

# Education Outside the Classroom Handbook

*Inspiring Great Minds*



Queensland Academy  
for Science Mathematics  
and Technology



## EDUCATION OUTSIDE THE CLASSROOM

Education Outside the Classroom (EOTC) comprises curriculum-based teaching and learning activities that go beyond the walls of the classroom. We believe that the more students are involved with the learning process and making decisions with respect to their learning, the better the learning outcomes. EOTC acts as a vehicle for learning across curriculum areas and subjects, and these experiences can often form powerful aspects of a student's identity. The development of social skills, problem solving and self-reliance are core components of these experiences.

Challenging outdoor activities and environmental studies, among many others, are particularly powerful learning opportunities. They contribute to a range of important societal targets across education, health, behaviour and community cohesion which are valuable components of a rounded and rich educational experience. Students have the opportunity to participate in a variety of these enrichment activities throughout their time at QASMT, some of which are compulsory, while others are optional.

At QASMT the mandated EOTC opportunities include, but are not limited to, activities such as Athletics Carnival, Cross Country and Walkathon, Harmony Week and year level camps and conferences. The mandated camp and conference program targets the specific needs of each year level, which prepares and supports students for particular junctures in their academic journey.

## MANDATED PROGRAM

The focus of our current program is based on our Positive Education Curriculum and is outlined below.

### **Year 7 – Relationship Building – Working collaboratively to take risks and achieve goals**

Our Year 7 camp focuses on the building of new **Positive Relationships** in an exciting environment. Activities are designed around positive psychology, entrepreneurship and innovation to create challenges that will engage students in working together to solve problems.

### **Year 9 – The Journey – Preparing for what is ahead – Setting goals and taking on challenges**

The Year 9 camp focuses on the journey that has been, reflecting on the MYP that has been completed, and how students have grown and overcome challenges and change. Activities focus on setting goals and tackling new challenges with a **Positive Purpose** as they enter the preparation course for the IB Diploma.

### **Year 11 – Leadership through Positive Purpose**

Students in Year 11 attend the Leadership Retreat Program. This program has been designed to provide students with an opportunity to demonstrate and develop their skills in team building, leadership and independence. Students learn about leadership and are provided with opportunities to demonstrate their capability prior to applying for student leadership positions within the Academy. It is also a time for students to strengthen peer relationships and to set the platform for the rest of the year and beyond.

### **Year 12 – Mindset Development for Positive Accomplishment**

The Year 12 Conference forms an essential part of students' time in their final year at QASMT. The conference prepares students for their IB Diploma examinations. In addition, it provides students with the opportunity to further develop skills in teamwork, and understand the value of their peers and support networks to prepare them for the challenges they may face in their final year and following graduation. Importantly, it is also a time for student celebration of Positive Accomplishment and to assemble together to celebrate their time at the Academy.

## OPTIONAL PROGRAM

Optional EOTC opportunities are listed below.

### **The Duke of Edinburgh's International Award – students who are 14 years of age and above**

There are three levels of achievement within the Duke of Edinburgh Program - Bronze, Silver and Gold. In order to achieve these awards, participants must complete an Adventurous Journey (AJ) and regularly commit to three ongoing criteria - learning a skill, participating in a community service and taking part in physical recreation.

The Adventurous Journey for the Bronze Award is supervised by QASMT teachers and includes two camps. The 10 Guiding Principles are as follows:

1. Individual
2. Non-competitive
3. Achievable
4. Voluntary
5. Development
6. Balanced
7. Progressive
8. Inspiration
9. Persistence
10. Enjoyable.

The Adventurous Journeys for both the Silver and Gold awards are unable to be supervised by the school. However, support will be provided by QASMT to connect students to external providers and to offer guidance through regular meetings. The external providers will supervise and run AJs for Silver and Gold award students.

### **The Bridge Award – students who are 11-13 years of age**

The Bridge Award was created by the Queensland Government as a way to involve young people in challenges similar to those included in the Duke of Edinburgh's International Award. This award is designed to be more appropriate and achievable for young people aged 11-13 years. The Bridge Award is a positive youth development program that is both fun and challenging.

The Bridge Award has two award levels. Here at QASMT, students will begin at Level 1 in Semester 2 of Year 7, progressing to Level 2 in Year 8. Students then have the option to participate in the Duke of Edinburgh program in Year 9, if they wish.

Each level has four sections that students need to complete, with Level 2 requiring a greater commitment than Level 1.

The four sections are:

- **Service** - be involved in the community and help others;
- **Skill** - develop personal interests and skills;
- **Physical Recreation** - participate in physical activity and improve fitness;
- **Adventurous Journey** - discover new surroundings, develop a sense of adventure and learn about the environment (one day for Level 1 and two days/one night for Level 2).

## SPORT PROGRAM

QASMT has a strong sport program, which has resulted in some excellent results and performances. The program aims to maximise participation by encouraging students to enhance their physical ability, confidence, teamwork and goal setting. Our program provides a balance between academic and sporting pursuits. As part of the West Brisbane Senior Secondary Sports Association, QASMT offers a vast range of team sports as well as supporting students in alternative sports through local clubs and representative opportunities.

### Sports Offered at QASMT

- Athletics
- Australian Rules Football
- Badminton
- Basketball
- Capture the Flag
- Oz Tag
- Tennis
- Volleyball
- Ultimate Disc
- Cricket
- Cross Country
- Futsal
- Netball
- Touch Football



### Outcomes – Learning Experiences and Benefits

- Participation in sport provides students with the opportunity to improve their physical health through improved cardiovascular fitness, muscular development and coordination.
- Mental benefits of sports are vast and include: increasing self-confidence, reducing stress, reducing anxiety and improving sleep habits and concentration.
- Sport teaches students the importance of winning and losing gracefully, and fosters resilience, which can be applied to all aspects of life.
- Sport encourages students to socialise and work productively with one another to achieve goals, and gives them an understanding of the importance of teamwork and their role within a team.
- The sport environment is a great place to grow and establish respect. Students who participate in sport, learn the importance of respecting their teammates, opponents, coaches, spectators and rules.
- Sport is an ideal environment to develop essential leadership skills, such as decision-making, motivating others and conflict resolution which can be applied to all facets of life.

### Possible Extra Opportunities

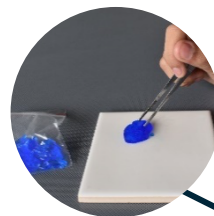
- Various competitions including All Volleyball Schools Competition, Equestrian Queensland Competitions and National Judo Competitions
- Gala Day competitions and Metropolitan finals

## CO-CURRICULAR ACTIVITIES PROGRAM

The Co-Curricular Activities (CCA) program provides a diverse range of challenges outside the classroom where students can explore their passions and extend their horizons discovering new areas of interest. By participating in the CCA program, students develop new strengths, overcome challenges and share experiences by connecting with like-minded peers. The broad range of experiences enables students to engage in creative pursuits, participate in new physical activities promoting personal growth, and foster a sense of personal responsibility through service relationships within the community. Through participation in CCAs, students develop relationships with peers and staff, maximising their opportunities for improvement and achievement. The extensive CCA program at QASMT aims to provide exciting activities that will stimulate an interest in school life and promote the discovery of new gifts, talents and passions, beyond the confines of the classroom.

### Regular Co-Curricular Activities

- Robotics
- Debating
- Environmental Club
- Dungeons & Dragons
- Leo's Club
- Vera Street Community Gardening
- Zonta International
- Readers Cup
- RoboGirls
- Art Shed
- Knitting Club
- Lawn Bowls
- Chess Club
- Running/Walking Club
- Drama Club
- Microscope Club
- Creative Writing
- Languages – native tongue and second language



### Additional Activities (based on demand)

- Judo
- Politics Club
- Gym Circuit

### The Co-Curricular Activities program at QASMT aims to:

- Provide students with opportunities to learn outside the classroom;
- Provide students with opportunities for enjoyment, adventure and challenge;
- Provide students with opportunities to enhance their physical and mental wellbeing;
- Help students develop respect for themselves and others, by providing them with opportunities for personal and social development;
- Enable students to take increased responsibility for their own development and to regard learning as enjoyable, continuous and lifelong;
- Develop students understanding of interdependent participation and inspire contribution to a greater purpose;
- Develop students' skills in leadership, complex-reasoning and responsibility;
- Engage students with community networks.

## ROBOTICS PROGRAM

There are a number of robotics programs available for students to participate in. Each program is detailed below and are based on national or international competitions, though entering the competition is not compulsory. The programs are all year long, however students have the option to change after a semester.

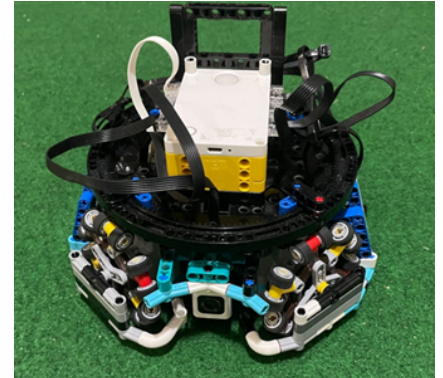
Year level	Time Slot	Programmes available	Cost / year
7	Friday 2:20 – 3:20	FLL, Robocup,	\$220
8 - 9	Thursday 3:20 – 4:20	FLL, RoboCup, Droid Racing	\$220
10 - 12	Friday 2:20 – 3: 20	FLL, RoboCup , Droid Racing	\$220
7-12	Friday 2:20 – 3:20	Aerospace Aviation	\$220
8 - 12	Friday 2: 20 – 3: 20/4:20	FTC	\$220

### FLL (FIRST Lego League)

FIRST LEGO League gives middle school students the opportunity to work and create together to solve a common problem. The really cool thing about FIRST LEGO League is all skill levels are welcomed and needed, technical or non-technical. Friendly competition is at the heart of Challenge, as teams of students ages 9-16 engage in research, problem-solving, coding and engineering – building and programming a LEGO robot that navigates the missions of a robot game. As part of Challenge, teams also participate in a research project to identify and solve a relevant real-world problem. The FLL Challenge program is a competition program and has tournaments in select areas. If registered for the upcoming season, teams must attend one event.

### Robocup

The Robocup community fosters the development of intelligent robots by defining and executing competitions that are used by scientists and students from around the world to test and demonstrate their robots in attractive, realistic scenarios. There are four challenges that students can select from: Soccer, Rescue Line, Rescue Maze, and Onstage. Beginners will start on Lego EV3 or spike primes, more advance participants will build their own robot with Aurdino and component parts like sensors, motors, etc.



### Droid Racing Competition



The annual DRC is a Robotics challenge that encourages friendly competition where universities from around Australia and the world are invited to bring their automated bots to traverse an obstacle course.

The Droid Racing Challenge (DRC) is a student robotics challenge focusing on the development of ground-based autonomous robotic racing platforms. The “droids” that take part in this competition will feature autonomous operation, robotic vision, navigation and obstacle avoidance, and mechanical design optimised for speed. Design and build a completely autonomous system capable of racing around a track, denoted by two coloured lines; all while avoiding collisions with other vehicles and obstacles. This is done through the use of computer vision.

This program was first opened to high school students in 2022, and is available

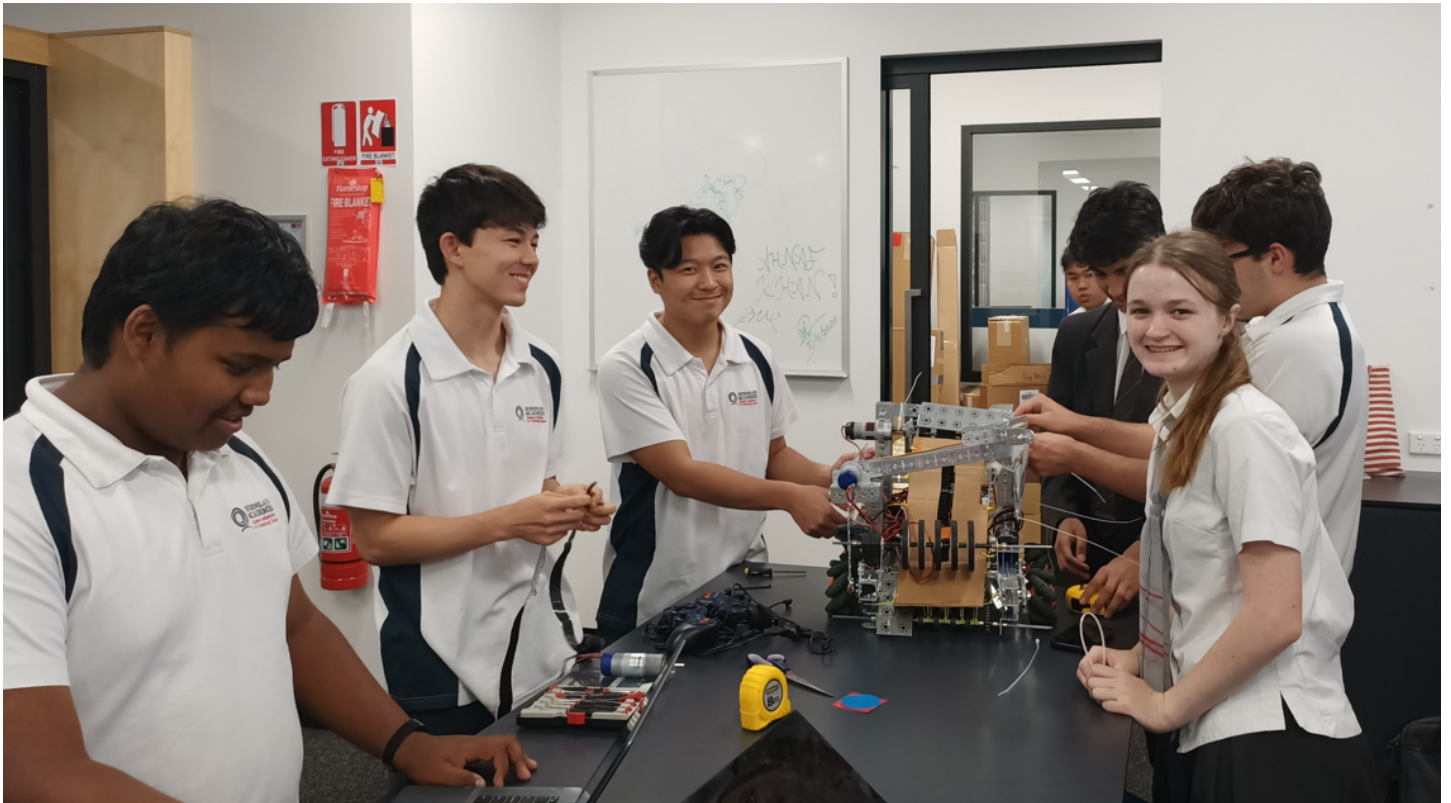
by application only.

## Drone Club

Drones at QASMT is a nascent club seeking to interest students in the growing field of Aviation and Aerospace. After members have earned their wings using a simulator they fly First Person View (FPV) micro racing drones in controlled conditions solo and in competition. Once they have mastered the basics of flight they have the opportunity to extend their knowledge of the craft by designing, building, coding and flying their own creation. This is a longer term activity and is well suited to those with an interest in all things aviation, robotics and automation.

## FTC (First Tech Challenge Robotics)

This is a year long commitment and no experience is necessary to join us. FTC is a robotics competition that we aim for in November and December. It is not necessary to compete to be in the program some students come along for the fun, social and learning experiences. The FTC competition is a real world problem in miniature, with robots built from scratch with Tetrix or Rev component parts or using our new 3D printing, laser cutting, plasma cutting and pan brake machines, students will also be able to design and create bespoke parts from sheet metals, wood, and acrylic. Challenges include making the robot drive over obstacles, pick up parts e.g. balls or other shapes, throwing objects, shooting hoops or stacking objects. This is the next level above FLL (First Lego League) and as part of this challenging program students will learn a great many skills from design, engineering, programming, and building to team work and leadership. If you cannot be put into a team for FTC you will have the option to join another robotics club.



## INSTRUMENTAL MUSIC PROGRAM

The Instrumental Music Program at QASMT offers a place for all students who wish to continue their music journey and fulfil their musical talent.

### Ensembles

There are musical groups for most levels and interests across orchestral and chamber ensembles to world and modern music groups. Audition files for Year 7 and 10 entry are due by mid-January.

#### Strings

Allegro Strings (Beginner-Intermediate); Bravura Strings (Intermediate-Advanced); Chamber Strings (Advanced); Vivace Strings (Intermediate)

#### Woodwind/Brass/Percussion

Wind Orchestra (Advanced); Wind Ensemble (Beginner – Intermediate); Big Band I (Advanced); Big Band II (Intermediate); Jazz Combo (Advanced); Percussion Ensemble

#### Other

Combined Symphony Orchestra (Advanced); Rock Band; World Music Ensemble; Chamber Music – Trio; Chamber Music – Quartet Choir

### Lessons

Lessons are 35 minutes per week on a rotation timetable, so students do not miss out on the same subject each week. Our teachers offer a wealth of experience and enthusiasm to inspire a sequential development of skills and nurture growth. Year 10 to 12 students can negotiate a fixed time outside class time.

The Department of Education Instrumental Music curriculum includes band and orchestral instruments, organised in families, or strands, as follows:

- Strings — violin, viola, cello, double bass;
- Woodwind — flute, oboe, bassoon, clarinet, saxophone;
- Brass — trumpet, French horn, trombone, euphonium, tuba;
- Percussion — tuned and untuned instruments, including snare and bass drum, timpani, auxiliary and mallet instruments.

### Opportunities

- Concerts and Performances
- Workshops and Masterclasses
- External Competitions including Fanfare
- Nominations for SHEP and AHEP
- Concerto and soloist experience (subject to availability)
- QSO Compose participation (subject to application to CCA)
- Rehearsals and instruction from specialist teachers





## **STEM PROGRAM**

### **International Student Science Fair**

QASMT is invited each year to the International Student Science Fair (ISSF) as a member of the International Science Schools Network (ISSN). The ISSF is hosted on a rotating basis by a network of specialist science high schools in different countries around the world. ISSF brings together students, teachers and school leaders to share and develop ideas about science in a modern world, with a focus on the combined sharing and development of teaching and learning in science education. All student participants are expected to present on their research project. There is also a problem-based learning activity where participants from different schools form teams to look into one aspect of an issue challenging our society. Other highlights include keynote lectures by prominent scientists, visits to research and educational institutions, excursions and cultural activities.

### **Learning Experiences and Outcomes**

The ISSF aims to provide students with opportunities to:

- Effectively communicate scientific knowledge and concepts to an international audience;
- Think critically about how effective leadership in science can provide solutions to complex societal issues;
- Make cross-cultural connections with gifted science students, teachers and principals.

### **SuperComputing**

SuperComputing (SC) is an international conference for high performance computing (HPC), networking, storage and analysis, and brings together the international supercomputing community – a gathering of scientists, engineers, researchers, educators, programmers, system administrators and developers that is unequalled around the world. It aims to spotlight and showcase the most advanced scientific and technical applications in the world. Each year the SC Exhibition Hall features exhibits of the latest and greatest technologies from industry, academia and government research organisations; many of these technologies being seen for the first time. Students will be able to attend a series of sessions which are of interest to them, surrounding the topics of HPC. Other highlights include keynote lectures by prominent researchers and the exhibition hall, where hundreds of research and industry exhibitors debut the most advanced innovations in HPC.

### **Learning Experiences and Outcomes**

SuperComputing aims to provide students with opportunities to effectively communicate with experts in HPC, conduct primary research, make cross-cultural connections with like-minded individuals, and provide inspiration for the continuing study of Computer Science and/or Information Technology in a Global Society (ITGS) in their senior years. Students who attend will be our leaders for QASMT's emerging HPC program.

### **International STEM Tours**

As one of the key components of the International Baccalaureate, QASMT provides students with the opportunity to develop their international mindedness through participation in our international STEM tours. These tours provide educational and cultural experiences in an extensive and immersive 2-week program. Structured yet flexible, students complete a CAS project as part of these tours, in which they demonstrate skills in teamwork, independence, and more. Our enthusiastic teachers work closely with students in small groups through our pre-tour and on-tour projects and are witness to each student's growth from this experience.

As one of the key components of the International Baccalaureate, QASMT provides students with the opportunity to develop their international mindedness through participation in our international STEM tours. These tours provide educational and cultural experiences in an extensive and immersive 2-week program. Structured, yet flexible, students complete a CAS project as part of these tours in which they demonstrate skills in teamwork, independence, and more. Our enthusiastic teachers work closely with students in small groups through our pre-tour and on-tour projects and are witness to each student's growth from this experience.

### International STEM Tours offered

- Europe STEM Tour – open to students in Year 11 who study French, German or Latin. This tour has a language school component and students are placed in the location and language of their studies at QASMT.
- Japan STEM Tour – open to students in Year 11 who study Japanese. This tour has a language school component and students are placed in the location and language of their studies at QASMT.

### Learning Experiences and Outcomes

- Students develop cultural awareness and understanding through immersive engagement within an international environment.
- As part of their CAS project students must work in groups before the tour to plan activities that assist them answer their designated CAS Focus Questions. Students learn to develop their teamwork skills by negotiating activities, taking on leadership when they recognise it is needed, and important travel and daily life skills such as time management, transport, and budgeting.
- A diverse range of STEM focused experiences throughout the tours help broaden students' awareness of current issues and foci from the perspective of a nation other than Australia, the research that is currently being undertaken, and what the future of STEM and how the world could look.
- As part of our language tours, students significantly enhance their language skills through continuous communication with native speakers in their day-to-day interactions, as well as through structured education as part of their language school program.



## COMMUNITY AND SERVICE (CAS) PROGRAM

### Service Tour

Service is a significant component of the IB experience and a part of the fundamental values. In order to provide students a valuable and meaningful opportunity to provide service, QASMT offers a CAS Service Tour. Like the international STEM tours, our Service tour provides students with an opportunity to complete a CAS project by working closely pre-tour, on-tour and post-tour to provide a service commitment.

Learning

### Experiences and Outcomes

- Students will work with students in Far North Queensland
- Students will connect culturally to the land and gain further appreciation of its sacredness for the original custodians.
- By visiting heritage protected sites, students develop their appreciation for the diversity of Queensland and the importance of its natural environment

## Activity (Ski) Tour

As part of the International Baccalaureate's CAS requirement, QASMT offers students the ability to complete a CAS project with a focus on Activity in our Ski Tour. Under the guidance of professional instructors, this 5-day tour gives students the opportunity to learn new skills or develop current skills on the snow.

### Learning Experiences and Outcomes

- Students will conquer personal challenges by developing physical skills and learning to overcome failures
- The mental benefits of an active lifestyle will also be investigated and experienced by students
- The ski field environment is one that is supportive of all participants in fostering their development. Students will learn about the importance of respecting rules and etiquette, developing leadership skills such as decision-making and motivating others.

