."**

**Lucy**

Mechanical Engineer at BAE Systems, Guest Speaker for the Beacon Program



**"The Program shows our low-socioeconomic students the world of technology... It gave us an opportunity our school could not afford to run on our own."**

**Bec**

Teacher at Ocean View College, Beacon Program Participant



# The Beacon Holiday Program encourages students to thrive

As well as the 10-week school program, the Beacon Holiday Program offers an immersive four-day STEM experience, diving into the realms of land, air, and sea.

Students engage in hands-on activities with technologies like virtual reality, coding, artificial intelligence, and 3D modelling, building practical skills and sparking excitement about future career possibilities.

Led by trained Lumination staff, this fully catered holiday camp intensively explores Beacon content, culminating in a showcase of student creations. BAE Systems presenters provide valuable insights into STEM career pathways, ensuring participants leave inspired and equipped with a deeper understanding of STEM's potential.

## Schools involved

- 2022** Paralowie R-12  
Bexley Public School  
Medina Primary School
- 2023** Salisbury Community Hub  
Wallsend District Library  
Hillcrest Christian College
- 2024** Para Hills Community Hub  
Wallsend District Library  
The Station, Horsham

**192**

Students participated

**85**

Schools represented

**63%**

Male students

**37%**

Female students

Increased Interest in STEM Subjects

**79.3%**

Maths

**7.6%**

Digital Technology

STEM Career Aspirations

**43%**

After program

**4.8%**

First Nations student participation

**“The Beacon Holiday Program has encouraged my girls to want to choose more STEM subjects in their future.”**

**Kelly**

Parent of students that participated in the Beacon Holiday Program



Want to know more about the Beacon Program? Get in touch with us today.