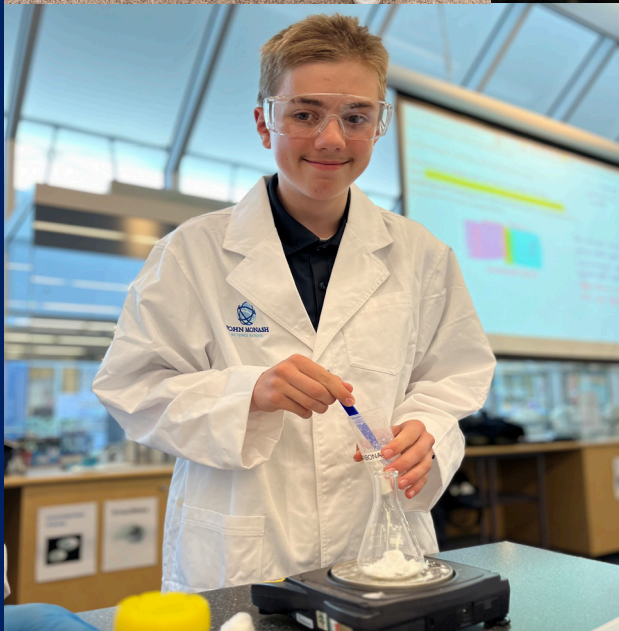


2025

School PROSPECTUS



JOHN MONASH
SCIENCE SCHOOL



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. Monash University is proud of the role we play in helping the school nurture the next generation of great thinkers and doers.

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 Education and Science in particular, work closely with the school to develop classroom content of the highest international quality, as well as opportunities for collaboration.

Surrounded by one of Australia's largest concentrations of scientific expertise and infrastructure, John Monash Science School encourages students to immerse themselves in the sciences, 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

Investing in OUR FUTURE

Message from the Regional Director, Department of Education and Training

John Monash Science School is Victoria's first specialist secondary school focussed on Science, Mathematics and Associated Technologies. It has been formed as a result of a unique partnership between the Department of Education and Training (DET) and Monash University and offers a unique and challenging learning environment for Years 10-12 students with access to the resources of a global university.

Alongside Monash University, and through its innovative curriculum and ever-widening outreach programs, the school aims to increase student interest in science and mathematics, and encourage more students to pursue science and mathematics-related careers to support Victoria's future economic, social and environmental needs

Beginning its exciting journey in 2010 the school now provides innovative and research-based student learning and aims to fully develop the capacities and talents of all students. The first Year 12 cohort graduated at the end of 2012 with outstanding academic results, with students now pursuing careers in science and science-related fields at tertiary institutions in Melbourne and interstate. Female students, who in the past have been less inclined to pursue this kind of pathway, have always been a vital part of our student body, with 48 % of students in our 2019 cohort being female.

Victoria as the Education State was launched by the Premier Daniel Andrews in September 2015, heralding an exciting new era for Victorian education. As part of this agenda STEM, - Science, Technology, Engineering and Mathematics, is highlighted as an essential element for our society moving

forward, and JMSS is playing a lead role. The School through its science immersion programs is allowing students and teachers from remote regional Victorian schools excellent opportunities to engage with its unique science curriculum.

The Education State is about ensuring that every Victorian has access to an excellent education regardless of their background or location. To these ends, the Victorian Government has invested \$125 million to create 10 high-tech centres of learning, known as 'Tech Schools'. One of these Tech Schools has been established in the City of Monash, with JMSS and key partners Monash University, CSIRO and Holmesglen collaborating with local secondary schools and industry partners. The aim is to create a learning centre that will use leading-edge technology, discovery and innovation to deliver the advanced education and training that Victorian school students will need to flourish in a rapidly changing global economy.

North Eastern Victoria Region is proud to host the school and as Regional Director I welcome and encourage all Victorian students with an interest in pursuing a career in the science and mathematics fields to consider John Monash Science School.

Karen Money

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





Be proud of your PASSION FOR SCIENCE



Message from the Founding Principal of John Monash Science School

I would like to extend a warm welcome to prospective students, parents and teachers to John Monash Science School (JMSS), Victoria's first specialist school in the Sciences, Mathematics and Associated Technologies.

“If you have a passion for the sciences, love a challenge and welcome every opportunity to learn, then this is the school for you.”

I want you to be proud of that scientific passion, and be determined to make a career from it. The success of Australia's future has never been more dependent on our capacity to produce high-performing graduates in the STEM (Science Technology Engineering Mathematics) fields, so your decision to join us is both timely and vitally important.

JMSS brings together the dual strengths of an innovative team-based teaching and learning methodology, and a contemporary science curriculum co-created as the result of our unique partnership with Monash University's Science, Biomedicine, Pharmaceutical, Engineering and Education Faculties. It is an exciting prospect for enthusiastic and passionate young scientists, and the opportunities provided are rich, deep and inspiring.

We are proud of what has been achieved for and on behalf of some of Victoria's brightest young minds in the life of the school to date. Through our partnership with Monash University, we are able to ensure all Year 10 students are able to undertake an extended science research project with guidance from expert mentors.

“Exciting programs and approaches have seen over 95% of JMSS graduates in 2023 gain entry into tertiary STEM courses, with consistently outstanding VCE results.”

It is vitally important to us that we develop good citizens, not just good scientists, at JMSS. UNESCO's four pillars of education define the way we teach, the way we learn, the way we interact and the way we work together. The variety of co-curricular options allows students to develop a range of skills and talents, from music to art, from sport to leadership. The close-knit, supportive, energetic and welcoming environment so evident at JMSS is the result.

Each and every one of us, students and staff alike, has made the brave decision to leave our previous schools in support of the mission of JMSS to lead change and innovation in STEM education in Victoria. Students and parents new to the school will find an environment characterised by strong working relationships between students and staff, a mutual sense of belonging and support existing among our students, and a keen sense of aspiration and challenge which urges all in our community to strive for their personal best in all they do. Our teachers know each of their students, have high expectations of and for them, and provide the necessary individual support to ensure each student achieves ongoing improvement. This unique JMSS culture, affectionately known by many as the 'John Monash Way', embraces all who come. I look forward to welcoming you into our community, and to you developing academically, socially and personally into tomorrow's scientists, innovators and leaders.

Peter Corkill

PRINCIPAL
JOHN MONASH SCIENCE SCHOOL



Specialism in SCIENCE EDUCATION

John Monash Science School (JMSS) opened its doors to students in 2010 as Victoria's first specialist secondary science school.

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 a key role in developing curriculum and emerging science subjects such as Materials Engineering, Biotechnology 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 provided by the University of Melbourne alongside traditional Year 12 subjects.



Teaching for EFFECTIVE LEARNING

The development of core learning skills and attributes is seen as the cornerstone of academic success at John Monash Science School. These are woven into the fabric of each learning sequence at the school, as we believe the capacity to solve problems, collaborate in teams, undertake independent inquiry, think and act ethically, and make strategic use of high-end technologies will mark a point of difference for our students as they take their place in their chosen fields 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, such as inquiry-based learning, 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.

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.

Our teachers work closely together to plan learning 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 combination of computers, laptops, tablets and iPads, enabling 'anytime anywhere' learning, giving our students ready access to resources and collaboration opportunities.



Breadth in CURRICULUM

While the school has a strong focus on Science and Mathematics, the curriculum is broad enough to develop students' 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 (Quantum Physics and Astronomy), Geoscience, Aquatic Biology and Bioinformatics;
- Issues Studies (the interface between Geography, Ethics, History, Politics and the Sciences);
- Data Science (a range of fascinating options in Computer Science);
- LOTE - French & Japanese. In 2024 we also facilitate 10 other LOTE offerings
- Physical Education

Co-Curricular PROGRAM

Our Co-Curricular Program, offered on Wednesday afternoons, provides a range of activities such as Sport, Dance, Drama, Drawing, Computer Programming, Chess, Robocup, Community Service, Gardening, Photography, Duke of Edinburgh, Environment / Sustainable living and much more.

Little Scientists and Mini Mathematicians also run at this time. This is where our JMSS students facilitate onsite at JMSS, science and 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 students 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.

Recent guest speakers include 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;
- 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 for subjects such as Science, Mathematics, Biology, Physics, Chemistry, Geography, Psychology, Environmental Science and Issues Studies.

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 Further 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 Computational Physics	1	2		
VCE Extended Investigation			3	4
University Extension Chemistry				
University Extension Physics				
University Extension Biology				
University Extension Planet Earth & Climate Change				
University Extension History & Philosophy of Science				

ELECTIVE SCIENCES

Disease, Disorders and Scientific Discoveries

Aquatic Fieldwork Science

Biotechnology

Pharmaceutical Science

Analytical Spectroscopy

Microbiology

Terraforming Mars

Materials Science and Engineering

FLEET Science

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

3 4

HUMANITIES

Year 10 Issues Studies

	Units			
VCE Accounting	1	2	3	4
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

Leadership

Careers and Pathways

Health Education

Year 10 Physical Education

LANGUAGES (Face to face at JMSS)

French

Japanese

OTHER STUDIES

VCE Visual Communication and Design (By Distance Education)

VCE Philosophy

MUSIC

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

CO-CURRICULAR PROGRAM

Creative and Critical Thinking	Digital Art
Robotics and Emerging Technologies	How to Thrive
Mathematics Modeling	Photography
Minecraft Engineering	Advanced Debating
Emotions and Cognitive Perspectives	Reading
Cells to Systems	Origami
Brain Bee	Drama Sports
Little Scientists	Drawing and Painting
Mini Mathematicians	Innovations and Inventions
Lego Robotics	Debating
Yoga	Music Composition and Songwriting
Knitting and Philosophy	Tabletop Games and Board Games
Monash Sports	Chess



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 and UK in 2023.
- Annual International Supercomputing Conference held in Denver, Colorado in 2017 & 2019 and Houston, Texas in 2018.
- International Science Exchanges in Japan and Thailand.
- International Competitions in Maths and Science. JMSS has students in the Australian Science Olympiad teams for the last six years
- Annual Language Exchange with Ritsumeikan Science School in Kyoto, Japan.
- The Biannual Maths Modelling Competition in Singapore.
- In 2020 and 2021 many of these global opportunities were run online however in 2024 many of these opportunities are back to being onsite.



Coquette
Sharks
BLACKBURN

Coquette
Sharks
FLANNERY



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 Orientation Camp 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.

Outstanding CONTEMPORARY FACILITIES

John Monash Science School is a \$20 million state-of-the-art educational facility, designed to advance each student's academic ability.

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, kitchenette areas with microwaves on every floor, 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?

Normal individual class sizes will be at or below 25 students. Most subjects are team-taught, with two classes (50 students) and two or more 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 two digital devices to school. The primary device (for example laptop or notebook computer) will serve as the student's main computer. The secondary device (for example tablet, or a hybrid "phablet") will give students access to advanced digital content and various applications through which to organise this content.

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.

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.

Fees 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.

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