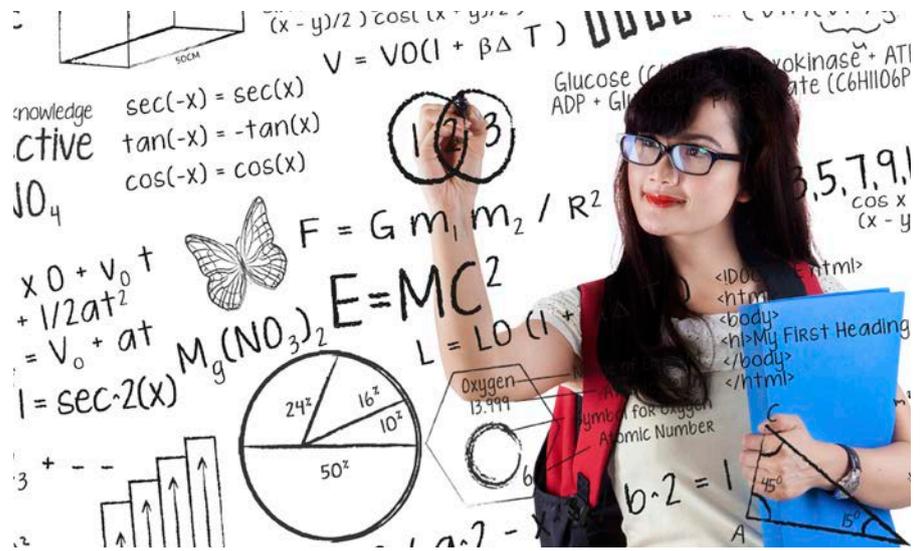


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STEAM Residential

STEAM Driven, Years 7 & 8

Sunday 25 to Wednesday 28 June 2017

To be the best she can be



STUARTHOLME SCHOOL

What is the STEAM Residential?

The STEAM Residential Program provides a three day residential for gifted girls who are currently in Years 7 and 8. The Residential aims to offer high ability students an intensive program of learning in the STEAM areas: Science, Technology, Engineering, the Arts and Maths. Gifted girls will have an opportunity to learn alongside students with similar abilities and interests. Girls will have an opportunity to learn with others who think like them. They will be encouraged to talk about issues that are important to learning, thriving and becoming the best they can be.

How do I know if my daughter should attend the STEAM Residential?

Students accepted for the STEAM Residential must have high intellectual ability, scoring in the 90th percentile or above, as demonstrated through ability testing (i.e. IQ assessment or standardised ability group tests) and/or high achievement scores (i.e. standardised group tests; ICAS results). Where none of these is available, NAPLAN results, a recommendation from a teacher or home tutor will be sufficient indication of exceptional ability. Documentation is not required; however parents/carers should be aware that these workshops are designed to be academically rigorous and students are required to keep up with the rapid pace of instruction. **Students must be able to work at least one to two years above their current grade level.**

What workshops will be offered for students at the STEAM Residential?

Workshops in each of the STEAM areas: Science, Technology, Engineering, the Arts and Maths, will be offered. Students will participate in one workshop for the duration of the program. Students thrive when learning is matched with their interests. For this reason, it is very important for the student (rather than a parent) to indicate the workshops they would prefer to attend. When applying for registration for the STEAM Residential, the student should be asked to indicate all five of the workshops, in order of preference. Every effort will be made to place students in one of their top three workshop preferences. Workshops offered may be adjusted to accommodate the numbers registered, the student's preferences and teacher availability.

Workshops

SCIENCE: What's so special about me?

Sally Glennon

"DNA is like a computer program but far, far more advanced than any software ever created" - Bill Gates

What makes each of us unique? It's all in our DNA. Students will investigate genetics, DNA and what makes an individual unique. Students will be involved in hands-on activities including DNA extraction and 'Build a Bunny' which relates to simple monohybrid crosses. Students will apply their understanding of genetics and heredity to grasp the importance of genetics in our society. They will explore different fields that DNA analysis can be used in, from court cases to the discovery of new therapies for genetic diseases.



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TECHNOLOGY: Tech Futures - designing, coding and programming

Leigh Ferguson

Students will be introduced to the basic principles of computer science by designing and building a mobile app in App Inventor. They will also design and code games. It is as important to teach coding / programming as it is to teach how to read - not that programming is a new literacy, but it is an extremely important one for future careers. Learning coding will help our students succeed in jobs that we can't even dream of yet. Students will also cover video production and the use of a green screen.

ENGINEERING: Building bridges

Liz Holt

Students will learn about forces in balance and apply this knowledge to design and build bridges. Working in small teams, students will explore forces that enable bridges to carry large loads. Students will investigate a variety of bridge designs taking into account design limitations, expense of construction and strength. Considering the constraints of the location and the budget, the Engineering teams will plan and construct bridges to span a river. Points are awarded for budget, weight and load as the bridges are tested to destruction.

ARTS: Psychology (logos)

Zainab Ali

Do you love learning about the human mind and human behaviour? We are all naturally curious about the world, especially the people in our lives, and are concerned about the choices and actions that we observe. If you have an inquisitive and creative mind, Psychology is a logical topic of study. We will explore many questions about how humans learn, think, feel and behave in different situations.

This workshop will investigate areas of Psychology and its relationship to animals and humans alike. We will explore the psychological basis of behaviour and its applications to everyday life.

MATHS: Counting techniques and cryptography

Mary Malone

This workshop will introduce students to two fascinating and challenging areas of mathematics - counting methods (with a focus on permutations and combinations) and cryptography. The mathematics of permutations and combinations lies at the core of several mathematical specialties such as number theory, graph theory and probability. A solid understanding of counting methods is vital in the study of computer science. It is a tool in many scientific specialties and has applications in areas ranging from finance to psychology.

Cryptography has been used for thousands of years in order to keep information secret from unintended audiences. It has evolved over millennia from simple written code to the complex computer algorithms in use today. This will be a fun and challenging workshop, where students will build on their algebraic knowledge and application and have the opportunity to develop and refine their skills in problem solving and logical reasoning.



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Why is STEAM a residential program?

Attending a residential program allows students with similar abilities and interests to have time together outside of the workshops, to really get to know each other. Many of the girls who qualify for the STEAM Residential Program are from rural and regional areas. Participation in this program requires that all students stay at Stuartholme for the duration of the Residential, even if students only live a short distance from the school.

Residing at Stuartholme School also allows students to participate in a carefully structured affective program. Students will learn about themselves, exploring and discovering what it takes to achieve personally, academically and professionally. Beyond the workshops, students will meet women working in STEAM-related areas and learn about careers in these fields.

On the first night, the girls will have an opportunity to get to know each other through fun-filled activities. On the second night, there will be visits from women working in STEAM related careers.

Where will students stay?

Students will stay in the Boarding House at Stuartholme School. Entrance to Stuartholme is from 365 Birdwood Terrace, Toowong. There are no facilities for parents to stay at the School.

Who are the people who will teach and support students attending the STEAM Residential?

Each workshop is led by a teacher with experience working with high ability students. Each workshop will be small in size, to foster and encourage open communication between students and teachers. These teachers are specialists in their subject area and each will be presenting a stimulating, challenging workshop, prepared specifically for gifted students who can work at least one to two years above their current year level.

Each student will be part of a small residential care group facilitated by a Residential Leader. These women are excellent role models, providing support for the girls throughout their time at the Residential. They will be involved in organising the morning, afternoon and evening activities for the girls and will be staying in the boarding facilities at Stuartholme.

All staff will work with Gifted Education expert and STEAM Residential Manager, Michele Juratowitch, Director of Clearing Skies. Michele has extensive experience conducting workshops and residential programs for gifted students. Michele was the Manager of Residential Programs and conducted the APTS, ASSETS and Scientia Residentials within the Gifted Education Research, Resource and Information Centre (GERRIC) at UNSW.



Cost and sponsorship

The cost of participating in the STEAM Residential is \$430 (including GST). This includes tuition, materials required for the workshop, all meals, shared accommodation, afternoon and evening activities. Rural families directly affected by drought may be eligible for limited funding assistance. Please contact Michele Juratowitch about eligibility. Other families may consider applying for individual sponsorship through local newspapers, service organisations or businesses. If parents require a letter from the Principal confirming student participation in the program to assist with applications for financial sponsorship, please contact Michele Juratowitch via email: michele@clearingskies.com.au

How to apply

Further information, the online application and payment process for the STEAM Residential in June can be accessed on the Stuartholme School website: www.stuartholme.com/events. The application, associated forms and payment must be submitted by the student's parent/carer before Monday 12 June. Please be aware that the application process will be closed when all available places have been filled – possibly several weeks before the closing date.

Payment for the STEAM Residential forms part of the application process. To make payment via the website, click on 'Online Payments', select 'STEAM Residential' as the event type. When payment is completed a receipt number will be issued, which must be retained and entered into the registration form. Payment can be made online or cheques made out to Stuartholme School can be posted to Attention: Adeline Viniko, STEAM Residential, Stuartholme School, 365 Birdwood Terrace, Toowong QLD 4066. Applications will not be considered until all of the application process is completed, including payment, completion of registration form and submission of medical and indemnity forms.

Confirmation of enrolment will be made via email together with additional information about the Residential. If a student is unable to be placed in the STEAM Residential Program, full payment will be refunded.

If a student is withdrawn from the STEAM Residential Program for any reason before Monday 12 June, a full refund, less an administrative fee of \$50 will be arranged. If cancellation occurs after Monday 12 June, an administrative fee of \$150 will be payable and deducted from the amount refunded.

Places at the STEAM Residential are limited. Parents are urged to complete applications as soon as possible; the application process will be closed when all places are filled.

More information

For more information please read the STEAM Residential Frequently Asked Questions online at www.stuartholme.com/events. If you have further questions, please contact Michele Juratowitch via email michele@clearingskies.com.au or telephone 0438 744 994.

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