Australian Science and Mathematics School

Context Statement

Government of South Australia
Department for Education and Child Development

Flinders University
ADELAIDE • AUSTRALIA

AUSTRALIAN SCIENCE AND MATHEMATICS SCHOOL
SCHOOL CONTEXT STATEMENT
School number: 1800

General Information

Principal: Jayne Heath

Deputy Principal: Glenys Thompson

School e-mail address
info@asms.sa.edu.au

Staffing numbers
41.0 Teaching Staff

15.0 Support Staff

Enrolment trends
2004 265 students (years 10, 11, 12)
2005 274 students with up to 30 of these being international students (years 10, 11, 12)
2006 250 students with up to 30 of these being international students (years 10, 11, 12)
2007 260 students with up to 30 of these being international students (years 10, 11, 12)
2008 265 students with up to 30 of these being international students (years 10, 11, 12)
2009 291 students with up to 30 of these being international students (years 10, 11, 12)
2010 336 students with up to 30 of these being international students (years 10, 11, 12)
2011 336 students with up to 30 of these being international students (years 10, 11, 12)
2012 357 students with up to 30 of these being international students (years 10, 11, 12)
2013 366 students with up to 30 of these being international students (years 10, 11, 12)
2014 348 students with up to 30 of these being international students (years 10, 11, 12)
2015 387 students with up to 30 of these being international students (years 10, 11, 12)
2016 388 students with up to 30 of these being international students (years 10, 11, 12)
2017 370 students with up to 30 of these being international students (years 10, 11, 12)
2018 384 students with up to 30 of these being international students (years 10, 11, 12)

Year of opening
2003

Public transport access
The ASMS is located on the grounds of the Flinders University of South Australia. It is serviced by the same network of public transport that supports the university, including a bus service connecting different sections of the campus. The Tonsley railway station is approximately 1km northwest from the school.

Charter

The ASMS is a school for year 10-12 students who have an interest in science and mathematics. Our school is not a local school, students are invited to apply outlining their interest in science and mathematics, career pathways there are considering and our ppraiches to teaching and learning.

The ASMS serves as a statewide focal point for teaching and learning, professional learning and research aimed at fostering improvement, innovation and reform in Science and Mathematics education. The school develops new approaches to teaching and learning in Science and Mathematics through the creation of an environment for interaction between educators and professional scientists and mathematicians within institutions and industry in South Australia and beyond. The schools' partnership with Flinders University is key to this collaborative work.

The ASMS is intended as a resource for every DECD school in the state through its programs of professional development and curriculum enhancement. Students and teachers from across South Australia are invited and encouraged to engage in ASMS outreach programs.

Teachers from around the state are able to work alongside ASMS staff in the ongoing development of the curriculum and teaching and assessment strategies. This work also informs the review and planning of professional learning activities.

The ASMS:

- Responds to current and future interests and needs of its students to establish models of excellence in science and mathematics education
- Provides a learning environment of leading edge and enterprise oriented science, mathematics and technology
- Provides a learning culture for its students that derives from the learning culture of its staff, which in turn derives from their interaction with university and industry scientists and educators
- Is an agency for change and enhancement of science and mathematics education for the state of South Australia and then nationally and internationally
- Prepares young people to be creative, critical, informed and motivated contributors responding to professional, personal and social issues
- ASMS to increase participation and success of senior secondary students in science, mathematics and related technologies and transforms students' attitudes to science and mathematics as career paths

General Characteristics

The Australian Science and Mathematics School (ASMS) draws students from metropolitan and rural areas in South Australia, and from interstate and overseas. This diversity reflects the global community in which students will work when they graduate.

The ASMS is a purpose designed and built senior secondary school facility. The building is designed to support students to develop as self-directed learners and engage in collaborative hands-on inquiry based learning activities. The school is sited within the campus of the Flinders University which abuts the Adelaide foothills and is adjacent to the residential areas of Bedford Park, Mitchell Park and Bellevue Heights. The ASMS building provides for a range of learning settings including face to face and online, coaching, mentoring and students as researchers and teachers. Students also make use of the extensive facilities within Flinders University such as additional laboratories, libraries, lecture theatres, canteens, sport and recreational facilities.

The school is located within the Flinders University Bedford Park campus. It has strong links with the campus, including sharing facilities, and access to its highly skilled staff. The school connects Science, Mathematics and related technologies directly to the issues in the world today with learning taking place in the university, the workplace, online and in the community.

Each student at the ASMS has a teacher they will work where ever possible over the three years of their enrolment in our school to support students in learning how to learn and managing their learning pathways. Their Learning Studies teacher acts as a mentor and advocate, monitoring and supporting students to achieve their learning goals.

The school learning community is based on strong and trusting relationships with peers, teachers and other adults. Each student is recognised as an individual, with the relationships developed with others being pivotal to success. The physical and emotional wellbeing of each student is supported by a strong connection with their teachers and a climate of trust and mutual respect that inspires and encourages everyone.

Having a school population of 385 students ensures that each student becomes personally known, supported and valued as a member of a dynamic learning community. Movement of students around the university and off-campus facilities occurs under the guidance and duty of care of the ASMS staff.

Learning Programs of the ASMS

Learning Vision

The ASMS vision is for Extraordinary learning: driven by curiosity and challenge, inspiring passion and confidence.

The Australian Science and Mathematics School (ASMS) is a senior secondary school promoting excellence in teaching and learning in science and mathematics education.

The ASMS aims to be recognised for its leadership of innovation and reform of learning and teaching in science and mathematics.

The ASMS is constantly in the process of creating a learning environment for the future that will prepare young people with a passion for study in science and mathematics to be creative, critical, informed and motivated contributors responding to professional, personal and social issues.

Learning Principles

Learning programs at the ASMS are built around the following key principles:

New Sciences:

emerging areas of science such as nanotechnology, aquaculture, biotechnology, photonics, genomics, polymer science, robotics and communication technologies are incorporated into school curriculum.

Inquiry Learning:

students engage in deep study in personal projects of major significance, especially through problem based and inquiry based learning approaches.

Interdisciplinary Curriculum:

programs with a focus on scientific and mathematical sills, knowledge and understanding in ways that are closely linked with learning from all areas of study.

Standards of Significance:

a systematic approach to allow students to meet school, state-wide, national and international educational standards.

Authentic Experience:

students study real world ideas, problems and issues and make connections with their learning that are meaningful to them in their present and possible future life circumstances.

Engagement and Retention:

increased participation and success of senior secondary students in science, mathematics and related technologies and transforms students' attitudes to science and mathematics as career paths.

Capabilities

The ASMS actively promotes the development of the ACARA General Capabilities in all of its students.

Capabilities are diverse knowledge, skills and dispositions that students develop for their roles as citizens, workers and members of local and global communities. A focus on capabilities is a powerful way to develop balance and connectedness across diverse areas of learning and to promote learning that is transferable to many future elements of life.

The ASMS certificate of Graduate Capabilities is a statement of the student's demonstration of their capacity to:

- ***Literacy***
- ***Numeracy***
- ***Information and communication technology (ICT) capability***
- ***Critical and creative thinking***
- ***Personal and Social capability***
- ***Ethical understanding***
- ***Intercultural understanding***

Central Studies

The learning program for students in Years 10 and 11 at the ASMS is based on the unique courses developed by the school which are called Central Studies. There are 3 separate interdisciplinary Central Studies presented in each semester over a two year program. The Learning Studies program is based on a curriculum that addresses learning how to learn, as well as SACE PLP and Health.

- **Biodiversity**

This study involves the understanding of the diversity of life on planet Earth through the role of evolution in the development of species. Major areas of investigation include geological time scales, natural selection, Earth processes such as continental drift and plate tectonics, dating methods and the extinction of specials. Other concepts and content include animal and plant structure and function, ecosystems, biodiversity and classification systems.

- **Dream Design & Develop (3D's)**

The world is changing, with rapidly emerging opportunities for innovation. This central study has as its focus the innovation cycle, with students identifying a problem and designing, prototyping and marketing a solution. This culminates in an Innovation Expo, where students will compete to market their innovation. Students explore a range of content to support this, ranging from materials and their properties at a range of scales to historical views on innovation and its drivers, while moving towards an understanding of the potential of current developments and applications such as nanotechnology and biomimicry. This Central Study has a significant practical component, with use of 3D printers, laser cutters, programming and technical drawing as students turn their ideas into reality.

- **Truth and Perception**

As students of language, philosophy and science we not only describe the world as we see it, but also challenge others by asking "Why" and "What if?"

In Truth and Perception, students will examine some of the theories about light, chemical reactions, biological processes and the purpose of language and images. They will explore scientific knowledge as a collection of overlapping models, each with their own limitations in describing nature. By exploring the same phenomena through these different levels of abstraction, they will confront the notion that science is about understanding doubt as much as discovering truth. Can two people ever truly understand each other's meaning?

- **Earth and Cosmos**

This study explores understandings of the sun, moon and stars, and the challenges of human space exploration. The concepts and content covered include the structure and size of the universe, understandings of time and space, composition of the planets, evolution of the Earth's atmosphere, oceans and geological formations and human space exploration. Computer simulation and mathematical modelling of physical phenomena is used to enhance students' understandings.

- **The Body in Question**

Body In Question explores the human body as a system from a number of perspectives, principally through human health issues. Students examine the nature of health and disease from the physiological, mental, social and emotional and immunological basis and investigate the role of physics in describing and explaining the human body.

- **Student Inquiry Project**

This programme has been designed to be taught over an 18 week semester where students have 200 minutes a week class time.Students have been asked to undertake an extended project which incorporates elements of inquiry and research.Students have been given the choice of working individually or in small self-managed groups to complete their project. They are requested to make a topic choice which is STEM related in regards to the focus area for their project and are free to choose the format of the final outcome.

All students have a nominated teacher who will mentor and support students in completing their contracts via a blend of group learning activities focused upon research and project management skill development and individual discussion and assistance. If required, students can utilize one of their 100 minute lessons to conduct activities related to their contract outside of the school. Students are expected to offer peer support not only within their working groups but to classmates during group discussions.

- **Communication Systems**

In this Central Study students study different communication systems: electronic, biochemical, geographical, digital and visual. They look at how humans interpret, change, adapt, transform and control communication systems. There is a detailed focus on the physics of electrical communication to understand electrical currents and micro-processors, with a special focus on how this is applied in airborne communication. The chemistry of biochemical communication is studied to understand the structure and function of chemicals such as neurotransmitters and hormones.

- **Sustainable Futures**

Sustainable Futures explores the myriad of possibilities for our humanities and the planet's future. Students explore possible futures from a number of perspectives, principally by looking at current situations and how creativity, information and technology can bring about a more sustainable future. Students use data and modelling to investigate some possible futures; and beyond this how creativity and technology can help us to overcome the limitations of modelling. Students should be inspired to take action in their lives and thereby contribute to healthy, equitable and sustainable future for all.

- **Medical Engineering**

Medical engineering is a rapidly evolving field with a profound effect on society. This central study allows students to explore the complex interaction between context and innovation, and the process of designing and engineering solutions to problems. A study of the social context of the Second World War and the medical innovations in response leads into consideration of current medical technologies, the inspiration and process behind their designs, and the science and mathematics required to make them work. In the final third of the course, a codesigned inquiry project aiming to engineer a solution to a student-chosen medical problem provides the opportunity to put design skills into practice and make an impact.

- **The Energy Equation**

Should we balance our Energy Equation? The Energy Equation central study will explore historically significant moments in the origins of energy production from coal & fossil fuels through to Nuclear power and the current generation of renewables. Students will then explore emerging technologies that could potentially secure our energy needs for the future. Each week will be driven by the analysis of critical texts that underpin key scientific & mathematical concepts within the Energy Equation. These texts will support students in their evaluation of science as a human endeavour in the field of energy production.

- **Order from Chaos**

Humanity seeks, uses and creates order in the form of systems and patterns to function in a seemingly chaotic universe. This central study examines both order and chaos within human society and the natural world. The initial focus is on social order and governance with a focus on political systems and persuasion. Students will develop and analyse their own persuasive speeches and will explore the role statistics plays in influencing voter behaviour. Humans as pattern makers will be a focus of a study examining the natural world utilising mathematical sequences and series to describe, analyse and artistically emulate the patterns seen in nature. The final module has a focus on investigating complex systems in the modern world, how resistant they are to chaos and how machines are increasingly learning to control them.

- **Learning Studies**

Learning Studies (LS) is held daily throughout the year. Students are grouped across all year levels with most students spending their 3 years at the ASMS in the same LS group with the same LS teacher. The LS teacher is the main point of contact for each student and all communication between student, families and subject teachers occurs through the LS teacher.

The Learning Studies program is a multifaceted interdisciplinary curriculum that is both complex and comprehensive. It has been designed to support the development of each student as an effective learner and an active citizen.

There are many different elements of the LS program including;

- Development of an ePortfolio
- Music, Movement and Mindfulness (MMM) Activities
- Development of the Capabilities and dispositions
- Development of self-directed learning skills
- Assemblies
- Development of effective learning strategies

There are several compulsory parts of the Learning Studies program. These include

- Completion and assessment of the Personal Learning Plan (PLP), a compulsory SACE requirement for Year 10
- Health and Physical Education, a compulsory requirement for the Australian Curriculum Year 10
- Learning Conversations (Term 1 and 3) for all students
- Graduate Capabilities through to for Year 12
- DECD Keeping Safe Curriculum for all year levels
- SACE Stage 1 Health
- ePortfolio
- Students report comments

SACE Accreditation

The work undertaken by students in the Central Studies is mapped against, and formally accredited through, the following SACE Stage 1 subjects under the authority of the SACE Board of SA.

2018

Mathematcis (20 Credits)

Scientific Studies (40 Credits)

English (20 Credits)

Integrated Learning (10 Credits)

Research Practices/Research Project (10 Credits)

Personal Learning Plans (10 Credits)

Health (10 credits)

Enrichment Opportunities

Adventure Space

University Studies is an enrichment and extension program conducted in a dedicated 100 minute session on Thursday afternoons. The Adventure Space program is to promote a high degree of interaction with Flinders University with short courses. Students have the opportunity to work in mentored projects using university and community facilities. The Adventure Space courses provided in recent sessions have been:

- Wide World of Sports
- Aviation Studies
- Science and the Arts
- Debating
- Music
- Service Club
- Maths Club
- Creative Writing
- Dance
- Literacy for All
- Hacking
- Ideation Space
- MOOCs & DUOLINGO
- Voxon
- Bath Bomb Bonanza
- Research and Presentation

Demonstration of Learning

The ASMS is committed to transforming the way student learning and achievement are defined and measured. It is developing and using multiple assessment strategies.

Assessment is ongoing and regular to provide feedback that assists, extends and improves learning. Supporting students to seek feedback that helps them in their learning and teachers providing appropriate and constructive feedback that is meaningful to students, supports and empowers and contributes to their development is key to their learning improvement at the ASMS. Our school's emphasis on active approaches to assessment provides authentic experiences that involve the students themselves, their families, industry partners, and school and university staff.

The Central Studies involve students in learning in authentic contexts. Students and teachers work together to determine what students already know, understand and can do and then negotiate an agreed context for learning and mode of demonstration of learning growth.

Demonstration of learning and subsequent assessment of this learning may occur in the community, industry, international student science fairs and exhibitions or work environments other than the classroom, providing the opportunity to present to an authentic audience. It is important that such environments recognise and value the student's involvement in training, work and community responsibilities.

Staff

Staff Support Systems

The ASMS places a high priority on the professional learning of all staff. Essential to establishing and maintaining the strong learning community, staff are supported to work in collaborative ways. Teams are based around working relationships and may include non-teaching staff. All teaching staff are members of a teaching team. Staff report on their professional learning plans, their professional learning activities and progress in achieving their identified PL goals. Regular review meetings are held with professional growth mentors providing support to achieve planned outcomes.

New staff are supported with an extensive Induction program that involves ongoing activities and checkpoints to monitor the effectiveness of the program. Specialised professional learning sessions are scheduled to ensure that new staff are able to develop an understanding of the underpinning principles that drive the teaching and learning approach of the school.

Time is set aside for all staff members to participate in a planned professional learning program each week. The program is planned each term to address identified staff and school needs and to support staff professional growth. Staff members are actively involved in reflecting on their practice in a focused manner.

Central Studies teams work to develop and implement curriculum for year 10 & 11 students. Each team is led by a Leader: Interdisciplinary Curriculum and as a team are responsible for collaboratively writing curriculum and teaching materials, planning teaching approaches, monitoring, assessing and reporting on student learning. Central Studies teams consist of teaching staff representing a range of subjects and at times may include Flinders University staff with expertise related to the Central Study. Regular meeting times are scheduled for the collaborative work of Central Studies teams.

Year 12 teaching teams are subject based and collaborate in planning and assessing student learning. Teachers of year 12 subjects meet regularly as a whole group and in subject teaching teams, ensuring they are aware of SACE requirements and processes and monitor student progress and engagement across year 12 subjects. The Year 12 Student Engagement, Growth & Participation Leader monitors students' progress and works with Year 12 teaching teams.

Performance Development

Each staff member develops their professional learning goals and these form the basis of performance development processes at the ASMS in line with DECD PDP processes. Each staff member reports on the connection between the goals, their PL activities and changes they have been able to make to their practice in order to better meet the learning needs of ASMS students. Staff identify and nominate a professional growth mentor who is able to support them in their professional learning growth. The mentor meets regularly with their mentee to discuss professional learning objectives and identified areas of growth. In addition, Performance Appraisal meetings with the Principal, Deputy or Assistant Principal are also scheduled where a need is identified. Each staff member is entitled to written feedback on their performance and through their teaching team and is able to demonstrate strategies to meet the requirements of their role in the school community.

Staff Roles

Teaching staff are employed as Graduating Teacher, Teacher, Co-ordinator B1, Leader B2, Senior Leader B3 & B4, Deputy Principal and Principal. Teaching staff are involved in collaboratively teaching, developing and reviewing curriculum, monitoring student learning, professional learning program planning, and reflection and evaluation of practice through action research and other evaluation processes. Non-Teaching staff are employed to support student learning and perform administration tasks of the school. Personal Advisory Committee (PAC) provides advice on staff loads and responsibilities in conjunction with Contributive Leadership groups (Strategic Directions, Learning Futures, Learning Design, and Learning Cultures) and Central Studies teams.

To support the ASMS charter to provide professional learning opportunities for teachers and educators across South Australia, staff are provided with opportunities to develop expertise in PL facilitation, and mentoring as well as writing and publishing. For some this may include completion of postgraduate studies offered in conjunction with Flinders University and accredited at Graduate Certificate, Masters and Education Doctorate level. Others may participate in workshops or short courses focused on developing their skill and understanding in a particular aspect of this role. As part of professional learning plans, staff have access to resources to support their involvement in programs of this nature.

At the ASMS, each teacher is seen as a leader. As a member of a collaborative teaching team they are a leader of learning, effectively empowered to make decisions that impact on student learning through their contributions to decisions related to curriculum, timetabling, approaches to teaching, learning, assessment, and school structures that impact on learning. This Contributive Leadership model is evident in teacher role descriptions and linked to the ASMS Strategic Directions, School Improvement Plan and Professional Learning program of the ASMS. Staff involvement in particular leadership activities enables the learning community of the school to learn through their leadership activities and for each to share their insight with other educators.

School Facilities

Buildings and Grounds

The ASMS is a world-class, purpose-built school. Its design serves to inspire those who use and visit it.

Integrated within the campus of Flinders University, south of the city of Adelaide, it comprises a two level building at the Sturt Campus and also has teaching spaces within the adjacent Sturt Building of Flinders University.

The ASMS also shares the use of a library, cafeteria, gymnasium, students services facility, sports fields and recreational spaces at the Sturt Campus and is able to book the extensive range of other facilities such as lecture theatres, rooms and laboratories on a needs basis.

The building design is based on extensive world wide research and analysis of emerging best practice in teaching and learning and is designed to stimulate learning anytime, anyplace and anyhow.

Its floor plan comprises nine learning commons, nine studios, large open circulation break out spaces and range of meeting/ seminar rooms which provides for flexibility and adaptability to cater for the principle elements of the school's charter:

- Provide a reforming environment in the teaching and leaning of Mathematics, Science and associated technologies for students
- Provide professional development for teachers across the state of South Australia.
- Provide learning enhancement opportunities for students in other state schools.
- Play an active role in preservice / inservice training of teachers.

Learning Commons

Each caters for up to fifty students and has an open plan teacher preparation area associated with it. Modular furniture sited in each learning common allows for flexible teaching and learning groupings.

Specialist Facilities

Learning studios – multimedia, mathematics, physical sciences, applied technology (IDEATION Studio), presentation/performance, environmental sciences, life sciences, human performance, for practical and research work are integrated with and are directly accessible from the learning commons.

The ASMS also has teaching spaces within the adjacent Sturt Building of Flinders University.

ICT Facilities

The ASMS is a leader in the use of ICT throughout all aspects of teaching and learning. All staff and students have access to a significant number of ICT facilities utilising the desktop computers provided on site, staff provided Tablet PC's or personal devices through the Flinders University provided wireless network infrastructure or from home. The ASMS provides access to an internet portal for all staff students and parents to provide access to teaching and learning materials and facilitate communication throughout the school community.

Student Facilities

- Outside learning areas
- 24/7 ICT and audio visual systems
- Central common spaces for circulation, social interaction, assemblies, lectures and informal learning spaces.
- Students have access to the university library system which houses the ASMS resource collection.
- Students and staff have access to the university canteen, sporting, leisure and other retail facilities.

Joint Use Agreement

The school has a joint use agreement with Flinders University that provides for ongoing ASMS access to the university's playing fields, libraries, gymnasiums, cafeteria, ICT and other facilities on an occasional use basis.

Staff Facilities

- Staff Room
- Preparation / office areas
- Board / meeting room with an associated kitchen
- Meeting / seminar rooms

Access for Students and Staff with Disabilities

- The building has access ramps for physically disabled students and contains an internal lift for access to the upper level
- The facility provides for a first aid / sick room and a fully scoped special access toilet service facility
- Extensive external ramping
- Braille signage and ground mounted pedestrian access pads
- Recording devices and targeted technology resources (echo pens)
- Modified education plans to support equal access to education resources and assessment
- Capability to support onsite external specialist providers
- Facilitation of applications for provisions for external assessment (SACE)
- 1:1 maths/literacy support sessions
- Onsite psychological support

Environmental Sustainable Development Features

The ASMS building incorporates extensive Environmental Sustainable Development (ESD) features within it, including:

- Computer controlled mixed mode airconditioning services.
- Intelligent high performance lighting complemented by extensive natural lighting through large glazed areas.
- High performance glazing with strategically placed sun screening and electronically controlled blinds.

- Controllable water and waste services.
- Building materials chosen for their high energy efficiency and environmentally friendly ratings.
- The building's computer controlled management systems can be accessed by students and used for educational purposes to understand how its environment is controlled. Many of its services have also been deliberately exposed to complement understanding of its operation.

School Operations

Year Levels

The ASMS is a Year 10 to 12 senior high school.

All Year 10 and 11 students work together on a common program called Central Studies. This gives Year 10 students an opportunity to gain some SACE Stage 1 credits. Year 12 subjects follow the defined SACE curriculum statements and students can meet all of the criteria for their South Australian Certificate of Education and ATAR at the school. Students are also able to negotiate use the ASMS Portfolio Accreditation for Tertiray Entrance (PATE).

Dress

Although there is no ASMS uniform, dress must always be neat and appropriate and must not be offensive to others. Guidelines have been agreed through consultation with students and are distributed to new students.

School Canteen

Students have access to the cafeteria on the adjacent Sturt Campus of the Flinders University and the ASMS has kitchen facilities (microwave, hot water and sink) for student use in the student café area.

Community Involvement

Students have the opportunity to take part in wide range of extra-curricular activities. One of these is the ASMS Service Club where students coordinate a range of fundraising activities to support charities and community organisations.

School Times

Lessons commence at 8.40am and normally conclude at 3.20pm. On Tuesdays the formal student day ends at 1.00pm. Teachers are involved in planned professional learning program every Tuesday afternoon from 2pm to 4.30pm. The school is open from 7.45am on weekdays and remains open until 4.30pm for students to continue their research and learning. The adjacent Sturt Library annexe of the Flinders University is open from 8.30am to 9.00pm Monday to Thursday and 8.30am to 6.00pm on Fridays. Australian Science and Mathematics School students have full access to this facility.

Sport

A variety of sports are on offer for all students at the ASMS. The lunch time sport program includes cricket, ultimate Frisbee and soccer. The ASMS competes in several interschool competitions (after school hours) including table tennis, indoor soccer, netball and basketball.

Community

Flinders University contributes its expertise in teaching and research in science and education to support the continued development, improvement, innovation and reform in science and mathematics education at the ASMS.

The operation of the ASMS involves on-going collaboration between the ASMS and Flinders University, particularly in the following areas:

- Curriculum development through a focus on the exploration and creation of new ways of teaching and learning for science and mathematics by creating an environment for interaction between practising teachers, professional scientists, educators and students within the University and industry.
- Enhanced learning opportunities through the provision of a unique opportunity for students to develop their skills and talents in an environment of innovative and enterprise-oriented science, technology, engineering and mathematics teaching and learning, research and development at the ASMS and the Flinders University.
- Evaluation and quality improvement processes associated with mathematics and science curriculum, teaching and learning at the ASMS.
- Pre-service teacher education and inservice professional development of teachers of science and mathematics in curriculum development, the new sciences, and in associated models of pedagogy.
- Establishment and enhancement of industry and community partnerships that provide authenticity to the learning opportunities within the ASMS.
- Enhancement of the international focus of the ASMS through attracting international student enrolments and engagement of international educators in the schools' professional development programs and in its broader development.

Parent and Community Involvement

- Parents are fully represented on the ASMS Governing Council
- A number also support the conduct of the emerging sporting teams within the school

Feeder Schools

- The ASMS is served from over 50 schools in metropolitan, rural and interstate locations.
- In 2018, 50% of its enrolment came from the public school sector, 42% from Independent and Catholic schools and 7% from overseas, interstate or homeschooled.

Other Local Care and Educational Facilities

- The ASMS has access to facilities within the Flinders University, the Flinders Medical centre complex, the Open Access College, the School of Languages and surrounding "Alliance" schools.
- The ASMS works closely with the Marion Inland and Fleurieu Partnership groups.

Commercial/Industrial and Shopping Facilities

- The ASMS is close to the Marion Shopping Town complex, the shopping and industrial precincts on the South Road Corridor.
- Flinders University services are located through the university

- It is also in close proximity to a range of commercial sites including Tenneco LTD, Science Park and Hills Industries

Other Local Facilities

- City of Marion offices
- Darlington Police head quarters

Local Government Body

- City of Mitcham, 131 Belair Road, Torrens Park

Postal Address:

Australian Science and Mathematics School

Flinders University

Sturt Road

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+61 8 8201 5685

Email: info@asms.sa.edu.au

Website: www.asms.sa.edu.au

Public Transport to the ASMS

Train and Bus Routes to Australian Science and Mathematics School

Train Tonsley Line to Tonsley Station

Bus Specific route numbers can be obtained from www.adelaidemetro.com.au

City to Flinders Uni Marion Access MA 1/2

Aberfoyle Park to Cabra College

City to Happy Valley

West Lakes Shops to Flinders Uni

Sheidow Park to Flinders Uni

Hallett Cove to Flinders Uni

City to Noarlunga Centre

City to Flinders Uni

City to Seaford Rise

City to Chandlers Hill

Blackwood Stn to Marion Shop Cntr