

SCARBOROUGH PUBLIC SCHOOL

JOURNEY SUMMARY



Development and implementation of effective, flexible and differentiated project-based learning with real world outcomes, underpinned by explicit teaching of mathematics and science at the point of need.

JOURNEY FOCUS AREAS

Project-based learning and STEM

TIMELINE AND MILESTONES

2015

- Inconsistent delivery of project-based learning programs within classrooms – teachers teaching content in curriculum silos and not in context.
- Development of School Plan with 3 strategic directions:
SD1 – Self-regulated owners of learning;
SD2 – Creative problem finders and solvers;
SD3 – A school without walls.
- Beginning of focus on growth mindset and risk taking.

2016

- Joined the STEM action project with a focus on developing a unit of work that effectively integrated STEM into a real-world learning.
- Through the STEM action project professional learning, we developed and researched design thinking as an approach to identifying and solving problems.
- Researched flexible learning spaces with support from Futures Learning.
- Developed connections with like-minded schools, organisations and the University of Wollongong to immerse students in a range of design and science-based challenges.
- Completed Student Enterprise unit – students developed their own businesses within their classrooms.

2017

- Joined the STEM Action Project as mentors, working with 15 schools to deliver professional learning around project-based learning and design thinking.
- Beginning of investment in flexible learning spaces and furniture, including vertical learning (whiteboards on walls).
- Begin to implement new systems for backwards mapping outcomes visually, giving students more opportunities to self-evaluate and allowing projects to evolve.
- Professional visits to STEM Action schools by all staff to mentor and learn from our colleagues.
- Provided support for the NSW STEM Rural Conference.

2018

- Further professional learning delivered around Social Innovation through Chris Harte and Critical and Creative Thinking.
- Completed the Tiny Homes unit of work – students researched the importance of home and designed their own tiny home solutions.
- Completed STEM Action Project.
- New School Plan 2018-20 that refines project-based learning focus (rather than STEM) and introduces critical and creative thinking, and gifted and talented education.

POSITIVE IMPACT AND EMOTIONS

Increased student engagement across all year groups

Challenge Excitement

Greater emphasis on risk taking and perseverance in learning

Developed strong network of support to further our journey

Increased risk taking by teachers and willingness to fail

Curriculum delivery is more flexible and visible for students

Strong collaboration and sharing of ideas across like-minded schools



Flexible classrooms are utilised effectively and cater for different learning needs

Regular feelings of failure and frustration

Feeling like we were taking a big risk

Validation for our approach through the STEM Action Plan

Increased buy-in of parents on our journey

Successful delivery of innovative projects from our mentor schools

MAIN CHALLENGE & SOLUTION

Challenge: Re-design of timetabling to ensure core literacy and numeracy instruction is not impacted on by project-based learning approach

Solution:

- Developing a culture of risk taking amongst teachers was challenging as we often feel we have failed if delivery isn't perfect.
- No obvious way to track outcomes and provide flexibility in planning for project-based learning units. Research and networking allowed us to adapt a hexagonal outcome tracking approach to suit our needs and share with others.
- Moving away from the idea of STEM as just computer and robotics-focussed learning, with an allocated time in the timetable – it crossed our whole timetable. This is a work in progress.

For more information journeys and helpful resources, jump on the Futures Learning website: <https://education.nsw.gov.au/teaching-and-learning/curriculum/learning-for-the-future/school-journeys>