

2027 School PROSPECTUS





Pathways to HIGHER LEARNING



Message from the Vice Chancellor of Monash University

For students who have a passion for unlocking the mysteries of the world around us and want to prepare to address the global challenges of our age, John Monash Science School offers a rare and valuable opportunity for talented students. Monash University is proud of the role we play in helping the school nurture the next generation of great thinkers and problem solvers.

Monash has a deep and multifaceted relationship with John Monash Science School, offering its students the chance to interact with one of the world's leading research universities. Our Faculties of Science, Engineering, Biomedical Science, IT, Education and Pharmaceutical Science in particular, work closely with the school to develop classroom content of the highest international quality, as well as opportunities for collaboration and immersion.

This university is surrounded by one of Australia's largest concentrations of scientific expertise and infrastructure and is at the forefront of knowledge creation in numerous STEM fields. John Monash Science School encourages students to immerse themselves in STEM, provides students with a first-class grounding in related disciplines, a seamless pathway to higher education and a host of exciting career prospects.

On behalf of Monash University, it is my pleasure to welcome future students, parents, teachers and support staff of John Monash Science School into the Monash community.

Professor Sharon Pickering

PRESIDENT AND VICE-CHANCELLOR
MONASH UNIVERSITY, MELBOURNE

Building THE FUTURE

Message from the Regional Director, Department of Education and Training

John Monash Science School is Victoria's first specialist secondary school with a mission to build scientific minds of the future focussed on Science, Mathematics, established and emerging technologies. The school was conceived through a unique partnership between the Department of Education and Monash University to offer a challenging learning environment for Years 10-12 students with access to the resources of a global university and the International Science School Network.

In partnership with Monash University, through innovative curriculum and expanding outreach programs the school succeeds in building student interest and career aspiration in science, mathematics and technology to benefit Victoria's economic, environmental and social future.

Opening in 2010 the school now sees students graduate with outstanding VCE results and well on the path to academic and social success, particularly for female students traditionally underrepresented in these fields now taking on the challenges in the safe yet challenging John Monash Science School environment.



Another key mission of the school is ensuring equity in access to regional and remote students through expert and highly valued outreach teaching and learning accessed virtually and immersion in programs at the school. The school ensures where there is passion in science and mathematics opportunities will be provided.

North East Victoria Region is proud to be part of and celebrate John Monash Science School. Along with the excellent staff I welcome and encourage all Victorian students with a drive and interest for pursuing a career in science and mathematics to join this world class school.

Karen Money

REGIONAL DIRECTOR - NORTH EASTERN VICTORIA REGION
DEPARTMENT OF EDUCATION AND TRAINING



IS SCIENCE PART OF YOUR FUTURE?



Message from the Principal of JMSS Andrew Chisholm

Welcome to all prospective students and parents to this prospectus for entry into John Monash Science School (JMSS) in 2027. I am hoping that this document will give an informative overview of Victoria's first specialist school in Sciences, Mathematics and Associated Technologies and will supplement other information available on our website, presented at our information night and seen first-hand on school tours.

“If you are passionate about the sciences and see yourself as someone who wants to actively get involved in improving the lives of others then this is the school for you.”

This school was envisioned by Monash University academics in the Science Faculty in the early 2000's who wanted to take talented students identified for their interest and passion in science and expose them to new and emerging scientific disciplines whilst simultaneously developing the skills and literacies that will enable them to build successful careers in the sciences.

Over the 15 years since this school's establishment in 2010, students have been challenged, nurtured and motivated to push the boundaries of their own learning, whilst also being encouraged to grab hold of the opportunities that are available here to collaborate and communicate with like minded students both here and overseas. The curriculum taught here has been influenced by strong and sustained collaborative partnerships with Monash University. We teach units in pharmaceutical science, biotechnology, mathematical modelling, data science, game development, engineering, astrophysics, environmental science, biomedicine, spectroscopy and medical imaging and many more. All our year 10 students also complete an extended experimental investigation which, depending on the topic they choose, could mean they are mentored by Monash staff and post graduate students. These investigations can be continued into later years and may form the basis of an investigation that is presented at science fairs interstate and internationally.

“Our Year 12 cohort of 2025 saw 65% of students receive an ATAR over 90 and 98% of graduate students moving into STEM based degrees in University.”

The pedagogy employed at JMSS is deliberately different from most schools. We have developed models of instruction where teachers work in teams to build and deliver curriculum that will allow for extension, acceleration and enhancement and importantly to cater for each student's individual abilities. The success of these pedagogies has seen JMSS achieve consistently excellent academic results and our Year 12 cohort of 2025 saw 65% of students receive an ATAR over 90 and 98% of graduate students moving into STEM based degrees in University.

We want our students to also develop the capabilities that will allow them to be successful in a rapidly changing world. They need to be strong communicators, flexible thinkers, active listeners, good team players, responsible decision makers and capable problem solvers that can confidently address the issues of tomorrow. To do this we facilitate a range of other opportunities including interest clubs, over 40 co-curricular options, diverse sporting opportunities as well as debating, an extensive music program, leadership development, science olympiads and many other options that contribute to developing the whole student. We also adhere to the tenets of the UNESCO four pillars of education, and these holistic approaches influence the ways in which the school operates daily.

So, if you are passionate about the sciences and see yourself as someone who wants to actively get involved in improving the lives of others then this is the school for you. I would like to wish all of you the best of luck in the application process for entry and I will look forward to welcoming all of our new students and parents into the JMSS community in 2027.

Andrew Chisholm

PRINCIPAL
JOHN MONASH SCIENCE SCHOOL



Designated Purpose Setting for SCIENCE EDUCATION

John Monash Science School (JMSS) opened its doors to students in 2010 as Victoria's first Specialist Science School. Recently the Department of Education changed the classification of schools and as such JMSS is now known as a Designated Purpose School for high ability students.

JMSS caters for students in Year 10 through to Year 12. Our students undertake a three-year Victorian Certificate of Education (VCE) program rich in the study of science and mathematics-based subjects.

Our unique position on Monash University's Clayton campus in Melbourne gives us access to nationally and internationally recognised science and education research academics. The school's innovative curriculum is co-written with Monash University academics and researchers, ensuring our curriculum hits the cutting edge of contemporary knowledge and practice.

John Monash Science School is able to offer a unique education unequalled elsewhere.

Monash academic liaison staff in Physics, Chemistry, Pharmaceutical Science, Biology, Geoscience, Mathematics, Geography, Biomedicine and Engineering have all played an important role in developing curriculum and emerging science subjects such as Materials Engineering, Biotechnology, Pharmaceuticals and Astrophysics to name a few. This broad range of subjects leads to multiple pathways through and beyond the VCE.

The opportunities presented to our students on a daily basis are unique, challenging and motivating. Our students are able to hear from leaders in their fields, work alongside them, become familiar with their research and one day will take a leading role in similar fields.

All students complete an Extended Experimental Investigation (EEI) in Year 10 on a topic of their choice. Some students are able to work with academics in a mentoring capacity on projects, and some students are welcomed into University Faculties for Work Experience placements.

Working with like-minded peers, expert teachers, and taking advantage of world-class facilities, students are encouraged to perform to the highest academic level in order to achieve their goals.

Some students access subjects above their age academic level, and many students study a university enhancement subject, taking first-year university science subjects alongside traditional Year 12 subjects.



Teaching for EFFECTIVE LEARNING

The development of core learning skills and attributes is seen as the foundation of academic success at John Monash Science School. These are woven into the fabric of each learning sequence at the school, as we want our students to solve problems, collaborate in teams, undertake independent inquiry, think and act ethically, and make strategic use of high-end technologies to be effective contributors in their careers beyond secondary school.

Gaining these skills will give students at John Monash Science School an advantage in any further studies they choose to undertake.

The school uses a range of techniques in the delivery of the curriculum to:

- develop problem-solving, critical thinking skills, and practical laboratory skills;
- promote the transfer of concepts to new problems and questions in a range of disciplines.
- teach students how to learn and build self-directed learning skills; and
- develop student ownership of their learning and enhance student interest in the subject matter.

Our teachers work closely together to plan learning

JMSS is proud of its team-based approach to student learning. Classes of up to 50 students benefit from having two team teachers in the room to explore knowledge from differing fields using a variety of teaching approaches.

experiences for students, and to monitor their progress. They adjust their approaches to support students in need of extra assistance, and to challenge those ready to take the next steps in their learning journeys. Students are also encouraged to work within teams, both large and small, using team members as resources for their learning.

The school's IT infrastructure is part of the extensive Monash IT network, giving our students and teachers access to resources developed in partnership with the university, as well as world-wide resources via high-speed internet throughout the building and across the university campus. Students use a range of technologies in each of their classes to access the latest resources, collaborate, code and present.



Breadth in CURRICULUM

While the school has a strong focus on STEM based subjects, the curriculum has options to develop skills and capacities across all fields. In Year 10 all students study:

- English;
- Mathematics;
- Science (Core Sciences including Physics, Chemistry, Biology and Geology);
- Emerging Science elective units (unique to JMSS) in fields such as Engineering, Pharmaceutical Science, Astrophysics and Biotechnology (just to name a few).
- Issues Studies (the interface between Geography, Ethics, History, Politics and the Sciences);
- Data Science (including an introduction to coding);
- LOTE - French & Japanese. We also facilitate 10 other LOTE offerings
- Physical Education

Co-Curricular PROGRAM

Our Co-Curricular Program is a valued program that offers our students a rich and diverse range of activities that open up new opportunities and experiences away from academic study. It offers students the chance to work in teams, learn new skills and develop leadership. It is a key part of the Year 10 and 11 program and helps us to develop our students holistically.

A range of activities are offered such as Sport, Dance, Drama, Drawing, Computer Programming, Chess, Bollywood, Robotics, Community Service, Photography, Music Composition, Knitting & Philosophy.

Little Scientists, Mini Mathematicians and Spike Robotics also run at this time. This is where our JMSS students facilitate onsite at JMSS, science and run other maths with Primary School students.

Students may also join one of the many music ensembles which practise and perform at various events and in competitions. Instrumental lessons are available throughout the week.

JMSS DIPLOMA

The JMSS Diploma is awarded at Year 12 graduation, and provides recognition for the achievements and skill development of our students outside the classroom including Leadership, Community Service, Sport, Performing Arts, Competitions and the Co-curricular Program over their time at JMSS.

The JMSS Diploma reflects a student's development in leadership, sport, music and the other activities, as well as the contribution to JMSS and the wider community.

Leading SCIENTISTS

JMSS students have been fortunate to have had access to leading scientists, current researchers, and Nobel Prize winners such as Elizabeth Blackburn, Peter Doherty, Dan Shechtman and Brian Schmidt, who have all spoken at the school.

Guest speakers have included climate advocate and Australian of the Year, Tim Flannery, renowned Australian scientists Suzanne Cory, Sir Gustav Nossal and a number of high profile STEM researchers such as Dr Linden Ashcroft, Professor Ros Gleadow, Professor Rachel Webster, Dr Duane Hamacher, Professor Muneera Bano and Professor Bronwyn Fox.

An abundance of OPPORTUNITIES

Students will be able to participate in regional and state-wide sport days and other competitive ventures during school hours. Students have the opportunity to participate in many field trips and camps, as well as student interest clubs such as Maths Club, Supercomputing Club and Chess competitions. Robocup competitions, Computer Hackathons, Olympiads, Debating, Guest Speaker Events, 3D printing, Interact club, Formula 1, Philosophy club, Drama and Musical Performances (music ensembles and bands) are all available.

Camps and EXCURSIONS

Camps and excursions are an integral part of the curriculum, consolidating and enriching learning experiences. Camps, excursions and field trips include:

- New Year 10 students induction camp at Monash University Residential Halls.
- Year 12 study camp at Lord Somers;
- Year 11 Geography and Environmental Science, and Year 12 Geography and Environmental Science field trips to different regions of Victoria;
- Reef and Rainforest Science Trip available to Year 11 students around the Cairns region in Far North Queensland. The trip involves students conducting research at many locations throughout the Great Barrier Reef, Daintree Rainforest and Atherton Tablelands.

There are also single day immersions run at Monash in Science, Biomedicine, Pharmacy and Pharmaceutical Science and Engineering.

Index of AVAILABLE SUBJECTS

ENGLISH

Year 10 English

	Units			
English	1	2	3	4
English Literature	1	2	3	4
English Language	1	2	3	4
English as an Additional Language (EAL)	1	2	3	4

MATHEMATICS

Year 10 Mathematics

	Units			
VCE Mathematical Methods	1	2	3	4
VCE Specialist Mathematics	1	2	3	4
VCE General Mathematics			3	4
University Extension Mathematics				

SCIENCE

Year 10 Science

	Units			
VCE Biology	1	2	3	4
VCE Chemistry	1	2	3	4
VCE Physics	1	2	3	4
VCE Psychology	1	2	3	4
VCE Environmental Science	1	2	3	4
VCE Maths and Computational Physics	1	2		
VCE Extended Investigation			3	4
Various University Extension subjects				

ELECTIVE SCIENCES

Disease, Disorders and Scientific Discoveries

Aquatic Fieldwork Science

Biotechnology

Pharmaceutical Science

Analytical Spectroscopy

Microbiology

Terraforming Mars

Materials Science and Engineering

Tiny Village Design

Medical Physics

Nature and Beauty of Mathematics

Astrophysics

TECHNOLOGY

Introduction to Games Programming and Data Science

Programming for Simulations and Machine Learning

VCE Computing	1	2		
VCE Algorithmics (HESS)			3	4

HUMANITIES

Year 10 Issues Studies

	Units			
VCE Economics	1	2	3	4
VCE History	1	2	3	4
VCE Geography	1	2	3	4
VCE Politics	1	2	3	4

PERSONAL DEVELOPMENT

Health Education

Year 10 Physical Education

LANGUAGES (Face to face at JMSS)

French

Japanese

MUSIC

Voice and Choir	Strings
Guitar	Brass
Instrumental Music	Woodwind
Piano	Percussion
Orchestra	Stage Band

CO-CURRICULAR PROGRAM

Robotics and Emerging Technologies	Digital Art
Bollywood	Photography
Minecraft Engineering	Debating
Personal Fitness	Reading
Cells to Systems	Origami
Brain Bee	Drama Sports
Little Scientists	Drawing and Painting
Mini Mathematicians	Music Composition and Songwriting
Lego Robotics	Tabletop Games and Board Games
Knitting and Philosophy	Chess
Monash Sports	



Global PERSPECTIVES & International COLLABORATIONS

Our partnerships with several international specialist science schools enable our students to collaborate, share research and build friendships with equally passionate students across the globe through exchanges and science fairs. JMSS is an Executive Member of the International Science Schools Network (ISSN). Opportunities include:

- International Science Olympiads, International Young Physicists Tournament, Maths Olympiads, and conferences such as “Water is Life” in the Netherlands in 2016, and Tokyo in 2018.
- Annual International Student Science Fair hosted by JMSS in December 2015, Singapore in 2016, Korea in 2017, Chicago, USA in 2018, Singapore in 2019, Thailand 2020, China 2021, USA in 2022, UK in 2024, Thailand in 2025 and Adelaide in 2026.
- International Competitions in Maths and Science. JMSS had students selected in the Australian Science Olympiad teams for the last eight years
- In 2026 we have students attending a range of events, including:
 - International Astronomy and Astrophysics Olympiad in Vietnam
 - International Young Physicist Tournament in Switzerland
 - The Japan Super Science Fair in Kyoto Japan.
 - Singapore International Mathematical Modelling Competition



Student EMPOWERMENT

Central to all of the work at John Monash Science School is our belief that quality interpersonal relationships are essential if outstanding learning outcomes are to be achieved. We foster these relationships through our House Structure. The four Houses, named after prominent Australian scientists Peter Doherty, Elizabeth Blackburn, Fiona Wood and Tim Flannery, allow us to foster both school spirit, pride, and connectedness between all members of our community.

Each house has seven mentor groups and all students are allocated to a Mentor Group. These groups are cross age and each student is also allocated a peer buddy to assist them transitioning to JMSS.

Each student also has a Teacher-Mentor who remains with them throughout their time at JMSS, guiding and advising them and supporting their growth and development throughout their journey with us.

Various events such as swimming and athletics carnivals, Corkill Cup, Harmony Day, Battle of the Bands and Personal Development Day provide a healthy source of competition and enjoyment for all members of our community.

We believe strongly in the ongoing development of leadership capacity in our students.

The school greatly encourages student voice and agency and has two platforms for this to re-enacted; student Parliament and the Town Hall.

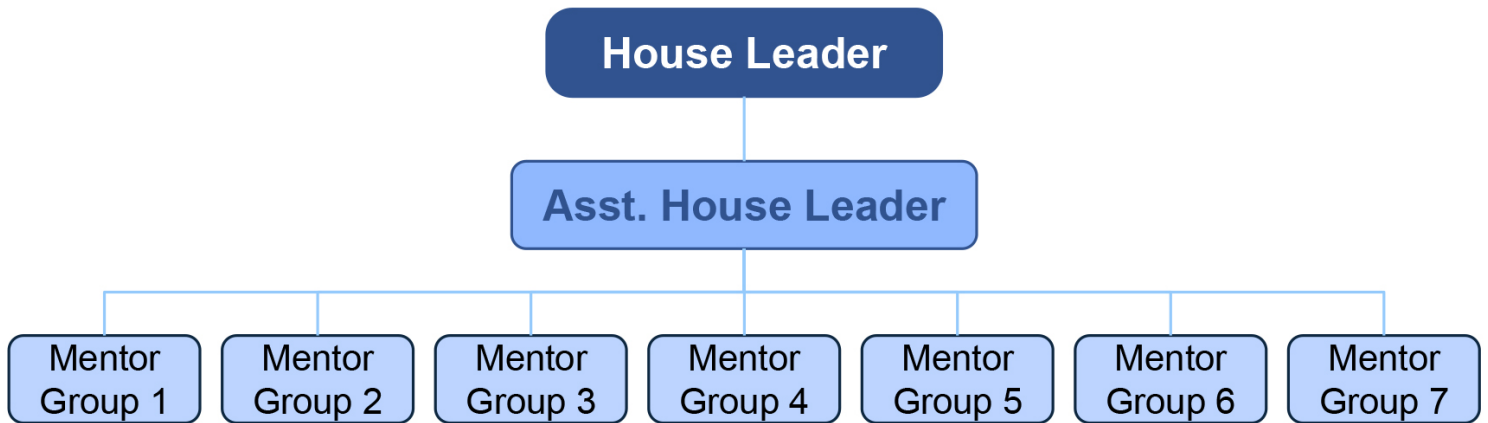
Student Parliament is for elected members of the student body to vote and pass motions regarding how the school functions.

The Town Hall is a mixture of elected and self-nominated students and allows clubs and interest groups appropriate support to generate ideas and plan events.

Our school works hard to ensure all students make a quick and effective transition into John Monash Science School. We begin each year with an Induction Program for Year 10 students, designed to introduce them to learning the JMSS way, as well as to the many new friends they will make. This is an important step in the learning journey of students making the challenging transition from previous familiar surroundings. We also provide a thoughtful and structured induction program for our new Year 11 students.

Our students and staff have created an aspirational yet welcoming, safe and supportive community at our school.





Mentor Groups

- Meet four days per week (15 min)
- House assemblies
- Vertical age grouping (Year 10, 11, 12)
- Mentor teacher stays with Mentor Group

- Four houses named after prominent Australian scientists
- Under guidance of House Leader





Outstanding CONTEMPORARY FACILITIES

John Monash Science School is a state-of-the-art educational facility, designed to advance each student's academic ability in STEM.

The school has been designed to facilitate a range of teaching approaches, with flexible group sizes and maximum access to contemporary learning technologies. These outstanding facilities help us achieve the best learning outcomes for students in the 21st century. Rather than traditional classrooms, our school has open-plan learning spaces for small or large groups up to 50 students with two teachers working in partnership.

Our science laboratories are spacious, flexibly designed and ICT-rich, allowing small-group or whole-class problem solving, individual or group research, direct instruction and collaborative skill development. Students have wireless network access throughout the building, including laboratories. Students use a combination of digital devices to research, problem-solve, organise, document, analyse, present and create digital objects as well as accessing references and resources from Monash University and beyond.

There are also landscaped outdoor areas, a basketball court, an amphitheatre, outdoor kitchen with microwaves, and a fully-equipped cafeteria. Students also benefit from close access to Monash University for both physical and digital resources.

Monash University has provided the site for the school building in the Science, Technology, Research and Innovation Precinct (STRIP) at the Clayton campus in Melbourne's south-east. John Monash Science School is on the corner of Wellington Road and Dandenong Road/Princes Highway. To ensure student safety, JMSS has its own drop-off/pick-up zone. Please note: due to limited access, there is no parking for visitors.

The University is well-served by public transport, with regular buses from each of Ormond, Huntingdale, Clayton and Blackburn railway stations. JMSS students are also able to travel to and from other Monash University campuses free of charge on the Monash shuttle buses which leave each of the Caulfield and Peninsula campuses at regular intervals during university semesters.







General INFORMATION

Admission

Entrance to John Monash Science School will be based on students' aptitude in and passion for science, mathematics and associated technologies. Potential students undertake an application process including written assessment tasks, practical activities and an interview where students demonstrate their suitability to make the best of the school's learning opportunities.

JMSS accepts 200 students into Year 10 each year, and approximately 30 students in Year 11. The school does not allow entry at Year 12. Prospective students can register for the selection process via our website www.jmss.vic.edu.au.

Enrolment into the school is limited to a maximum number of students from each school, as with select-entry schools. The school attracts students from all educational sectors, as well as regional and rural locations.

Is there a full choice of subjects through to VCE?

Although JMSS is Victoria's first specialist school for the sciences, mathematics and associated technologies, it offers a broad curriculum that satisfies the Victorian Curriculum (VicCurric) and Victorian Certificate of Education (VCE) requirements and assessments.

What are average class sizes?

What is the gender balance?

Most subjects are team-taught, with two classes (50 students) and two teachers working together. This innovative approach is supported by research and continues to be the focus of our own development in this field. It allows students to work effectively in small teams, and teachers to vary approaches to ensure every student is able to learn at the point of need.

Our experience has shown that both genders are attracted to the school in equal numbers, with the outstanding facilities and curriculum opportunities cited as the key reasons. There is also genuine gender balance among the staff.

Who is John Monash?

John Monash Science School is named to commemorate the legacy of a famous and distinguished Australian, General Sir John Monash. Sir John Monash is best known for his outstanding military service during World War One, but his impact on Victoria was profound in the civic, education and engineering spheres. He is also remembered in the names of Monash University and the City of Monash.

Textbooks and Technology

Students are required to bring a laptop to school. The laptop type is not prescribed but needs to have minimum specifications that can be found on a dedicated site at JMSS.

Textbook, apps and eBook lists will be provided to parents before the start of each school year. Students will be able to borrow both eBooks and print resources from the school's library.

Will the students be free to mingle with Monash University students?

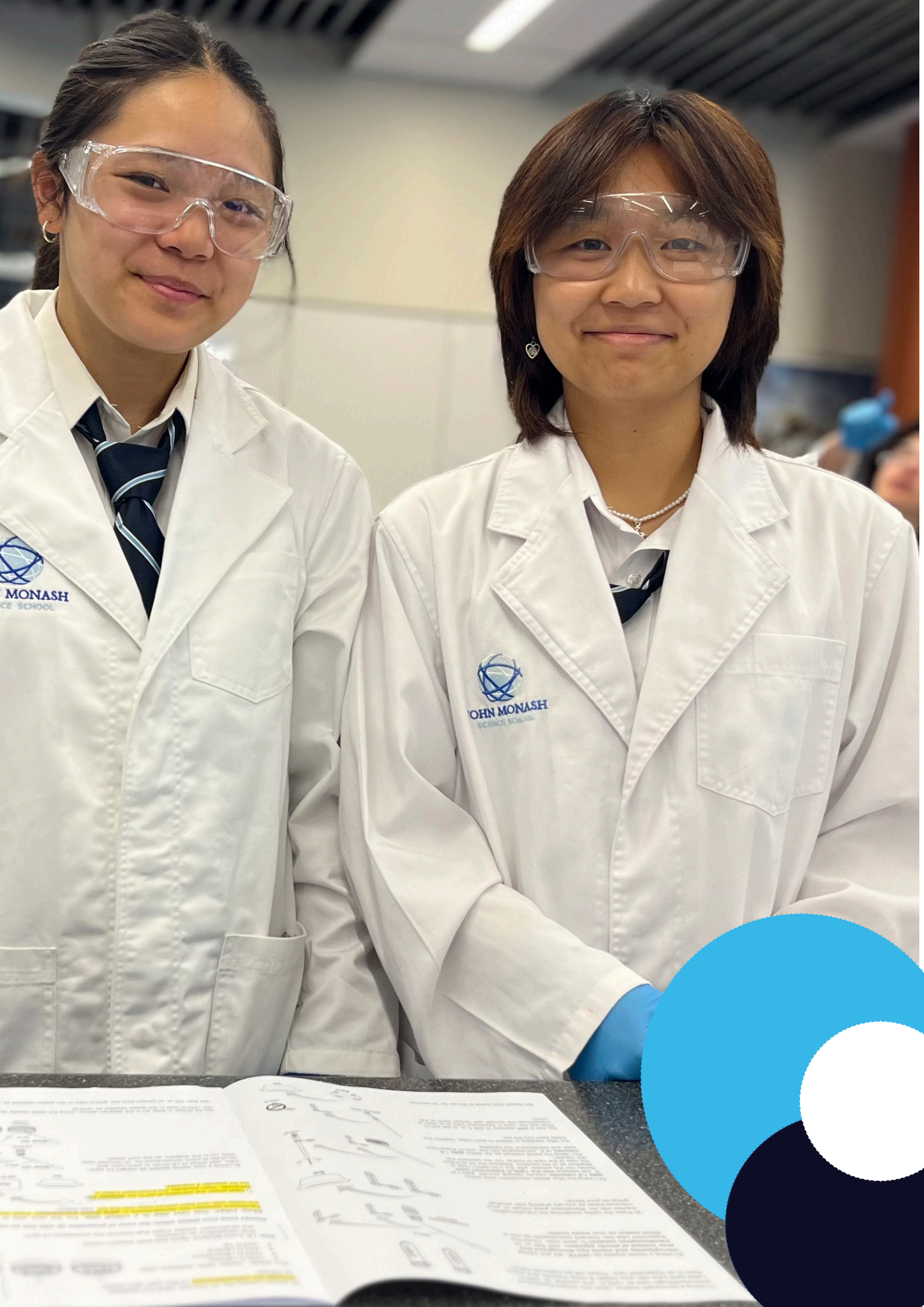
No. John Monash Science School is a separate facility, located on the grounds of Monash University's Clayton Campus. Students remain within the school grounds for the whole day except for supervised lectures and workshops on the university campus.

Students will undertake workshops, immersion days and may even have a mentor in the university that will give them access to a variety of University facilities.

Students may also take advantage of the library, sporting, cultural and other extra-curricular opportunities presented by the university outside school hours.

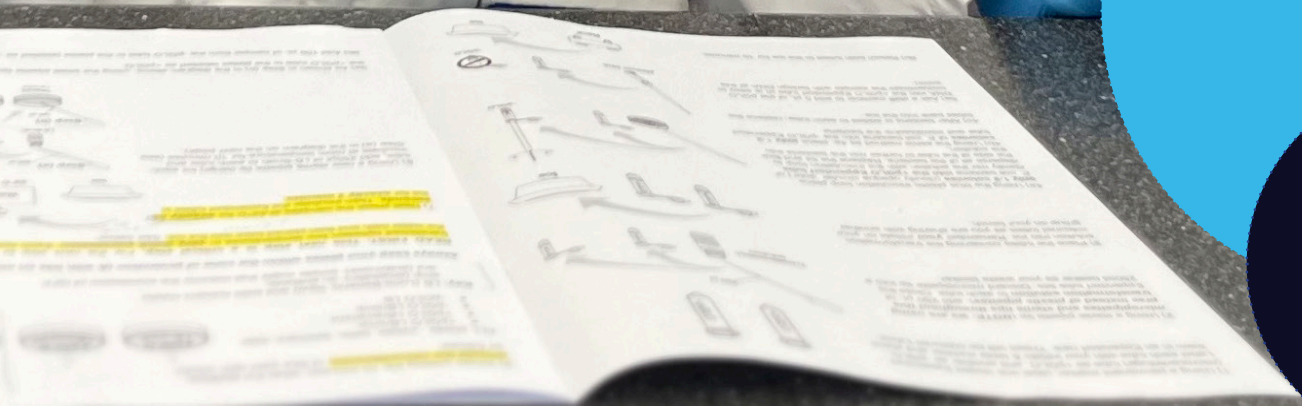
School Hours

Students are required at school from 8.20 am. Students are dismissed at 3:20 pm on Mondays, Tuesdays, Thursdays and Fridays and 3.30 pm on Wednesdays.



MONASH
SCIENCE SCHOOL

JOHN MONASH
SCIENCE SCHOOL



JMSS

COURSE STRUCTURE

Year 10	
English	
Core Maths or 1/2 Methods*	
Core Science	
Issues Studies	
PE or LOTE**	
Elective	Elective
Data Sci.	Elective

* Students wishing to complete Units 1/2 Methods in Year 10 must sit a readiness test. Note that *Mathematica* is used in place of CAS calculators.

** Students studying Japanese or French at JMSS, and students studying LOTE by distance education (VSL online) do not complete PE.

Year 12
Subject from English group
Maths [‡]
Subject 3
Subject 4
Subject 5

Students study five (5) subjects in Year 12.

‡ Students who have completed Units 3/4 Methods in Year 11 may not have a maths subject in Year 12. Note that there is very limited space General Maths and this is only available to students who required extra support in their Maths studies. It usually replaces Mathematical Methods.

Some students complete a university extension subject in Year 12.

Year 11
Subject from English group
1/2 or 3/4 Methods [†]
Science Subject 1 ^{††}
Science Subject 2 ^{††}
Breadth Subject ^{†††}
Sixth subject

[†] A General Mathematics pathway is not typically available at Year 11.

^{††} Students complete two of Chemistry, Biology and Physics.

^{†††} All Year 11 students complete a breadth subject. These provide skills complementary to those found in most Science and Maths subjects.

Note: Students may have the opportunity to complete one accelerated (Unit 3/4) subject in Year 11. Students will be considered for two accelerated studies in exceptional circumstances only.

FAQ'S

A detailed list of Frequently Asked Questions (FAQ's) are located on our website

<https://jmss.vic.edu.au/admissions/faqs/>

Uniform

School uniform is compulsory, comprising a Summer, Winter and Sport uniform. Uniform information is given at enrolment, and second-hand uniforms are available.

Contributions and Other Costs

Victorian Government Schools provide students with free instruction to fulfil the standard Victorian curriculum and we want to assure you that all contributions are voluntary. Nevertheless, the ongoing support of our families ensures that our school can offer the best possible education, facilities, and support for our students. Without this support, it becomes challenging for the School to continue to offer the wider offering of subjects and special curriculum experiences.

JMSS requests payments from parents under three categories:

Essential Student Learning Items: Items and activities which the school deems essential for student learning.

Optional Items: These are provided to students on a user-pays basis. Items and activities that enhance or broaden the schooling experience of students and are offered in addition to the standard curriculum.

Voluntary Contributions: This includes tax-deductible contributions to the school's Building and Library funds.

Any families experiencing financial difficulty should contact the Business Manager, Corey Goodes.

Contact Details

T: (03) 9905 1002

W: www.jmss.vic.edu.au

E: john.monash.ss@education.vic.gov.au

Postal Address

John Monash Science School
PO Box 8016
Monash University
VIC 3800

Physical Address

39 Innovation Walk
Monash University
Clayton VIC 3168
(Corner of Wellington Road and Dandenong Road / Princes Highway)



39 Innovation Walk
Monash University, Clayton Campus
Clayton, VIC 3800



+61 3 9905 1005



john.monash.ss@education.vic.gov.au

WWW.JMSS.VIC.EDU.AU