



Kimberley Park State School



The **Kimberley Park State School STEM Pathway of Excellence program** is a selective entry program open to students in Years 4, 5 and 6. It is designed to engage, challenge and extend learners who demonstrate strong interest and achievement in Mathematics, Science and Technologies.

The STEM Pathway of Excellence program is widely recognised for its purposeful learning, high levels of engagement and commitment to developing the next generation of innovative thinkers and problem solvers.

Students in the program participate in enriched and accelerated STEM learning opportunities, including Robotics, Coding, Engineering, Science and Mathematics, delivered through integrated and future-focused learning pathways.

Through immersive, inquiry-based learning experiences, students develop critical and creative thinking skills and build their capacity to solve authentic, complex real-world problems. The program is strengthened by meaningful partnerships with leading educational and industry organisations, including The University of Queensland, Griffith University, Queensland University of Technology, and the Queensland Museum.



Kimberley Park State School has a strong and sustained record of excellence in STEM education. Over the past nine years, students have consistently achieved Regional, State and National championship titles in Science and Robotics competitions.



PROGRAM COSTS

A fee of \$140.00 per student applies, in addition to the Student Resource Scheme. This fee supports the specialised resources, equipment and program costs associated with the STEM and Robotics learning experiences your child will participate in, including involvement in The University of Queensland Wonder of Science program.

SELECTION PROCEDURE

Students who apply for the program will be considered through the following five-stage process:

1. Application dates and information will be released via the KPSS newsletter, parent email and the school Facebook page.
2. Families submit an Expression of Interest form, including the student response, either via email to bbird31@eq.edu.au or at the KPSS front office by the closing date. This can be found on the school website page (below). Students are required to complete only the response section relevant to their current year level.

<https://kimberleyparkss.eq.edu.au/curriculum/teaching-and-learning/03-stem-program-of-excellence>

3. Eligible applicants will be invited to complete the ACER entry test at school.
4. Applicants will be assessed using a range of evidence, including ACER test results, school reports, the student response, demonstrated engagement at school and participation in STEM activities within the community.
5. Successful applicants will be notified by mail in Term 4.

For more information about the Kimberley Park State School STEM Pathway of Excellence program, please contact Bridgette Bird, STEM Champion, at bbird31@eq.edu.au

We Acknowledge the traditional custodians of this land, the Yagara people.
Every child successful, ready for the future

STEM Program – Expression of Interest
Parent / Caregiver Response

Student Details

Student Name:	
Date of Birth:	
School:	
Current Year Level and Class:	

Parent Details

Parent/Caregiver Name:	
Address:	
Email:	
Contact phone Number:	

Academic Achievement- Please provide your child’s most recent academic results.

Subject	2024	2025
English		
Mathematics		
Science		

Other Academic Achievements

Please list any additional academic achievements or assessment results (e.g. ICAS, competitions, awards).

- _____
- _____
- _____

Student Interest in STEM

Please outline any STEM-related activities, programs, events or extra-curricular opportunities your child has participated in (e.g. robotics clubs, coding programs, science competitions, workshops).

- _____
- _____
- _____

Please also attach any photographs or examples of STEM or other projects your child has completed at home.

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Student Learning

Please indicate the behaviours your child demonstrates when learning:

- Enjoys problem solving and thinking deeply
- Shows curiosity and asks questions
- Persists when tasks are challenging
- Works well independently
- Works well collaboratively with others
- Shows initiative and creativity
- Takes responsibility for their learning

Observations of STEM thinking at home

How does your child demonstrate curiosity, creativity, or problem-solving at home?

What are your child's strengths and interests in STEM?

Why do you believe this STEM program is a good fit for your child?

Parent / Caregiver Signature: _____

Date: _____

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STEM Program – Expression of Interest Student Response

STUDENT RESPONSE – Students currently in Year 3

Design Challenge: Rube Goldberg Machine

A Rube Goldberg machine is a device that uses a chain reaction to complete a simple task.

Your challenge:

Design and build a Rube Goldberg machine using items you can safely find at home.

Your machine must:

- Include at least one lever and one ramp
- Use a chain reaction (one action causes another)
- Complete a simple task such as popping a balloon, moving a toy, dropping paper into a bin, or ringing a bell

What to submit:

- A labelled drawing of your design or a photo of your machine
- Labels showing the different parts and how they work

STUDENT RESPONSE – Students currently in Year 4

Design Challenge: Create a Helpful Invention

Engineers design solutions to everyday problems.

Your challenge:

Design an invention that helps solve a problem at home, at school, or in your community.

Examples could include:

- Helping carry heavy items
- Saving water
- Organising messy spaces
- Helping animals
- Making travel or movement easier

What to include:

1. A labelled drawing of your invention
2. The problem your invention solves
3. How it works
4. What materials it could be made from

You may draw by hand and upload a photo.

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STUDENT RESPONSE – Students currently in Year 5

Problem: Space exploration is creating dangerous space junk

Space junk (also called orbital debris) includes broken satellites, old rocket parts and fragments from space missions. These objects orbit Earth at extremely high speeds and can damage spacecraft and satellites. Scientists and engineers around the world are working on ways to remove this debris and protect future space travel.

Challenge: Design a solution to remove Space Junk

Your task:

Design an innovative device or system that could help remove space junk from orbit.

You must include:

1. An annotated (labelled) design of your solution
2. A written explanation of how it works (maximum 250 words)
3. Ideas for:
 - o How it would be built
 - o How it captures the space junk
 - o What happens to the junk after it is collected (e.g. reused, recycled, returned to Earth, burned safely)

Think like an engineer, scientist or inventor when creating your solution.