



Tullawong State High School
Soaring to great heights

School of Creative Excellence

Core Values

Diligence
Integrity
Courage
Respect

Vision

To be a school that inspires our students to seize opportunities, realise their potential, reach above and beyond their experiences, and know success.

Our Commitment

We will pursue this vision with open hearts, open minds, courage and capability.



**Tullawong
Academies**

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www.facebook.com/tullawongstatehighschool

Science, Technology, Engineering and Maths Academy STEM

Learning Opportunities

STEM academy members may have the opportunity to undertake a range of learning experiences. Learning experiences include:

- mentoring (Sparq-ed Program UQ)
- accelerated learning
- Siemens Science Camp
- Science and Engineering Challenge participation
- robotics
- BSDE – Extension modules
- QUT Start – university subjects
- national and international Competitions
- individual/small group investigations
- junior Physics Olympiad (JPhO) – UQ
- liaising with TSHS maths and science teachers and staff
- collaboration with other academy students.

Futures

Australia's Chief Scientist Professor Ian Chubb released his recommendations for a strategic approach to science and its related fields in September 2014.

He said that "An education in STEM also fosters a range of generic and quantitative skills and ways of thinking that enable individuals to see and grasp opportunities. These capabilities—including deep knowledge of a subject, creativity, problem solving, critical thinking and communication skills—are relevant to an increasingly wide range of occupations. They will be part of the foundation of adaptive and nimble workplaces of the future. Australian firms that actively embrace change as a normal part of business are around twice as likely to use engineering skills, twice as likely to use science and research skills, and three times more likely to use ICT skills."

International research indicates that 75 per cent of the fastest growing occupations now require STEM skills and knowledge.



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The demand for STEM will only continue to grow as we compete in the emerging global economy.
 SCIENCE, TECHNOLOGY, ENGINEERING and MATHEMATICS: AUSTRALIA'S FUTURE (*Professor Ian Chubb; September, 2014*) www.chiefscientist.gov.au

A career in STEM can involve planning, managing or providing scientific research and professional, technical and development services. They include the following:

Aerospace Engineer	Geologist	Biologist	Occupational Therapist
Architecture	Mechanical Engineer	Cartographer	Optometry
Automotive Engineer	Mining and Geological Engineer	Chemist	Pathologist
Biochemical Engineer	Nanotechnology Engineer	Computer Programmer	Podiatrist
Biomedical Engineer	Nuclear Engineer	Curator	Pharmacist
Business	Solar systems Engineer	Dietician and Nutritionist	Physiotherapist
Chemical Engineer	Software development	Economist	Physicist
Civil Engineer	Water/Wastewater Engineer	Environmental Scientist	Psychologist
Computer Hardware Engineer	Wind Energy Engineer	Geneticist	Radiographer
Dentist	Anthropologist	Marine biologist	Sports scientist
Education	Archaeologist	Mathematician	Statistician
Electrical Engineer	Astronomer	Medicine	Zoologist
Forensic Scientist	Biochemist	Medical Research	Air Force or Commercial Pilot
Economist			

Application Requirements for Year 7 and 8 Students

Minimum Academic Standards

Entry to this academy requires students to demonstrate the following achievement standards on their most recent report card:

- achievement of an 'A' standard in Extension Maths
- AND
- achievement of an 'A' standard in Science

Supporting Documentation

- a letter of recommendation from your primary school Principal



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Application Requirements For Year 9 and 10 Students

Minimum Academic Standards

Entry to this academy requires students to demonstrate the following achievement standards on their most recent report card:

- achievement of an 'A' standard in Maths
- AND
- achievement of an 'A' standard in Science
 - a letter of recommendation from your Maths, Science, or Technology teacher.

Application Requirements For Year 11 and 12 Students

Minimum Academic Standards

Entry to this academy requires students to demonstrate the following achievement standards on their most recent report card:

- achievement of an 'A' standard in one of the following subjects: Maths B, Maths C, Biology, Chemistry or Physics
- a letter of recommendation from your Maths or Science teacher.

Supporting Documentation Applicable To All Year Levels

- certificates from competitions related to the sciences e.g. Westpac Maths, Big Science, Engineering teams challenge, and Big Ideas
- any other evidence related to the sciences, such as club memberships, attendance certificates for workshops conducted by QUT or the QLD Museum