

STEM BRIGHT PROGRAM

STEM Bright Program

The STEM Bright Program at Brighton Secondary School has been developed to prepare students for careers and further study in the areas of Science, Technology, Engineering and Mathematics (STEM). In addition to learning specific curriculum content, STEM encourages critical and creative thinking, challenge-based and collaborative learning.

Overview

EP-

Students enrolled in the STEM Bright Program undertake a full year of classes across years 8-10 in each of science, design and digital technologies, and mathematics. These classes are taught using a cross-disciplinary approach and aligned to the Australian Curriculum. Integrated curriculum units are collaboratively planned by a dedicated team of specialist subject teachers, who contextualise the learning and pose real-world problems for students to solve relating to a common theme.

STEM education engages students in solving real world problems through project-based learning, and encourages them to innovate and think critically and creatively.

Extracurricular opportunities

Students are expected to embrace challenges and opportunities in STEM Bright, both within and outside of their STEM specific classes, through extracurricular projects, competitions, excursions and study tours. Students at Brighton Secondary School have the opportunity to participate in an exciting range of extension programs at local, national and international levels including:

- F1 in Schools
- Subs in Schools
- Mini Remote Operated Vehicles (ROV)
- Designing drones
- Coding and robotics
- STEM Taster Days

Study tours

Each year of the STEM Bright Program will comprise a study tour providing authentic 'real-world' learning opportunities linked to industry to enhance and extend in-class learning.

The study tours will be co-designed with students based on their interests and learning experiences throughout the year and are subject to change.

Commitment

Students are expected to complete the full 3 year STEM Bright Program, and to maintain a high standard of academic achievement, behaviour, and involvement in school life and extracurricular opportunities.

Application process

Interested students must complete a Bright Thinking application form, available from the school. Applicants will be shortlisted based on the quality of their application, including:

- A self-nomination form demonstrating initiative; ability to lead, motivate and positively influence others; ability to problem solve; ability to think critically and creatively; interest/activity/ experience relevant to the STEM Bright Program
- A creative piece that tells the panel more about the applicant (a video, folio, invention, project, story, artwork)
- Certificates demonstrating achievement in any of the following: state and national competitions (UNSW, Westpac or similar), NAPLAN results, community involvement and school reports.

Shortlisted applicants will be required to:

- attend a session to demonstrate a range of skills and aptitudes
- · participate in a conversation with the selection panel.

Enquiries are welcome – please contact the school on 8375 8200 or email admin@brighton.sa.edu.au

- Science and Engineering
 Challenge
- STEM Enrichment Academy for girls
- Sustainable building design
- TESLA sustainable energy



STEM BRIGHT STRATEGY

INTERDISCIPLINARY

STEM Learning encompasses cross-disciplinary approaches to learning that increases learner disposition in STEM related fields and their development of skills in collaborative problem solving, creative thinking and critical analysis.

STEM Learning refers collectively to the with engineering as a process to solve problems involving complex thinking.

COMMUNITY COLLABORATION

Effective partnerships for STEM related teaching and learning, within and between schools and with business, industry and the community.

Positive dispositions for STEM Learning so that learners are inspired to take on more challenging STEM Learning experiences

GROWTH

MINDSET

CURIOSITY

Strengthened STEM teaching

and learning ensures that every learner develops strong

disciplinary knowledge of

STEM and the underlying

skills of critical and creative

thinking, problem solving and

entrepreneurial thinking.

STEM Learning evokes

innovative pedagogies and explores new ways to identify evidence of learning.

INNOVATION

Build and subjects. Build and

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