



Australian **Science** and **Mathematics** School

# Context Statement



**Government of South Australia**  
Department for Education



**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 Email address

[info@asms.sa.edu.au](mailto:info@asms.sa.edu.au)

#### Staffing numbers

37.0 Teaching Staff

13.0 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)
2019	361 students with up to 30 of these being international students (years 10, 11, 12)
2020	354 students with up to 30 of these being international students (years 10, 11, 12)
2021	357 students with up to 8 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. Flinders railway station is a 500 metres walk across the University grounds to the school.

## Charter

The ASMS is a government school for year 10-12 students who have an interest in science and mathematics. Our school is not a local school, students apply outlining their interest in science and mathematics, career pathways they are considering and our approaches 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 learner engagement 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 Department for Education school in the state through its programs of professional development. Teachers from across South Australia are invited and encouraged to engage with ASMS staff in professional learning programs.

Teachers from around the state are able to work alongside ASMS staff in the ongoing development of the learning and assessment design. 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 agent for change and enhancement of science and mathematics education for the state of South Australia and also nationally and internationally
- Prepares young people to be creative, critical, informed, responsible and motivated contributors in their community and as global citizens
- Aims to increase participation and success of senior secondary students in science, mathematics and STEM related learning and impact positively on 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, cafeterias, sport and recreational facilities.

As 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 who mentors and guides their development as a self directed learner. Where possible they work together in the Learning Studies program over the three years of the student's enrolment in our school. This arrangement aims to support students in learning how to learn and in managing their learning pathways. Their Learning Studies teacher acts as a mentor and advocate, monitoring and supporting students to achieve their learning goals.

At the ASMS we recognise the importance of the relationship between students, their parents/caregivers and the school. 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 around 380 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 Australian Science and Mathematics School (ASMS) vision is for extraordinary learning: driven by curiosity and challenge, inspiring passion and confidence.

The 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 provides a learning environment that prepares young people with a passion for study in science and mathematics to be creative, critical, informed, responsible and motivated contributors responding to local, national and global issues.

### Learning @ASMS

At the ASMS learning for understanding is supported through:

**Connection.** Ensuring learning has direct meaning and value to the learner by relating new ideas to previous understandings and connecting with and using real-world contexts and contemporary issues of relevance to the learner. Opportunities for thinking outside the boundaries of disciplinary knowledge in an interdisciplinary and collaborative way enable learners to see the relevance of discipline-based knowledge.

**Agency.** Involving the learner in making meaningful decisions about their learning enables personalisation by the learner, not for the learner. Using information about their learning supports students to understand themselves as learners, developing the capacity to self-direct and self-regulate learning identifying learning directions and goals that are personally challenging and encouraging a growth mindset.

**Coherence.** Learning with insight and understanding enables the synthesis, transfer and stretch of new ideas and knowledge. Integrating diverse elements, perspectives and relationships and taking a broad view creates deeper understanding and ultimately enables progression from basic to more advanced concepts building an understanding of big ideas

### Learning Principles

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

- ASMS students strive to use their learning to develop the capabilities and dispositions that equip them for their futures including life, work and study. They are curious and this supports them to persevere and make meaning of their world.
- Students are equipped with the skills to solve problems and challenges using a growth mindset and being able to see and appreciate beauty in challenges.
- Students are able to select, use, synthesise, and apply information critically, thoughtfully, creatively and judiciously depending on the situation.
- Students operate in innovative, ethical ways in a local, national and global context.
- The study in interdisciplinary contexts supports students to make connections and value diversity as well as multiple perspectives.
- They know how to manage their physical, mental and social wellbeing and understand that they are owners and drivers of their own learning.
- Students develop the characteristics of a self-directed learner and are able to transfer their learning between contexts.

- Students communicate in a variety of contexts and to different audiences. They can work independently as well as in teams and understand that effective collaboration requires effort and the use of skills specific to different situations.

## Capabilities

The ASMS actively promotes the development of the ACARA General Capabilities for 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.

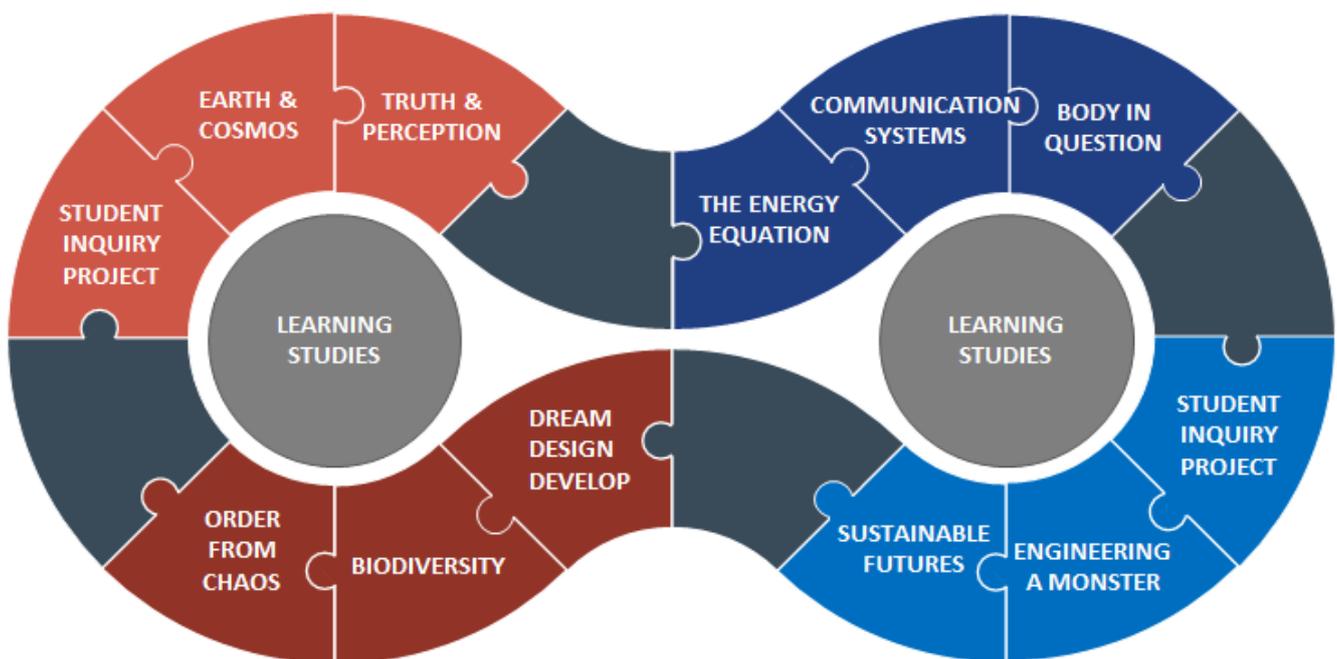
The ASMS certificate of Graduate Capabilities is a statement of the student's capacity to demonstrate competence in:

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

## ASMS Learning Design

### 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 4 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**

In Biodiversity students will explore the origin, development and diversity of life on planet Earth. There is a particular focus on the understanding of these events in relation to geological events that influenced or were influenced by them. Students will explore the structure of healthy ecosystems and explore human impact on them.

Biodiversity is a powerful combination of ecology, biology, geology, geography, genetics and literacy. The teaching program has 5 sessions of 100min each per week. Students will be required to undertake regular homework to consolidate class work.

### ➤ **Truth and Perception**

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 the truth.

### ➤ **Dream, Design & Develop (3D's)**

In this course, students will examine how the world of work is changing dramatically now and in the future. What will work look like for individuals, what skills will be needed, and how might our youth prepare for productive work in a future where they may have many jobs and even multiple careers over a lifetime? A number of experts see the human-machine interface as being a major focus for future jobs, as translators of technology for users and productive ways we can work with machines rather than compete with them. -100 Jobs of the Future, 2019

This course provides students with the opportunity to DREAM up the possible career opportunities afforded to us in the 4th Industrial Revolution, DESIGN a personalised learning program to gain the skills/knowledge/capabilities needed for these occupations, and DEVELOP a company/service/product that will add value to our future communities.

### ➤ **Earth and Cosmos**

This study explores understandings of the sun, moon and stars and their social, spiritual and technological roles. The concepts and content covered include the structure and size of the universe, understandings of time and space, the composition of the planets, the evolution of the Earth's atmosphere, oceans and geological formations and space exploration. Computer simulation and mathematical modelling of physical phenomena is used to enhance students' understandings. Earth and Cosmos is a powerful combination of physics, physiology, psychology, biochemistry, astronomy and literacy.

### ➤ **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.

Body in Question and is a powerful combination of physics, physiology, psychology, immunology, mathematics, language and literacy. The teaching program has 4 sessions of 100min each per week. Students will be required to undertake regular homework to consolidate class work.

### ➤ **Student Inquiry Project**

In the Student Inquiry Project, students undertake a detailed self-directed study in an area of interest. The Student Inquiry Project promotes the development of research, investigation and inquiry skills as well as the skills and abilities connected with organising and managing a sustained independent work effort. The Student Inquiry Project can be related to and build on learning in an existing area of study for the student or can be with a separate declared area of interest. Completing the Student Inquiry Project leads to a SACE subject result in either Community Studies (Stage 1) or Research Project (Stage 2).

### ➤ **Communication Systems**

In this Central Study students study electronic, biochemical, digital and language-based communication. They look at how humans interpret, change, adapt, transform and control communication systems. There is an initial focus on understanding electronics and some associated mathematics through self-paced challenges, leading into the intertextuality of science communication to the biochemistry of communication within organisms. The connection between chemical communications and states of awareness leads to an in-depth study of language based on Macbeth.

### ➤ **Sustainable Futures**

Sustainable Futures explores the myriad of possibilities for 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 a healthy, equitable and sustainable future for all. Sustainable Futures is a powerful combination of mathematics, history, environmental science, biology, chemistry, language and literacy.

### ➤ **Engineering a Monster**

In this course, students take a deep dive into Mary Shelley's 1831 edition of Frankenstein. The main character Victor Frankenstein can be viewed as a brilliant interdisciplinary engineer, using his knowledge of physics, mathematics, philosophy, biochemistry and anatomy to create his 'monster'. The novel exposes an important ethical theme that WE MUST care for and be responsible for the creations that we engineer. Students are given the opportunity derive deep and meaningful connections between this theme and their role of becoming creators in an engineering field of their choice (Mechanical, Electrical, Civil, Architectural, Med/Bio/Chemical, Software/Computer, or Aeronautical Engineering). Students stitch their own engineering creations together in the Ideation Studio, and apply relevant maths along the way. The course culminates with a study of the history surrounding WW2 where we play off the theme of how society engineered the monster of Hitler, the monster of war in general, and even some monstrous technologies. We must be responsible for the 'monsters' that we create...

### ➤ **The Energy Equation**

In The Energy Equation students will engage with a hands-on approach to the exploration of Energy; where we source our energy needs from, the efficiency of these sources and the approaches we use to harness it for our energy needs. Each of these elements is balanced with an exploration of the drivers, benefits and potential drawbacks of these sources.

A focus on the development of critical and creative thinking and ethical understanding will be a highlight of the program as students grapple with the local, national and global implications of decisions made in the pursuit of energy. The Energy Equation is a dynamic combination of Chemistry, Physics, Mathematics, History and English.

### ➤ **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 describing and influencing human 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 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 and predict them.

### ➤ **Learning Studies**

Learning Studies is a curriculum designed to support students in their learning and to develop their attributes as learners. The program ensures that students feel a sense of belonging within the school and are able to develop strong relationships with their Learning Studies teacher and students. Each Learning Studies Group is vertically grouped with up to 20 students from Years 10 to 12 who meet for 40 minutes every day with their teacher. Students work with the same Learning Studies teacher for their whole time at the school where possible. The student/teacher relationship is an essential part of the school's high-quality learning environment and this is founded and developed through the Learning Studies program. Through their expertise and experience, teachers are expected to support and mentor students to plan and achieve their goals as well as act as an advocate for students. The Learning Studies teacher is the first point of contact between school and home and consistently monitors student progress and achievement.

The Learning Studies Program is a central part of the learning programs of the ASMS. The following are a key focus of the program

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- Personal integration into the school life of the ASMS
- Curriculum focus – Study strategies and personal organisation, being a self-directed learner, Growth mindset, Neuroscience of learning, Pathways, and being a global citizen among other focus areas
- The development of a Personal Learning Plan (PLP) during Year 10 which is a compulsory element of the SACE.
- Construction of Growth Reflections which provide evidence of the students' learning and evidence for learning outcomes.
- Engagement with a program of activities to promote student well-being and learner resilience
- Support for pathway planning and making transitions beyond schooling
- The preparation and presentation of Learning Conversations
- The co-construction of a graduate statement focusing on growth and achievement against capabilities and learning outcomes.

Learning conversations are an integral part of the ASMS learning program. It is an opportunity for students to reflect on their learning journey and share this with their parents and teacher. These occur twice a year and are a compulsory part of the school reporting process.

## **SACE Accreditation**

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

<b>2021</b>	Research Practices (10 Credits St1)
Mathematics (20 Credits St1)	Personal Learning Plans (10 Credits)
Scientific Studies (40 Credits St1)	Health (10 credits St1)
English (20 Credits St1)	Research Project (10 Credits St2)

## **Enrichment Opportunities**

### **Passion Project**

100 minutes of time is specifically set aside on Thursday afternoon for students to follow their passions, create and extend their learning via opportunities for serious play either individually or through collaboration that enriches their opportunities beyond the curriculum. The allocated time aims to allow the students to explore through curiosity and connect with the community, Flinders University staff and industry organisations to enhance their learning. Through sharing their passions, young people drive their projects while being supported by mentors in the selected area. Current projects include:

- Aviation Studies, Computing/Coding/Software play, Music Development and Performance, Mathematical thinking, literacy projects, ideation, sports and recreation, art, various areas of science exploration and personal growth.

## **Using evidence to demonstrate Learning**

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

Assessment is ongoing and regular to provide feedback that assists, extends and improves learning. Students are encouraged to co-design learning and assessment within the broader construct of the curriculum so that it is personalised and connected to their passions. 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. Reflecting on this feedback and actively identifying how it will be incorporated into future learning strategies is a valued part of learning and is explicitly included in all aspects of the learning journey. 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. Our reporting places value on the development of the General Capabilities and this is foreshadowed not only in our reporting processes but in all aspects of learning.

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.

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## Student Wellbeing for Learning

At the ASMS we know that extraordinary learning cannot happen without recognition of the importance of the relationship between students, their parents/caregivers and the school and the essential role that this plays in each student's wellbeing. This partnership is an integral factor in creating a positive learning culture and experience for students at the ASMS. It is a cornerstone of how students are empowered to develop strategies that support their wellbeing. These relationships are protective and along with connection, are key to supporting the wellbeing of all learners. As a school we are committed to working in partnership with students and their families to build a safe, inclusive learning environment that is safe and accepting of all, supporting each to be curious and challenged as they follow their passions and build confidence as learners.

Our focus as a school is on learning programs that develop a growth mindset, build resilience and motivation for learning, and develop a student's General Capabilities to the ASMS graduate level. Wellbeing for learning at the ASMS is underpinned by our commitment to students having agency in their learning through the development of self-awareness and self-directedness in both their learning and their out of school lives. An important part of enacting this is ensuring students take their learning personally and have a voice in the design of their learning, having the power and autonomy to drive their own learning journey.

The ASMS school values, underpinned by the [Department for Education Learner Wellbeing Framework](#), guide our culture and our wellbeing for learning focus. Students, staff and families work collaboratively to ensure that pathways are personalised and opportunities maximised for success for each student.

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## Staff

### Staff Support Systems

The ASMS places a high priority on the professional learning and development of all staff. Essential to establishing and maintaining the strong professional and learning community, all teaching staff are members of a teaching team and staff are supported to work in collaborative ways. New staff are supported with an extensive induction program that involves ongoing mentoring, 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 the planned professional learning program each week. The program is planned 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. Staff are supported by a professional growth mentor who they meet with each term to plan and reflect on their professional learning activities and progress in achieving their identified PL goals. Regular review meetings held with professional growth mentors providing support to achieve planned outcomes.

Central Studies teaching teams work to develop and implement curriculum for Year 10 & 11 students. Each team is led by a Leader: Learning Design, and as a team are responsible for learning design as they collaboratively write curriculum and teaching materials, plan teaching approaches, monitor, assess and report on student learning. Central Studies teams consist of teaching staff representing a range of disciplines, expertise and experience 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 Leader Science, Leader Mathematics and Leader English monitors students' progress and works with Year 12 teaching teams to support development of SACE Learning and Assessment Plans and to support teachers in intervention and special provisions for students as required.

### Performance Development

In conjunction with the professional learning program, each staff member develops their professional learning goals, and these form the basis of performance development processes at the ASMS in line with DfE 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 are supported by a professional growth mentor who is able to assist 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 through their teaching team against demonstrated 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

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advice on staff loads and responsibilities in conjunction with Contributive Leadership groups (Strategic Directions, Future of Learning, Learning Design, and Culture for Learning) 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, mentoring and coaching 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 financial 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.

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## **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, 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 ten learning commons, ten studios, large open circulation break out spaces and range of meeting/seminar rooms which provides for flexibility and adaptability to cater for the principal elements of the school's charter:

- Provide a reforming environment in the teaching and learning of Mathematics, Science, STEM 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**

Our classrooms are open common areas each catering for up to fifty students and has an open plan teacher preparation area directly adjoining this space. 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 suitable 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 uses 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 Laptop 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 and informal learning spaces.

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- Students have access to the university library system which houses the ASMS resource collection.
  - Students and staff have access to the university cafeteria, 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
- 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 special provisions for external assessment (SACE)
- 1:1 maths/literacy support sessions
- Onsite psychological support
- The facility provides for a first aid / sick room and a fully scoped special access toilet service facility

### **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.

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## **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 in addition to learning associated with the Australian Curriculum. Year 12 subjects follow the defined South Australian Certificate of Education (SACE) curriculum statements and students can meet all of the criteria for their SACE and ATAR at the school. Students are also able to negotiate use the ASMS Portfolio Accreditation for Tertiary Entrance (PATE) as an alternative pathway into university level studies. Students are also supported by the ASMS to use the Flinders University Assessment Centre to support their application to tertiary study.

### **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 Cafeteria**

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. In addition ASMS students are able to engage with programs:

- 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.

### **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. Doors to the adjacent Sturt Library annexe of the Flinders University open automatically from 8.00am to 5.00pm Monday to Friday (excluding some public holidays) and all staff and students have access during these times. Australian Science and Mathematics School students have full access to this facility. Sturt Library is now open 24/7 (for University staff and students and ASMS staff – an email to Security allows access to be added to their ID card) Sturt library is staffed by Flinders University between 9.00 am and 5.00 pm Monday to Friday (excluding public holidays). ASMS staff are on site in the library currently on Monday, Wednesday and Thursdays.

### **Sport**

A variety of sports are on offer for all students at the ASMS. The lunch time sport program embraces a variety of sports including but not limited to cricket, soccer, volleyball, touch football, ultimate frisbee, basketball and

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football. The ASMS competes in several interschool competitions (after school hours) including indoor soccer, netball and basketball, and participates in Knock-Out competitions and athletics events throughout the year.

### **ASMS Partnership with Flinders University**

Flinders University contributes its expertise in teaching and research in science and education to support the continued development, improvement, innovation and learner engagement 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 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, entrepreneurialism and in associated models of pedagogy.

### **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
- Parents host information sessions for other parents to support them in understanding the culture of the school.

### **Feeder Schools**

- The ASMS is served from over 50 schools in metropolitan, rural and interstate locations.
- In 2020, 55% of its enrolment came from the public-school sector, 37% from Independent and Catholic schools and 8% 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.

### **Commercial/Industrial and Shopping Facilities**

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

**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  
 BEDFORD PARK SA 5042

**Telephone:**

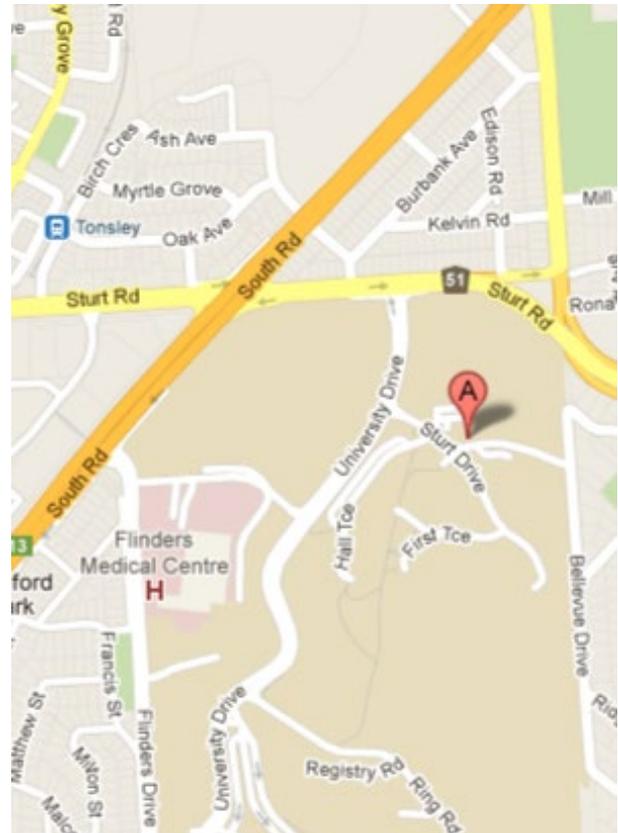
+61 8 8201 5686

**Facsimile:**

+61 8 8201 5685

**Email:** [info@asms.sa.edu.au](mailto:info@asms.sa.edu.au)

**Website:** [www.asms.sa.edu.au](http://www.asms.sa.edu.au)



**Public Transport to the ASMS: Train and Bus Routes**

Train Tonsley Line to Flinders Station

Bus Specific route numbers can be obtained from [www.adelaidemetro.com.au](http://www.adelaidemetro.com.au)

City to Flinders University

Blackwood Station to Marion Shopping Center

Aberfoyle Park to Cabra College

Marion Access MA 1/2

City to Happy Valley

West Lakes Shops to Flinders University

Sheidow Park to Flinders University

Hallett Cove to Flinders University

City to Noarlunga Centre

City to Flinders University

City to Seaford Rise

City to Chandlers Hill