



STEM Centre
Australia
SCIENCE TECHNOLOGY ENGINEERING MATHEMATICS



Dear parents and students,

STEM Centre Australia is excited to offer our **'School Girls in STEM'** course!

Are you interested in joining our voyage of leading-edge learning and discovery?

Why STEM is important?

According to the Australian Government Industry Employment Projections Report (2015), over the next five years, employment is predicted to increase in professional, scientific and technical services by 14 per cent and in health care by almost 20 per cent. The Australian Bureau of Statistics has estimated that some STEM-related jobs, such as information and communication technologies professionals and engineers, have grown at about *1.5 times the rate of other jobs* in recent years.

International research shows that building STEM capacity across the population is critical in helping to support innovation and productivity *regardless of occupation or industry*. Consistent with this research, industry surveys show that STEM literacy is increasingly becoming part of the core capabilities that Australian employers need.

A renewed national focus on STEM in school education is critical to ensuring that all young Australians are equipped with the necessary STEM skills and knowledge that they will need to succeed.

How we embody STEM concepts in our courses

STEM Centre Australia develops courses and delivers engaging learning experiences in STEM-related fields targeted towards school-aged and tertiary students, as well as educators. Aligned with the

Australian Curriculum, STEM Centre Australia offers several new, innovative and exciting courses to boost our students' knowledge, interest and awareness in highly sought-after STEM fields.

At STEM Centre Australia, we know that STEM is about implementing learning strategies that engage learners in authentic and collaborative problem solving, whereby solutions are created by drawing upon deep disciplinary knowledge of science, technologies and mathematics. Additionally, STEM learning encourages both critical and creative thinking. These skills are essential in all 21st century occupations. Our approach to STEM education optimises the development of STEM-capable individuals; people who thrive personally and professionally, make informed decisions in their daily life and are empowered to follow STEM careers and lead innovation at any age.

The STEM Centre Australia team consists of experts from leading Australian industries and institutions within the disciplines of science, technology, engineering, mathematics and education. In alignment with the National STEM School Education Strategy, we have developed a hands-on approach to scientific, mathematical and technological literacy, utilising learning modules, appropriate self- and peer-assessments and practicals.

School Girls in STEM

Course Description

At present, girls generally lack interest and enthusiasm in Science, Technology, Engineering and Mathematics (STEM)-related fields, resulting in a substantial underrepresentation of women in STEM careers. Without positive and early exposure to STEM, girls are missing on significant opportunities to develop the necessary transferable skills relevant to this field. Additionally, international research shows that building STEM capacity is critical in helping to support innovation and productivity regardless of occupation or industry. Achievement and retention of women in STEM is related to engagement, confidence and gender bias.

The 'School Girls in STEM' course contributes towards gender parity in STEM disciplines by inspiring female students about the exciting and endless possibilities of STEM. Designed by leading experts in STEM and education, this course addresses the National STEM School Education Strategy (Australian Curriculum) to develop key competencies, problem solving skills, critical analysis and creative thinking. Additionally, educators will motivate and empower students, whilst aiming to foster a positive and enthusiastic environment to nurture confidence in girls.

From drones and robots to slime, edible DNA to crystal formation, acids and bases to bendy bones; students will be exposed to a range of engaging, fascinating and interactive activities, to address and extend Australian Curriculum content, promoted by self-regulated and active learning strategies.

All lessons are conducted by qualified and experienced female professionals within relevant Australian industries and institutions, thus providing a real-life approach to STEM-related fields.

Course Structure

Students will be placed in an appropriate age- and skill-matched group, ensuring the best possible success in achieving expected learning outcomes, as follows:

1. Foster and nurture girl's curiosity towards STEM, ensuring the development of deeper engagement and learning through empowerment
2. Learn and gain practical experience in robotics and coding, including computer algorithms, sequences, loops, conditionals and variables
3. Identify forms of energy, with a particular focus on electrical (circuits), kinetic (motion) and chemical potential energy
4. Understand chemical reactions, acids and bases and states of matter
5. Develop an understanding of the human body, from genes to digestion

6. Understand types of forces, particularly gravitational, centripetal, electric and magnetic forces
7. Develop and implement fundamental scientific-inquiry and logical reasoning skills through longitudinally-interwoven multidisciplinary activities
8. Synthesise and implement new learning; undertake critical and creative thinking; identify and solve problems
9. Work effectively individually and as a team in project design and evaluation tasks

Course information

Phase 1 – School years 6-9

- 6 weekly sessions x 2 hrs per session
- Full course fee: \$319

How to Enrol

- Step 1: Complete the Online Enrolment Form [HERE](#).
- Step 2: Pay STEM Centre Australia the course fee in advance. An invoice will be sent to you with the payment details once the enrolment form is completed.

We look forward to guiding your child on this voyage of discovery, which will see them excel well beyond their regular school classroom. With limited places available, secure your child's future today by contacting us on 0412 258 554 or info@TutorsSA.com.au.

Kind regards,
STEM Centre Australia Team

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