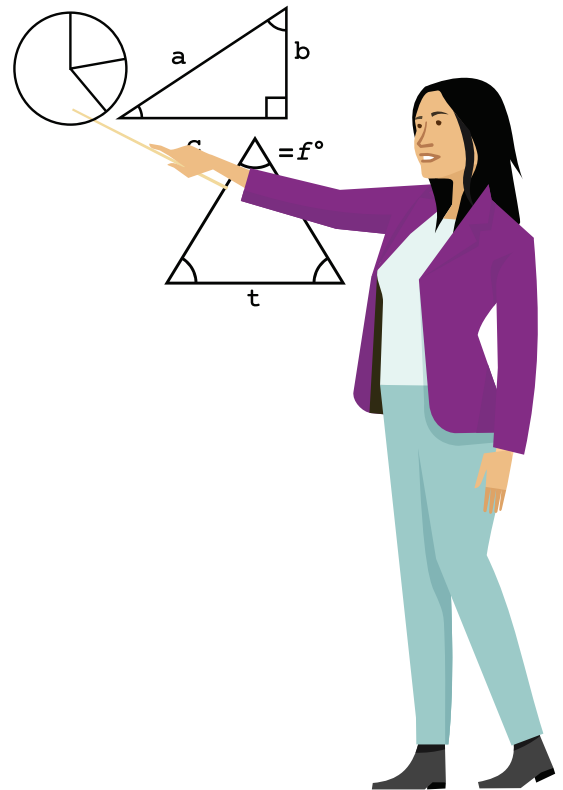




THE MATHEMATICAL
ASSOCIATION OF VICTORIA



THE MATHEMATICAL ASSOCIATION OF VICTORIA ANNUAL REPORT 2021-2022



VALUING MATHEMATICS IN SOCIETY

**MAV PROVIDES A VOICE, LEADERSHIP
AND PROFESSIONAL SUPPORT
FOR MATHEMATICS EDUCATION.**

PRESIDENT'S REPORT - MICHAEL O'CONNOR



There is a saying that “A change is like a holiday”. Most of the time I return from a holiday in need of a break! Change, like holidays can create busy periods, excitement, tension and risk, but also great opportunity. The change brought on by COVID over the last two years is much the same. The best

holidays are ones filled with memorable experiences and new frontiers – hopefully we can focus on and remember the positives, improvements, and new opportunities that arose despite the challenges that COVID has delivered.

As we return to some form of normal routine in 2022 it is worth reflecting further on how MAV has moved through the changes brought about by COVID. For all the hardships there have also been gains.

The uptake in virtual events has seen more teachers and students able to attend and take part in activities that before were somewhat limited to those in geographical proximity to major urban areas. At the same time, we have learned to value opportunities for coming together physically.

Where in the past this might have led to discussions of “either, or” I hear in the pages below more of a “both, and” conversation prevailing. As testament to this, membership growth has continued in spite of the difficulties faced over the last two years. This demonstrates that MAV is delivering upon its commitment to support maths educators.

The staff and board of MAV have strived to maintain quality service and learning opportunities and I congratulate all of them on their efforts. The staff have found new ways to deliver programs and support for schools including attracting high profile presenters from far and wide.

The board's stewardship continues to be responsible and has led to our sound position resulting in the reserves target not only being met but exceeded for the first time. This now allows us to focus more confidently on elements of the strategic plan, such as community building, that previously have been understaffed.

Finally, I want to thank all of you, our members and supporters, for your engagement with us. We exist to serve you and your students.



CEO'S REPORT - PETER SAFFIN



As COVID impacts continue to affect schools and MAV's ability to deliver its program and services during 2021, MAV continued to be creative in finding the best opportunities to add value for maths educators and members.

Unfortunately, some programs such as in-school consulting could not continue in many cases, and other opportunities were negatively affected. On the other hand, MAV continued its expansion into virtual delivery, successfully bringing games days and the primary conference back online after these were cancelled in 2020. Overall, MAV effectively delivered all of its usual programs in 2021 in one form or other. This is a great achievement that required some creative problem-solving from staff and some new ideas.

We noted throughout the year the struggles, impacts and pressures upon schools and teachers whilst doing their best to support students and families. I am extremely proud of how our mathematics educators in Victoria pushed on under the pressures of 2021 to ensure they delivered all they could to support students within this difficult environment. Well done!

MAV staff also worked hard in the best interests of educators. I was proud to see their dedication and innovation continue in what was a challenging time. Here are some program highlights worth a mention. You will find many more successes outlined throughout this report.

- Online events gained significant traction in 2021 and were a key opportunity to support maths educators with their own professional learning and new ideas to support students. We saw an expansion in attendance at online professional learning and delivered our Primary and Early Childhood Mathematics Education Conference, and New Frontiers of Learning Conference, plus two regional conferences, all of which had significant attendance in the virtual format. MAV's conference portal that was developed has been an enormous success, allowing the professional and stable delivery of online events with access to recordings and resources after each event.
- Virtual Games Days were held for the first time. The format retained the competitive approach between schools and teams. There was opportunity for real-time collaboration and for the first time some digital challenges and games were used. Feedback was overwhelmingly positive, and we now see virtual games days as an opportunity to engage more students across the state regardless of their location. Formerly games days were restricted to metropolitan areas in face-to-face settings.

- The VCE revision program was renewed in its second year receiving extremely positive feedback from students. For the first time it was also made available after exams, for teachers to up-skill in preparation for teaching VCE subjects. This was a great success with many teachers accessing this substantial support. This will now be an ongoing opportunity.
- The Maths Talent Quest (MTQ) grew in participation again as schools looked for engaging ways to work with their students.
- The MAV21 Annual Conference was again a great success being held virtually. Registrations were strong and feedback was extremely positive.
- DET partnership and funding opportunities were strong allowing MAV to create a range of new resources that will come to life in 2022. These will provide support for educators across primary and secondary schools.

It is clear from feedback from our members and educators that virtual is here to stay. There is a strong demand for both face-to-face and virtual events. In terms of providing equitable access to educators across the state of Victoria, we are mindful of delivering a range of event formats that allow all educators access to quality professional learning and student activities.

2021 was a challenging financial year for MAV. You will see in the financial reports that the revenue dropped for a second year running due to COVID, but there was very little government support provided. Despite this MAV stood strong and came out with a very small deficit. After a number of strong years MAV has built up its cash for operating reserves, and during 2021 reached its operating reserves target for the first time. This ensures that MAV has a safety belt for tough times or unexpected expenses in future. Further, MAV now has some reserves above its operating reserves target. This will become an opportunity in future for the Association to reinvest into programs and services that benefit mathematics educators and support MAV in delivering upon its mission.

Moving forward 2022 will see a continued implementation of the MAV Strategic Plan, with a focus on community building. We are undertaking research into community building approaches to develop new products and services that will bring together mathematics educators from across Victoria in exciting ways. Much work was also done in 2021 to develop an advocacy strategy, and implementation will begin in 2022.

Thank you to staff and the MAV Board for their hard work and support in making 2021 a success, in what have been challenging times! Thank you to all of our mathematics educators and members who have continued to support MAV, so that we can support you.

Onwards and upwards!

MAV PERSONNEL

Chief Executive Officer	Peter Saffin
Mathematics Education Consultants	Jennifer Bowden (Primary) Helen Haralambous (Secondary) Danijela Draskovic (Secondary) Jess Mount (Secondary)
Community Strategy Manager	Claire Embregts (from July 2021)
Membership Officer	Michael Green
Administration Assistant	Darinka Rob
Events Manager	Jacqui Diamond
Marketing	Louise Gray, Stitch Marketing

SPONSORSHIP, PARTNERSHIP AND SUPPORT

MAV works with many other organisations across the mathematics education, Universities and related STEM industry sectors. Many of them are credited on our website and in our programs that we collaborate on. There are too many to mention all of them in this report. Therefore, to all organisations that sponsored our events and services, provided in kind support in various ways, or partnered on specific projects, MAV says, 'thank you' and we look forward to working with you again in the future.

If you want to collaborate with us, contact us at office@mav.vic.edu.au.

MAV'S SERVICES



FINANCE

COMMITTEE MEMBERS

Dan Cloney (Chair of Finance Committee), Kerryn Sandford, Nadia Abdelal, Mei Ong, Peter Saffin (Executive Officer)

KEY ACHIEVEMENTS

- Operating reserves target exceeded for first time
- New financial dashboards and indicators identified and implemented
- Investment policy approved, to allow for future investment to be effectively managed.

2021 was a challenging year for MAV on the financial front. Due to the COVID pandemic, revenue dropped for the second year in a row, and below that achieved in 2020.

A main reason for the revenue drop was due to existing consulting work in schools being postponed and cancelled as MAV staff could not visit schools to undertake the contracted work. With schools again in lockdown during 2021 other services were disrupted - for example, the MAV online store (MAVshop) struggled to achieve sales targets with purchasing patterns completely different to previous years. The revenue drop also continued despite some programs being delivered that were previously cancelled in 2020, such as the games days and primary conference. This illustrates the challenges faced by MAV related to the COVID pandemic and resulting disruptions to the school sector.

MAV only received two months of job keeper support in the financial year which made a small contribution to reducing the deficit. MAV was not eligible to receive any other federal or state government subsidies in 2021.

Despite the decline in revenue, reduced cost of delivering programs and cost savings in various expenses countered the risk with MAV delivering a very small deficit that was very close to break even and the small, budgeted surplus that was forecast.

MAV's cash position is strong and improved on previous years. This was mainly due to a significant improvement in recovering unpaid debts. This was driven by work done in 2021 to improve invoicing and processes that ensure payments are received in a timely manner. This also resulted in a small increase in equity for the organisation.

In 2021 MAV has reached its operating reserves target (which ensures that there are at least six months of operating reserves available) and has surplus funds to consider making strategic investments to support the organisation, mathematics educators and members. The Finance Committee developed an investment policy that was approved by the Board to support decision making in this regard.

The Finance Committee continued improving MAV's financial reporting, with new financial dashboards and indicators identified and implemented that allow the board to have clearer visibility on MAV's financial position. This includes benchmarking against similar organisations within the sector. This is intended to support MAV to identify any risks before they become a significant threat and to be more responsive in decision-making. The MAV Board and Finance Committee members would like to particularly thank Mei Ong, committee member, for her significant work and technical skill in developing these dashboards for the Association.

Improved reporting, combined with a strong cash position, and clear policies around reserves will ensure that MAV remains a financially sustainable organisation.

For more information on MAV's finances see the Audited financial reports.



MEMBERSHIP

COMMITTEE MEMBERS

Michaela Epstein (Convenor), Christiana David, Peter Karakoussis, Rhiannon Lowry, Michael O'Connor, Peter Saffin (Executive Officer)

MEMBERSHIP

KEY ACHIEVEMENTS

- Overall, MAV has now achieved membership growth year-on-year since 2017
- Significant previous growth in primary school members stabilised in 2021
- Student members increased significantly on prior years as relationships with universities strengthened.
- There was a slight decrease in other individual members, mainly due to COVID reducing individual membership to its lowest level in a number of years.
- During the COVID period in 2021, additional supports were provided for members to assist them with the ongoing challenges being faced.

As seen in the below membership report the number of student members engaging with MAV increased significantly. This is a fantastic opportunity as the students are the future of our membership, while also being the future of our teaching

workforce. It is great that we now have a large membership to engage with and support as they begin their careers. In 2022 we hope to build some further programs that will engage and support this group of important members.

School memberships are reasonably stable, with the growth in primary school memberships over a number of years now flattening out. It will be important for MAV to ensure that membership is retained and that growth in members continues where there is opportunity. Primary schools will continue to be a focus as this is the area where MAV has the lowest school membership. Renewal rates for schools that become members are very high, due to most member schools engaging with MAV throughout the year in various ways. In 2021 MAV delivered all of its usual pre-COVID programs and services in a variety of formats. The bulk of events were delivered virtually due to restrictions throughout the year. Delivering the full range of services ensured that members had a choice of programs to engage with as well as the opportunity to interact with each other.

During 2021 MAV also began work on implementing a community building strategy. This strategy is included in the MAV strategic plan and is a significant opportunity to engage members in new and exciting ways in coming years. This should support higher levels of member and educator engagement and help to create a more sustainable Association for the future. You will hear more about this in 2022 as the strategic plan implementation is progressed.

	2017	2018	2019	2020	2021
Life members	13	14	14	17	17
Individual members	382	351	350	390	342
Student members	66	218	374	304	518
INDIVIDUAL MEMBERS	461	583	738	711	877
Associate members	27	28	33	31	35
Early childhood centres	0	0	1	2	1
P-12 schools	133	137	141	136	146
Secondary schools	312	322	321	331	306
Primary schools	403	395	437	483	475
INSTITUTIONAL MEMBERS	885	872	933	983	963
TOTAL	1346	1455	1671	1694	1840

MATHS ACTIVE SCHOOLS

KEY ACHIEVEMENTS

- MAS school resource kits developed, for Primary and Secondary year levels.
- All previous and current MAS resources were moved onto an online platform with the goal of creating an interactive space for MAS.
- Due to the nature of virtual learning in 2021, MAV added discounted registrations to Professional Learning and Student Activity events as a MAS Benefit.

The impact of remote learning in schools was evident in teacher's reduced engagement in MAS programs in 2021. Teachers expressed that they needed to focus on core teaching and supporting students, and that professional learning associated with MAS program were not a priority. There were no additional MAS applications in 2021.

MAV Education Consultants recognised that MAV had created quality remote learning resources that did benefit MAS, and that further new ideas were not immediately required.

In recognition of the extra workload on teachers during the pandemic, MAV decided to offer discounts to targeted, quality professional learning and student activities. Benefits included complimentary and discounted professional learning and conference attendance, and discounted VCE Revision Program access for students. In preparation for supporting MAS in future, all existing MAS resources were moved on to a new online portal where schools were provided access. This platform will be used to engage schools further in future years. For 2022 responsibility for the MAS has been allocated to a staff member who will coordinate the program for participating schools and look for opportunities to evolve and enhance the program in future. This will improve communication with MAS and develop further opportunities for the schools to engage with MAV activities.



KEY ACHIEVEMENTS

- Key planning on advocacy undertaken by the MAV Board
- Release of key paper in October 2021: *Valuing Mathematics in Society: a discussion paper.*
- Various editorials released on key topics relevant to mathematics educators and members
- MAV staff representing members and mathematics educators on various curriculum panels and other advisory boards.

MAV has included advocacy as a key area of focus in its strategic plan. Work is progressing to ensure a strategic approach in implementing advocacy strategies. There are so many areas for potential action that the Board spent much time in 2021 identifying these areas in its discussion paper and narrowing them down to a smaller number of priority areas where actions will be taken in future. This planning is important to ensure that MAV's resources are used strategically and efficiently to have impact on behalf of members and maths educators.

The CEO also represented MAV and members as part of the review panels for the Senior Secondary School Pathways Reform - providing advice for Foundation Mathematics, the Victorian Pathways Certificate and the VCE Vocational Major study designs as they were developed. It is important that members' voices are heard through these curriculum development processes.

MAV also ran sessions for teachers focused on the Australian Curriculum review and provided feedback directly to ACARA on its findings in support of members' feedback.

The CEO represents the MAV as a member of the Tech School Learning Advisory Panel, so that mathematics is accurately and thoroughly represented in the curriculums of the Tech schools now active across the state.

A focus for 2021 was also around financial literacy, working in collaboration with Deakin University, articles for educators and parents to help raise the profile and importance of financial numeracy and literacy in our community and across schools. This work will continue in 2022.

Further work on advocacy will continue in 2022. You may find out more and access links to various published articles about MAV's advocacy work on our website: www.mav.vic.edu.au/Services-and-News/Advocacy

PROFESSIONAL DEVELOPMENT

COMMITTEE MEMBERS

Clare Delaney (Convenor), Nadia Abdelal, Johnson Alagappan, Kylie Slaney, Elizabeth Burns, Kerryn Driscoll, James Mott, Paul Howard, Helen Haralambous (Executive Officer).

MAV's professional learning (PL) is focused in four key areas:

1. In-school professional learning, including consulting services
2. General professional learning across all levels, including online and face to face sessions
3. VCE professional learning program
4. Specialised conferences:
 - New Frontiers of Learning Conference, in partnership with Independent Schools Victoria
 - Primary and Early Childhood Mathematics Education Conference, in partnership with the University of Melbourne, and the Graduate School of Education.
 - Regional conferences (both Virtual in 2021). The Horsham Conference was held on Friday 23 July with 97 delegates from 9 schools, and the Wangaratta Conference on Monday 12 July with 63 delegates from 14 schools.

IN-SCHOOL PROFESSIONAL LEARNING

KEY ACHIEVEMENTS

- Over 200 days of in school consulting was planned however we were only able to deliver 25% (mainly virtually) due to COVID regulations and impacts on schools.
- 21 planned onsite days of secondary mathematics professional learning were delivered. However, due to COVID the majority of these were changed to virtual events.
- MAV Education Consultants (MECs) and contracted primary consultants were engaged to run professional learning workshops in a number of schools, at all levels, from all sectors and from all regions.

Due to COVID, delivery of primary mathematics professional learning by Primary Mathematics Education Consultants was again significantly down from previous years. Primary Mathematics Education Consultants delivered 25% of the initially 200 days planned. The majority of these were delivered virtually.

The year started with secondary consultants delivering four days onsite at secondary schools. These were aimed at Years 7 - 10 teachers, with a focus in all cases on Problem Solving and/or assessment tasks. However, from mid-term 2 and for the remainder of the year, the majority of events were delivered virtually. Some events that had been booked during this time were postponed (in the hope they would be onsite), and only two were cancelled.

For secondary schools who had requested MAV contracted consultants to deliver workshops by an assessor for their whole cohort of Year 12 students during the school day, as opposed to the MAV's Revision Lecture program held during school holidays, these events still took place virtually. This included both metro and regional events and took place throughout September and October. A positive aspect of virtual delivery was the MAV Secondary consultants running a Virtual Games Day for schools in the Ouyen region in December.

GENERAL PROFESSIONAL LEARNING

Due to COVID, the majority of Professional Learning events were held as virtual online events across a range of topics. The MAV Education Consultants based the program on feedback on the needs of teachers from P - 12. A number of Virtual workshops, on a range of topics, were held throughout Terms 2 and 3 and were delivered by both MAV Education Consultants and a range of experts in various fields. Refer details below. (See also SPP funded Online PD under Partnerships on page 23).

KEY ACHIEVEMENTS

The following list details a number of sessions delivered by MAV during the past year. Due to COVID all workshops were held as virtual events, indicated by 'V', with the number of attendees in brackets at the end.

F - 10

- Differentiating Teaching: One lesson for all! is better to work on a problem in many different ways rather than work on many problems in the same way. Georg Polya. Part 1: Teaching through problem solving (Years 5- 8). V (205)
- Differentiating Teaching: One lesson for all! is better to work on a problem in many different ways rather than work on many problems in the same way. Georg Polya. Part 2: The lesson structure and enabling and extending prompts. (Years 5- 8). V (213)
- Differentiating Teaching: One lesson for all! is better to work on a problem in many different ways rather than work on many problems in the same way. Georg Polya. Part 3: Orchestrating a productive mathematical discussion (Years 5-8). V (202)

- Let's Talk Strategy - Using Maths300 to start and shape classroom conversations (and debate). (Years 5-10) V (27)
- Maths 300 Anatomy of a Lesson eg. Dice Footy (Years 5-10) V (59)

Primary

- Numbers talks - what are they and how do they serve all learners? (Years F-6) V (132)
- How can visuals prompt discussion that value and extend every learner? (Years F-6) V (154)
- Formative Assessment: The Power of Just in Time Assessment and Instruction. (Years F-6) V (142)
- Data Use for Instruction: Beyond the Spreadsheets and Numbers. (Years F-6) V (140)
- Intervention Part 1: Prevention Is Better Than Cure. (Years F-6) V (222)
- Intervention Part 2: Prevention is Better Than Cure. (Years F-6) V (240)

Secondary

- Teaching VCE Networks (VCE) V (166)
- Embedding the Maths Proficiencies in Classroom Practice (Years 7-10) V (104)
- Virtual manipulatives to assist understanding (Years 7-10) V (94)
- Unit 4 Networks (common traps - misconceptions that are seen on the VCAA exams etc). V (120)

Whole day PD

The following whole day PD Days were held, with a variety of workshops:

- Horsham Regional Conference (Virtual)
- Wangaratta Regional Conference (Virtual)
- VCE Mini Conference Bendigo (onsite at Latrobe Bendigo)
- Two Virtual VCE Mini Conferences (in lieu of Melbourne University and Federation University Gippsland), details described in the VCE Professional learning section.

As occurred in 2020, demand and attendance during 2021 far exceeded MAV expectations, with most sessions drawing at least 100 delegates. Feedback for these sessions were very positive, with several teachers requesting MAV continue delivering more workshops virtually in future.

VCE PROFESSIONAL LEARNING

KEY ACHIEVEMENTS

- Total attendees at VCE events for 2021 was 665
- Three whole day VCE PD days, with a total of 344 attendees, at:
 - Melbourne University V (273)
 - La Trobe University, Bendigo (46)
 - Federation University, Gippsland V (25)
- Three after school SAC workshops, all were virtual events. A total of 70 attendees:
 - Maths Methods (formerly Burwood) (30)
 - Further Maths (26) and Specialist Maths (14) (formerly Burwood)
- After school Meet the Assessors (MTA) workshops were all held as virtual events. A total attendance was 251 attendees, as per below:
 - (Formerly Geelong): 54 attendees (Further Mathematics, 32, Maths Methods, 14, Specialist Mathematics, 8)
 - (Formerly Williamstown): 72 attendees (Further Mathematics, 31, Maths Methods, 27, Specialist Mathematics, 14)
 - (Formerly Burwood) MTA Maths Methods: 51 attendees
 - (Formerly Burwood): MTA Further and Specialist: 84 attendees (Further Mathematics, 51, Specialist Maths, 23)

The MTA VCE events proceeded as Virtual events with three evenings held, one per stream:

- MTA Further Mathematics (114)
- MTA Mathematical Methods (92)
- MTA Specialist Mathematics (45)

The highly in demand VCE PD series was again successful in 2021, with whole day workshops again being offered, along with the after school Meet the Assessors and SAC workshops. Although it was planned that these would be offered both onsite and virtually, only the whole day VCE Mini Conference was held onsite at Latrobe Bendigo, with all other events taking place virtually.

PRIMARY AND EARLY CHILDHOOD CONFERENCE

KEY ACHIEVEMENTS

- Collaboration with Melbourne Graduate School of Education's Mathematics, Science and Technology Education Group (MSTEG) at The University of Melbourne
- Successfully held in virtual format for the first time in 2021
- Excellent engagement and over 230 delegates and 50 presenters
- Leaders' and educators' days both well attended
- International keynote delivered for the first time

The jointly delivered Primary and Early Childhood Conference was run as a virtual conference delivered via zoom through MAV's custom-built conferencing platform.

The conference consisted of a leaders' day, and an educators' day, both of which were equally well attended. The hand-picked program included presenters that represent both MGSE and MAV consultants, researchers, staff and others. This provided a great opportunity to showcase the work of both organisations, while supporting mathematics educators with resources, ideas and practical advice to take away and implement. For 2021 themes included exploring evidence-based approaches to change and improvement, developing enquiry and problem-solving based approaches, the use of digital technologies, and engaging the school community and mathematics, among other things.

An international keynote speaker was included for the first time. Professor Alan Schoenfeld, who is the Elizabeth and Edward Conner Professor of Education and Affiliated Professor of Mathematics at the University of California at Berkeley, presented on 'What really counts in learning, and how can we support teachers in making it happen?'

MAV would like to thank the Melbourne Graduate School of Education for their support, and we look forward to delivering this conference in future years. We also thank the Victorian Department of Education and Training for once again being a major sponsor of this event. This included sponsoring a number of regional delegates to attend who would otherwise be unable to participate.



2021 Primary and Early Childhood Mathematics Education Conference

MEANINGFUL MATHS: MAKING MATHEMATICS EDUCATION ENGAGING FOR ALL

The Mathematical Association of Victoria (MAV) in collaboration with the Melbourne Graduate School of Education's Mathematics, Science, and Technology Education Group (MSTEG) present a conference focusing on early childhood and primary school mathematics education.

A virtual event | Hand-picked program of high-quality presenters | Learn from leaders



Join us for either or both of these two days

<p>Building leadership capability in mathematics education</p> <p>Thursday 10 June, 2021</p> <p>For current and emerging mathematics and numeracy leaders, and system leaders in primary schools and early childhood settings, including Principals, Deputy Principals, Numeracy Leaders, Academics, DET, VCAA and others.</p> <p>Themes include:</p> <ul style="list-style-type: none"> • Explore how to use evidence-based approaches to implement change and improve practice • Improving assessment, looking beyond content (proficiencies, capabilities and student's engagement) • Integration of effect use of technologies across the mathematics curriculum • Explore how professional collaboration and feedback can strengthen mathematical outcomes, PLC • Strengthening engagement between your school and communities. 	<p>Building capability for all mathematics educators</p> <p>Friday 11 June, 2021</p> <p>Designed for primary teachers and early childhood educators regardless of experience level. Sessions will build confidence and develop professional ability as a mathematics educator in a supportive, hands-on and engaging series of workshops.</p> <p>Themes include:</p> <ul style="list-style-type: none"> • Developing inquiry and problem-solving based approaches • Explore the integration of digital technologies within mathematics education • Link content knowledge with pedagogy to deepen pedagogical content knowledge • Explore how to use evidence-based approaches to improve your practice • Engaging your school community in mathematics • Exploring innovative strategies in differentiation.
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www.mav.vic.edu.au/Conference/2021-Primary-and-Early-Childhood-Conference

Major sponsor: THE EDUCATION STATE, VICTORIA State Government, Education and Training

Keynote sponsor: EssentialAssessment

NEW FRONTIERS OF LEARNING CONFERENCE



KEY ACHIEVEMENTS

- Collaboration with Independent Schools Victoria (ISV) for third year running
- Successfully held in virtual format in 2021 – increasing attendance
- Excellent engagement and over 230 delegates and 50 presenters

The jointly delivered New Frontiers of Learning Conference was run as a virtual conference delivered via zoom through MAV's custom-built conferencing platform. This not only provided an excellent experience on the day, but a portal to store all related recordings of sessions and resources that are accessible for delegates for six months after the event. Over 100 delegates attended in 2021, from all school sectors.

The conference theme for 2021 was *Poke the Bear*, and that is just what we did. The day began with a thought-provoking keynote titled *Maths without mistakes*, delivered by Dan Meyer.

Due to the event being virtual this was the first year the event engaged an international, high-profile keynote. Dan's approach stimulated much discussion and laid the groundwork and ideas for the workshops that followed.



Workshop presenters represented both MAV and Independent schools Victoria, providing a range of opportunities for delegates to engage in conversation while exploring new ideas and resources.

Sessions included both workshops on creating engaging and interactive maths lessons and assessment, and small conversations sessions focused on topics such as 'Visible thinking in the maths classroom' and 'Shaking up leadership'.

This collaboration was a great success, allowing MAV to expand its impact with a boutique, small and exciting conference that receives very positive feedback from delegates each year. MAV would like to thank Independent Schools Victoria for their support, and we look forward to delivering this conference in future years.

Teacher feedback

- *This was a great time to reflect and listen with other math leaders. There were some small pieces of wisdom shared that are already influencing how I am thinking and approaching what I do.*
- *A day to refresh my thinking and gave me space to reflect in ways that can improve my own professional practice and help me to inspire others.*
- *This was fabulous - I have been looking forward to it since last week and loved the learning. I can't wait to watch the other sessions as well to get the absolute most out of the day.*
- *Thank you for a great day, it was really inspiring and beneficial.*
- *Always love challenging my thinking and teaching at these Poke the Bear sessions. Relevant, thought provoking, engaging*



New Frontiers of Learning

Friday 10 September 2021

About the conference

Presenters

Poke the bear!

A joint professional learning event for mathematics educators from Foundation to Year 10

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Conference Login

Log out

Join the conversation!



#PokeTheBear

#NewFrontiersOfLearning

@IndSchoolsVic

@MAV_info

It's time to explore some of the long-held assumptions about mathematics and poke the bear!

How do we engage students in an authentic way with the 'messiness' of this glorious subject? Let's embrace the necessities of content, curriculum and sequence using contemporary practices and broadening our reach to other disciplines. There are plenty of mathematics educators in schools right now ditching antiquated practices, keeping the timeless ones that work and moving to innovative approaches.

MAV21 ANNUAL CONFERENCE: THE CAPABILITIES IN MATHEMATICS TEACHING AND LEARNING

COMMITTEE MEMBERS

Dr Ann Downton (Convenor), Dr Leicha Bragg, Kate Copping, Claire Delaney, Danijela Draskovic, Trish Jelbart, Thomas Moore, Kat Rodriguez, Peter Saffin (CEO), Dr Max Stephens, Leigh Thompson, Jacqui Diamond (Executive Officer).

KEY ACHIEVEMENTS

- Provision of an exceptional educational virtual conference experience for the delegates and presenters during the second year of the COVID pandemic
- An outstanding program and range of keynote presenters
- Inclusion of secondary panel and panel for all levels as keynotes
- Provision of live stream and pre-recorded session, which delegates can access for 12 months post conference
- A profit was achieved that was higher than 2020

The 58th (MAV21) annual conference, 'The capabilities in mathematics teaching and learning', our second virtual conference was held on December 2 and 3, 2021. The aim was to provide an exceptional educational virtual conference for all our delegates and presenters, which judging from the feedback we received from delegates, presenters and volunteers, we achieved.

Whilst our main goal at the start of the year was to increase the number of paying delegates and our profit margin, this took a major turn when we realised that due to ongoing restrictions to large gatherings due to the COVID pandemic, school policies and delegate confidence to attend large

gatherings, we would need to provide a virtual conference in 2021.

A key to the success of our second virtual conference was the behind the scenes work of our Events Manager Jacqui Diamond, throughout the year in planning, negotiating and liaising with the Delegate Connect team, the sponsors and exhibitors.

Two other contributing factors to the success of the conference were the program and selection of keynote speakers including an international speaker, and the use of volunteer room hosts who supported each presenter by facilitating the 'online chat' that enabled participants to engage with the presenter.

Due to the unsettled nature of the situation in 2021 the number of delegates was lower than in previous years, and almost 100 less than 2020 (886). Overall, we had 794 participants across the two days, which comprised of:

- 580 paying delegates
- 26 complimentary registrations
- 140 presenters
- 37 exhibitors, and
- 11 volunteers.

The highest proportional of delegates were secondary mathematics teachers (Years 7-10), then VCE teachers, followed by primary teachers. In terms of demographics, the over 50s represented the highest number of delegates, followed by the 30-40 age bracket, with under 30s the lowest.

KEYNOTE	YEAR LEVEL	TITLE
THURSDAY 2 DECEMBER		
Sharyn Livy	Early Years	Eliciting critical thinking through the use of sequences of connected cumulative challenging tasks
Jodie Miller	Primary	Enacting intercultural capabilities through early algebraic thinking
Ashleigh Koo and Thomas Moore	Secondary	Teaching in action: using problem-based Lessons to develop student capabilities in Mathematics
* Secondary Panel	Secondary	The capabilities in mathematics as a vehicle to prepare students for their professional, personal and civic lives
Peter Liljedahl	All levels	Building thinking classrooms
FRIDAY 3 DECEMBER		
Jennifer Bowden	Early Years	Mathematical thinking in the early years: Developing critical and creative thinkers for our future!
Toby Russo and James Russo	Primary	Mathematics in a multi-age setting
Matt Skoss	Secondary	General capabilities...strategies for infusing them into student learning
Sarah Fenton, Jennifer Palisse and Helen Silvester	Secondary	Mathematics by design
** F- 12 Panel	All levels	First Nations students and mathematics education, lessons for Australia

*Secondary panel members: Claire Delaney, Rod Sheehan, Kylie Stanley, and David Tout

**F-12 panel members: Jodie Hunter, Cynthia Nicol, Mathew Lillyst, and Daniel Steele.

This data will be a consideration in planning and marketing of future conferences.

Despite the lower number of paying delegates, we had an overall profit of \$212,342, which was an increase of \$44,506 on 2020 and \$29,123 on the targeted budget (\$183,219). Two contributing factors to the increase in profit were the income from sponsorship (\$53,110) which was slightly higher than 2020, and a reduction in expenses. This data will provide us with a benchmark for planning our budget for future conferences.

Having a virtual conference also impacted on income derived from exhibition income (\$4,950), which was approximately 50% less than 2020. There were 17 exhibitors less than last year, the main reason being the lack of engagement and opportunities to talk directly to delegates.

As mentioned above, sponsorship income was higher than 2020 with keynote sponsorship packages being the most popular with all secondary presentations sold. For the first-time room sponsorship was promoted with one organisation taking up this offer (Sparx Learning). Key sponsors included: ANZUK, Cambridge University Press, Casio, and Texas Instruments. Keynote sponsors included: Australian Maths Trust, Victorian Department of Education and Training, Essential Assessment, and Oxford University Press. The Department of Education and Training also sponsored 16 regional delegates to attend the conference.

MAV21 had the same program format as MAV20 with 5 keynotes and 50 sessions each day (10 in each time slot). Keynote speakers were selected for their expertise in early years, primary, secondary, or across all levels and linked to a key aspect of our conference theme The Capabilities in Mathematics Teaching & Learning and sub themes 'Capability development in students, valuing mathematics in society, numeracy in context, ICT capabilities and workplace capabilities'. Our international speaker was Peter Liljedahl, a professor in mathematics education at Simon Fraser University in Vancouver, Canada, who presented a keynote on day one. The table on page 15 shows each of the keynotes and the focus of their presentation.

The keynotes provided a mix of current research, thought provoking ideas and practical implications relating to the capabilities in mathematics teaching and learning.

The feedback from delegates was positive and many commented on how much they enjoyed the range of presenters. A few comments from delegates:

- *Thank you, Peter. Your keynote presentation was inspirational and informative.*
- *Absolutely made me rethink some approaches to my classroom and how my students are actively learning. (Peter)*
- *The best virtual session I have ever attended. So much to take out of this presentation. Peter's knowledge and content was perfect for our school and our system to consider going further to enable better thinking, not just in mathematics but across all areas.*
- *Ashleigh and Tom gave us an engaging, insightful presentation - great application of five ways of teaching by Smith and Stein and Ashleigh's own modifications- really inspired me to experiment more in the class with this strategy!*
- *Good ideas to help include other cultures when teaching maths. (Jodie Miller)*
- *Loved all the presenters at this session. Very informative. Dave was excellent and practical. (Secondary panel)*
- *Great and engaging presentation - thank you. Even though I am not in a multi age setting, I certainly have a variety of levels and abilities in my classroom (as we all do) and so still found the presentation useful for differentiation. (Toby and James Russo)*
- *Loved the fact that Jennifer and Helen presented differing viewpoints on design thinking.*
- *This was a fantastic presentation that really had me thinking about how to effectively embed Aboriginal cultures and learnings, as well as in general considering and supporting all my students. More of this please!*

Overall, the keynote presentations were well received, as were the two panels. Some of the comments from the delegates reflected an appreciation of the diversity of presenters.

THE CAPABILITIES IN MATHEMATICS TEACHING & LEARNING



MAV21
CONFERENCE

2-3 DECEMBER



MAV21 Virtual Conference

CHOOSE EVENT SEARCH ON DEMAND SYNOPSIS LOG IN

Times are shown in your local time zone GMT +10 (Australia/Melbourne)

Virtual Program
Speakers
Virtual Sponsors
Virtual Exhibitors
Virtual Delegate Schedule
My Network
Leaderboard Competition
MAVshop

THE MATHEMATICAL ASSOCIATION OF VICTORIA

The Capabilities in Mathematics Teaching & Learning

02/12/2021 - 03/12/2021

SYNOPSIS MAV2022

MAV21 Virtual Conference

The future workforce and societies' development and sustainability require a strong focus on the capabilities in education. Often called entrepreneurial or 21st Century skills, the capabilities underpin how our students think, understand themselves, engage with each other, society and their learning, alongside their deepening understanding of mathematics.

The Victorian Curriculum capabilities are:

- Critical and Creative Thinking
- Personal and Social capability
- Intercultural, and

Once again, this year we were privileged to have a wide variety of presentations for our delegates to attend, and grateful to our presenters for their willingness to embrace the virtual platform again this year. Delegates were invited to complete a survey about the conference, and their responses will inform our planning for MAV22. A cross section of the responses are shown on page 16.

Whilst there were many positive responses about the virtual conference there were also some strong recommendations for future conferences to have a face-to-face component with opportunities to interact with exhibitors and network with other delegates.

As Conference Convenor I would like to sincerely thank Jacqui Diamond (Events Manager) and Peter Saffin (CEO), the MAV Board and staff for their support, and our hard-working conference committee for their time, expertise, enthusiasm and effort in developing an outstanding program. I am particularly proud of our efforts to provide such a professional virtual conference experience for our delegate and presenters. It was indeed a privilege to be Convenor of the committee, for MAV21. My thanks also to all the presenters who committed their time, energy and expertise to presenting such high quality and thought-provoking sessions.

- Ann Downton, Convenor

ANNUAL SPONSORS



Delegate feedback

- *As a virtual conference the presenters so far have been engaging and well-resourced with content. The delivery has been good considering the context.*
- *I loved Peter Liljedahl and hope to hear from him or other leading international experts next year.*
- *Having the conference online is SO MUCH better, but the actual portal is a little clanky.*
- *Seems pricey for an online conference but I do appreciate having access to the videos throughout the coming year and being able to view sessions I wasn't able to attend.*
- *Thanks for organising the MAV conference in this extremely difficult year. I found MAV a great platform to share ideas among teachers.*
- *I enjoyed the setup of the day, including access to the virtual sponsors and yoga. Thank you!*
- *Thank you for a great 2 days - has really given me further enthusiasm and confidence as I transition careers to teaching.*
- *What a stimulating and rewarding day. There were many hard choices about what to listen to. I'm looking forward to catching up on some that I didn't see but wanted to.*
- *Please go back to face-to-face conference as soon as we can. Thank you.*

STUDENT ACTIVITIES

MATHS GAMES DAYS

The impact of COVID 19 meant that Games Days were unable to be held in a face-to-face format. Host schools agreed to hand over the hosting to the MAV who partnered with Think Square to provide virtual events to students across Victoria

KEY ACHIEVEMENTS

- The move from school-based events to a virtual platform for the first time was highly successful. Many teachers reported online delivery was an excellent way to engage their high performing students following the cancellation of every event in 2020.
- We were able to continue our relationships with corporate partners in sponsors, supporters and prize givers through running these games on an online platform.
- The movement to an online platform allowed for MAV staff, schoolteachers and students to gain new learnings through the activities and tasks presented.
- Games Days were open to students from diverse geographic backgrounds and not limited in registration numbers. Teams consist of 4 students, we had registrations from:
 - Year 3 - 36 teams
 - Year 4 - 30 teams
 - Year 5 - 49 teams
 - Year 6 - 53 teams
 - Year 7 - 39 teams
 - Year 8 - 45 teams
 - Year 9 - 32 teams
 - Year 10 - 19 teams
 - Year 11/12 - 14 teams

A highlight was the partnership with Andrew Lorimer-Derham from ThinkSquare who shared his online games and provided engaging tasks and activities for the students.



COLLABORATE



COMMUNICATE



INVESTIGATE



WORK LIKE A MATHEMATICIAN

MTQ SPONSORS



MATHS TALENT QUEST



KEY ACHIEVEMENTS

- Increased number of participants from 2020 numbers, even with remaining fully virtual.
- 393 entries from 52 schools, and whilst there was only a small increase in school numbers (2) we did have more than double the number of entries overall.
- The process of online registration and judging was streamlined. This was very helpful given the large increase in numbers.

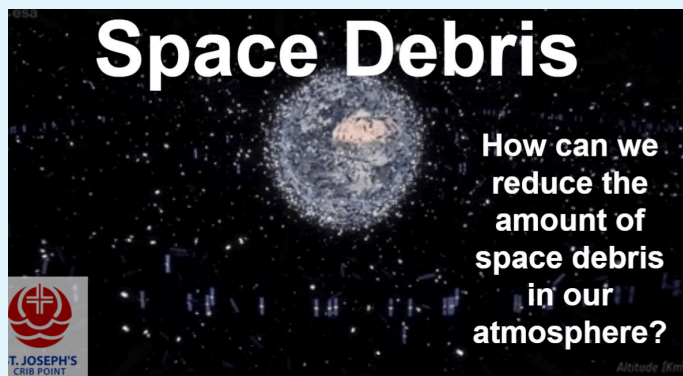
Whilst the remote learning conditions were prevalent in 2021, both students and teachers showed an increased ability to participate in the MTQ and complete inquiry-based investigations. We received 393 entries from 52 schools, along with a high number of entries that were judged at a school level. MTQ judges were impressed by the quality of entries and had very positive feedback around the online process of registration and judging. Students, judges, and MAV staff continued to ensure their students were able to complete a “maths by inquiry approach” within a challenging remote learning environment.

In general, those investigations that received High Distinctions had in-depth investigative processes with clear indications of the mathematics involved at a level above expectation. Distinctions followed the investigative process and students used mathematics that was expected at their level. Credits showed strengths in the investigations or mathematics used. Encouragements needed to build on both the investigative process and mathematics involved.

The National Maths Talent Quest was hosted virtually by the Mathematical Association of Western Australia. Victoria was very successful in the National Maths talent Quest - we entered 21 investigations with one receiving a Highly

Commended and 11 being overall National winners in their category. This was a great success and there was excellent collaboration across the states. All states are now moving towards a more collaborative approach. In lieu of a face-to-face ceremony the MAV created a recorded online ceremony that schools were encouraged to watch “live” and/or share with their students online or when they returned to school. The ceremony also received very positive feedback.

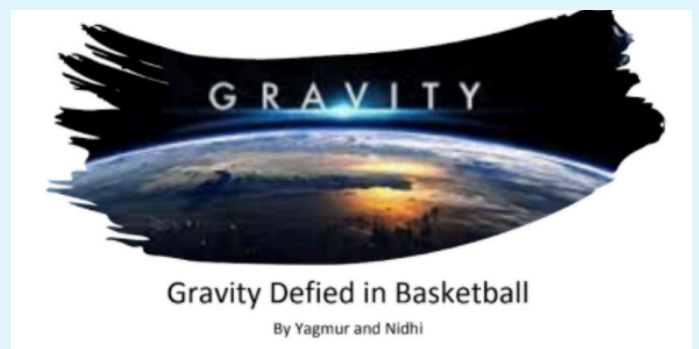
We continued our sponsorship agreement with LaTrobe University and Casio and started a new sponsorship relationship with Footy Feud. With online MTQ success in 2020 and 2021, we will continue with a virtual platform for the Maths Talent Quest with a focus on improving teacher and student resources and a greater diversity and number of students and schools to be involved across Victoria.



How Do Permutation Locks Work (Part 2)

By turning the dial left once and then to the second number, you connect R1 with R2a from the other side, and when you turn the dial to the second number, the first and second tumblers are turned, but not the third. The second number should correspond to the gap in the second tumbler, and now the second and third tumblers are in place.

Finally, you turn the dial right to the third number. By doing this you disconnect R1 and R2a so only the first tumbler turns. The gap in the first tumbler should correspond with the third number. When you reach the third number, all gaps are in place. This allows a lever mechanism to slot into the gap. The bar holding the lock closed pulls on one end and can open if the other end slots into the gaps.



Not all Smarties boxes are equal.

By Anthony D'Amore Prep
Paynesville Primary School

Geometric Analysis of Shapes and Angles of Pitched Roof Houses

Hip Roof Shape

Top View: [Diagram of a hip roof top view showing a square with diagonal lines]

Side View: [Diagram of a hip roof side view showing a trapezium]

Front & Rear View: [Diagram of a hip roof front/rear view showing a triangle]

Top View	Front View	Rear View	Side 1 View	Side 2 View
02 Trapezium	01 Triangle	01 Triangle	01 Trapezium	01 Trapezium
02 Triangles				

> The Hipped roof shapes have 02 Trapezium and 02 Triangles from top view.



VCE REVISION PROGRAM

KEY ACHIEVEMENTS

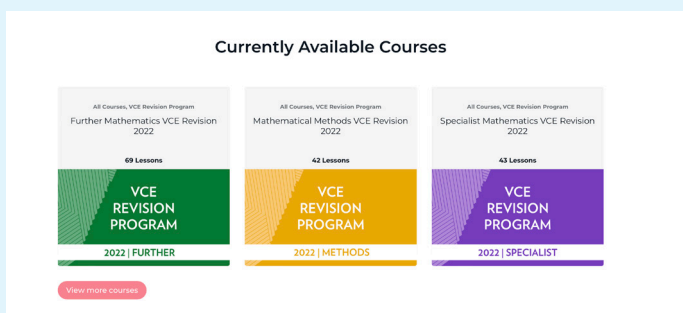
- Online course updated and improved with videos being filmed at MAV with professional equipment and videographer.
- High student engagement, with 1738 students taking part:
 - Further Mathematics had over 1000 enrolments,
 - Mathematical Methods over 780 enrolments, and
 - Specialist Mathematics over 200 enrolments.
- Access provided to teachers new to VCE to enhance their teaching knowledge. Over 190 teachers registered.

The VCE Revision Program was once again a success, with a number of schools enrolling their entire cohort of students, alongside various individuals signing themselves up for access. Schools appreciate the high-quality content, including videos from highly experienced assessors that ensure accuracy and clear instruction for students in how to succeed in mathematics exams. Despite this success, the enrolment numbers were lower than in 2020 due to the Victorian Department of Education and Training no longer providing funding for regional and rural schools to participate in VCE Revision Programs. Even so, MAV was extremely happy with the high use of the platform which we expect to grow further.

In 2021 the VCE Revision Program content was enhanced with further questions and improved videos to ensure the product remains as useful and professional as possible.

As a new opportunity in 2021, the platform was opened to teachers new to VCE who wanted to upgrade their VCE teaching knowledge and skills over December to April. This was a great success with many teachers accessing the content and commenting on how useful it was. This is now planned to be an ongoing opportunity in future.

The VCE Revision Program will be upgraded in 2022 ready for the introduction of new study designs in 2023. This will include creating content for new Foundation Mathematics which will be expanded to Units 3 and 4, allowing an opportunity for MAV to have new content to cater for this cohort of students.



The Thinkific learning management system.

VCE revision program testimonials

Students:

- *One of the best courses worth the time and every penny spent. Comprehensive and easy to follow.*
- *Maths was not my favourite subject in school, so I found it really difficult to know how to revise for the further maths exam. MAV's online revision program was a life saver, I was able to understand the format of the final exam, as well as my strengths and weaknesses I needed to work on to prepare. Highly recommend!*
- *MAV has provided me with a very thorough and helpful platform that allowed me to fully understand the maths content through its application-based strategy. Unlike teachers and other like services, MAV focused on applying this content, rather than simply learning it. This allowed me to answer exam questions with confidence and perform highly during VCE exams!*
- *The further maths study videos provided by MAV have been super helpful. They're clear and easy to understand and have helped me feel much more confident in the upcoming exams and in the quality of my bound reference! I would definitely recommend these lectures to future VCE students!*
- *The MAV Further Maths Revision Course was so engaging and easy to understand. It allowed me to revise content easily and in detail, and also allowed me to perform my best in the exams. This course is awesome as it just works.*

Teachers

- *This course has been a fantastic way for me to immerse myself in VCE Methods. I learnt a lot of tricks along the way, particularly with respect to the use of my Classpad. I would highly recommend it to all beginning teachers teaching Methods from Year 10 to 12.*
- *I wish I had access to a course like this prior to my first attempt at teaching Specialist Maths. It would have made it so much easier to teach and I believe that my students would have been far better prepared for their exams.*

GIRLS IN STEM

KEY ACHIEVEMENTS

- Successful move to online delivery for first time after cancellation in 2020.
- Over 200 students participated from 16 schools.
- A variety of speakers provided in-depth stories of being women in STEM.
- Hands-on activities delivered virtually reinforced stem skills and engagement.
- FORD remained as a gold sponsor in 2021.



MAV's Girls in STEM event is designed to share stories from women who are paving the way for students to flourish in STEM careers. This event explores females in STEM careers with an emphasis on the importance of mathematics required for success. Students heard from leading industry experts in

a range of fields about their experiences working in a STEM focused career including:

- Priyani Madan, Senior Civil Engineer, ARUP
- Suzanne Murphy, Senior Leader in Market Research, Modelez
- Emma Peel, Engineer, FORD
- Casey C, Data Engineer, Australian Federal Police
- Gem Lloyd, Meteorologist, Bureau of Meteorology

A virtual interactive panel discussion followed the individual presentations. Students then participated in two virtual hands-on activities that required curiosity and creativity. Schools were posted materials ahead of the event which students could use to engage in the activities. Each student experienced both of the following activities.

- Housing Design Challenge: A creative, hands-on workshop designed by Engineers without Borders and ARUP to open students' minds as they are challenged with the task of creating appropriate and sustainable housing in developing countries.
- Kinetic Energy Transfer Investigation: A hands on workshop designed by Questacon to investigate the transfer of motion – double bouncing balls.



PUBLICATIONS

COMMITTEE MEMBERS

Louise Gray (Editor, *Common Denominator* and design layout and marketing for all publications), Angela Rogers (Editor, *Prime Number*), Roger Walter (Editor, *Vinculum*), Jen Bowden (Executive Officer).

JOURNALS

KEY ACHIEVEMENTS

Prime Number

Angela Rogers has continued as editor of *Prime Number*. She has continued to bring her personal touch to the publication introducing new columns such as:

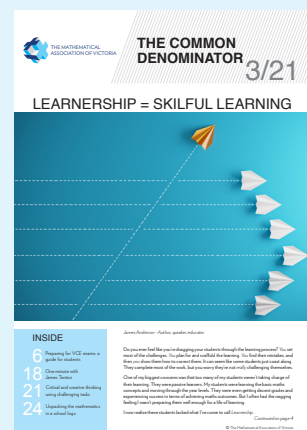
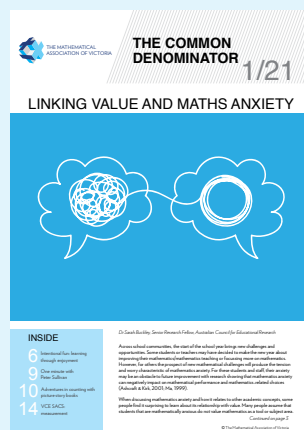
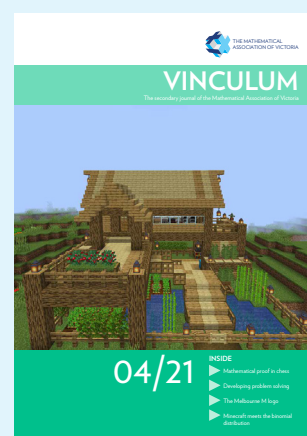
- **Maths in the workplace:** In each issue an interview with member of the public is published. It unpacks how they feel about maths and how they use maths in their career. The aim of this is to highlight the importance of quality maths teaching and where maths is used in our community.
- **Numeracy leaders corner:** This is a new addition to each issue, an interview with a Numeracy Leader is published, detailing their school, role and any resources/advice they would like to share. The leader is encouraged to write a short article highlighting something they are working on in maths at their school.

Vinculum

- At the end of 2021 Roger Walter announced his retirement as editor of *Vinculum*, with his last official edition being Term 1 of 2022. Roger's service of over 11 years has made an outstanding contribution to *Vinculum* and mathematics education.
- With regular columns such as the Passionless Problem and a variety of innovative, relevant and at times controversial topics, *Vinculum* has continued to impress its readership in 2021. We thank Roger for his service and leaving the publication as a valued resource.

Common Denominator

- Louise Gray has continued as editor highlighting outstanding practices in mathematics education across Victoria. She covered topics such as learnership and thinking practices to maths anxiety and indigenous practices in mathematics education.
- Louise has been able to craft excellent articles showcasing exemplar lessons and teaching across Victorian classrooms. We have used the publication to promote MAV Professional Learning and Student Activities along with expanding resources to support teachers and students.



MAV's Journals and magazine continue to be a highly sought-after resources, with articles often used in university course packs for pre-service teachers. Contributors vary widely across our sector and bring diversity and a great range of content to readers. Looking to the future, MAV will begin to identify opportunities for digital versions to be created that are more forward looking, including search and other functionality to enhance the delivery of our journals further, alongside printed copies.

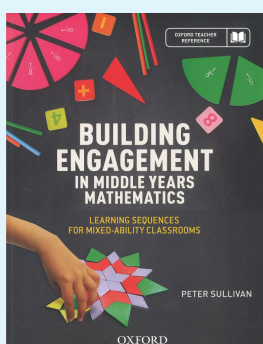
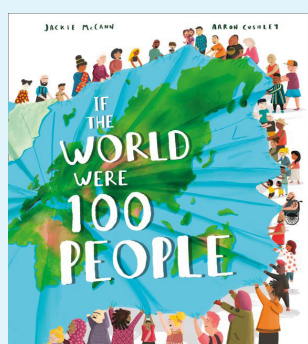
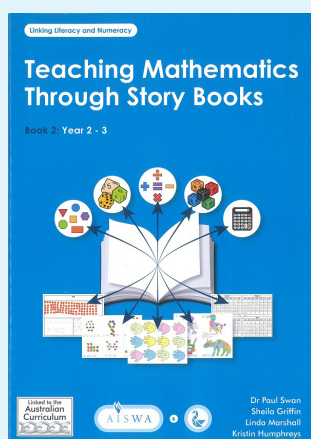
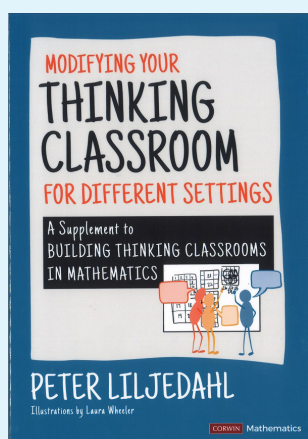
MAV SHOP

KEY ACHIEVEMENTS

- MAVshop sales down on prior years due to COVID restrictions impacting sales
- Great range of new titles secured ready for 2022 return of schools to the classroom
- 311 hand-picked quality products available for purchase across all years of schooling!
- 32 new titles introduced, plus:
 - Access to MAV21 Conference recordings
 - 2020 VCE Exam solutions
 - 2021 SAC Suggested Starting Points and Practice Exams

MAVshop sales in 2021 were unfortunately reduced compared to the few years prior. Due to the ongoing COVID restrictions school purchasing slowed further and sales patterns were completely different to historic years. Furthermore, MAV was unable to hold any physical stores at events which would normally contribute to a proportion of sales. Despite this, sales still held up at a reasonable level, and a number of new products were sourced in preparation for the 2022 school year.

We are already seeing an increase in sales compared to the previous February now that schools have returned to face-to-face learning. We expect MAVshop to remain a strong part of the Association's services and support for educators due to its hand-picked and curated collection of high-quality resources.



VCE RESOURCES

KEY ACHIEVEMENTS

The sale of VCE products continues to be a very important part of the MAVshop, with 12 new resources published, including:

- Solutions to 2020 VCAA exams published for Further Mathematics, Mathematical Methods and Specialist Mathematics and All Studies.
- 2021 SAC: SAC Suggested Starting points, Further Mathematics, Mathematical Methods and Specialist Mathematics and All Studies.
- 2021 VCE Trial exams for Further Mathematics, Mathematical Methods and Specialist Mathematics and All Studies.

The sales of VCE products remained stable compared to previous years due to schools depending upon these resources for delivering the programs. As usual pre-sales of VCE exams started months in advance. The VCAA exam solutions and SAC starting points are published in time to be integrated into the VCE professional learning program. They are both sold as stand-alone products and used in the professional learning events during term one. MAV's practice exams are regarded as some of the highest quality available due to our highly experienced author team consisting of a group of leading assessors and authors.



PROJECTS AND PARTNERSHIPS

VICTORIAN DEPARTMENT OF EDUCATION AND TRAINING

MAV was extremely pleased to continue the delivery of various projects in collaboration with funding from the Victorian Department of Education and Training (DET).

MAV has delivered upon its requirements for the Strategic Partnerships Program (SPP), and the Victorian Challenge and Enrichment Series. MAV also received funding for the other initiatives, usually related to developing exemplar resources for maths educators across primary and secondary schools as outlined below.

MAV also worked with the Department in various other projects throughout the year. We would like to thank the Department for their ongoing support as a funding partner and sponsor for MAV events as we continue to work to improve educational outcomes throughout Victoria.

Many of these significant programs will continue throughout 2022, and MAV will be promoting many of the resources it has collaboratively produced.



SPECIAL PARTNERSHIP PROJECTS MATHS CAMPS

KEY ACHIEVEMENTS

- Successfully delivered a virtual camp for the second time
- 24 regional and rural students attended
- Industry partners highly engaged.

In 2021 the MAV again hosted a successful Mathematics Camp for Year 10 Regional students, and a virtual format for the second year running.

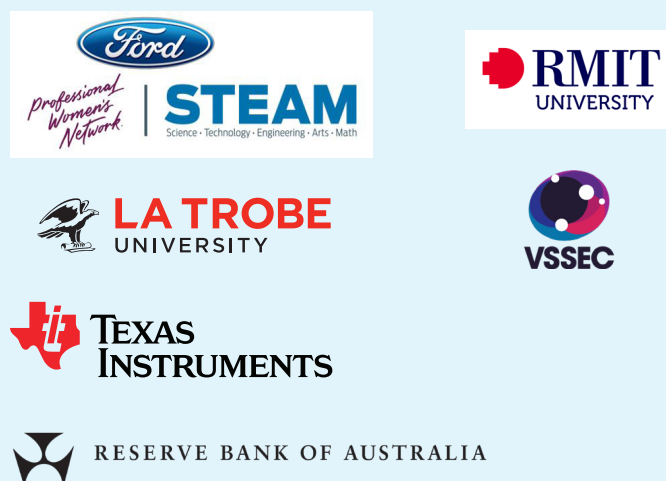
The mathematics camp brings together high potential rural and regional students to experience what a career in some of the most exciting organisations in the STEM industry looks like. A group of 24 Year 10 regional students were selected via an application process to participate in a Virtual Mathematics Camp, held during the Term 3 holidays.

The aim of the program is to provide an opportunity for students to gather with like-minded peers and work in small groups to explore hands-on, industry problems. Students work in a team to complete a real-world mathematics project. Four organisations utilising mathematics in different ways partnered with MAV: Ford, Reserve Bank Australia, Texas Instruments, and the Victorian Space Science Education Centre (VSSEC).

Each industry provided students with a project investigation and delivered many opportunities for students to be exposed to people from various facets of the industry. Presentations featured speakers not only from different parts of Australia but also from around the world - TI presenters were from Melbourne, Western Australia and Dallas, Texas.

Students also received daily mentoring by mathematicians from La Trobe University and RMIT University and from industry representatives. Students developed their project presentation and solution as a team, developing 21st century skills including communication, problem solving and creative and critical thinking. The open-ended projects stretched the application of mathematics past students' usual experience and challenged them to come up with innovative solutions. The week culminated in students presenting their project findings in the presence of the industry partners, invited guests and parents. Once again feedback was overwhelmingly positive, with students highly engaged in the mathematics and projects, and also with each other in a like-minded community of learners.

Industry partners



"The camp was a fantastic opportunity to learn more about mathematics and careers in mathematics and a great way to spend the last week of the holidays. Although it would have been better in person, it was a truly worthwhile and enjoyable experience. Thank you to everyone involved for your support and work in making the camp happen despite COVID."

"The camp was great!! It introduced me to 4 different fields of practical mathematical uses in work-force jobs, along with introducing me to mathematical professors who enlightened me about how maths is applicable in general situations along with its possible societal use."

"It's helped me, especially after talking to the panel to be more confident in my choice of methods and in believing that I can truly succeed."

SPECIAL PARTNERSHIP PROJECTS (SPP) ONLINE PROFESSIONAL LEARNING

KEY ACHIEVEMENTS

- Targets for online learning attendance and sessions exceeded enormously
- 15 separate professional learning opportunities delivered
- 993 Primary teachers involved in online professional learning
- 1187 Secondary teachers involved in online professional learning
- Various sessions available to view on demand

In 2021 attendance at virtual professional learning grew further upon the prior year. Teachers began to recognise the value of short sharp sessions they could access from their school or home whilst being unable to attend face-to-face events during COVID restrictions.

These programs provided great exposure and access for regional and rural teachers to professional learning who would otherwise not have access to such experiences. Approximately 50% of participants were from regional and rural schools, with the proportion of metropolitan attendees growing in 2021. Alongside the opportunity to learn sessions also provided an opportunity for educators to share and network. A list of workshop topics delivered is provided in the professional learning section of this report.

MAV exceeded its attendance targets substantially due to the popular demand of workshops on a range of topics. MAV staff also engaged a variety of expert presenters to ensure a varied and relevant program to attract teachers.

Feedback surveys indicated that the sessions MAV delivered, strongly met participant needs.

MAV's ability to deliver interactive, virtual experiences (not just a talking head!) has improved substantially. Our presenters have gained new skills, to deliver meaningful and powerful professional learning regardless of the format. We will go forward better equipped and stronger in supporting our educators across the state - reducing our traditional metropolitan focus while providing greater equity of access.

VICTORIAN MATHS CHALLENGE AND ENRICHMENT SERIES

KEY ACHIEVEMENTS

- Funding was received for two projects; the Victorian Coding Challenge (VCC) and Games Days.
- Second round of the Victorian Coding Challenge completed during 2021. Over 1700 students participated.
- Games Days kicked off in 2021 in virtual format with much success and high engagement.

The Victorian Coding Challenge

2021 was another successful year for the Victorian Coding Challenge (VCC), with over 1700 students from government schools across Years 5-10 taking part. The feedback we received from teachers and students alike has been very encouraging, and we hope to keep this program going for many years to come.

The Coding Challenge consists of two stages. In stage 1 students receive a virtual kit with a series of fun and engaging coding tasks. Three different kits are created: Years 5 & 6, Years 7 & 8 and Years 9 & 10. Students participate in these tasks via a user-friendly online platform – accessible from school or home. The challenges require students to apply coding and algorithmic thinking in order to solve interesting problems.

These tasks can be conducted either at school or during school holidays, at the student's pace. Scaffolding and coding resources are provided in case students need some support along the way. Teachers also have access to suggested solutions. Stage 2 allows students to compete with others in their year level category in a state-wide coding competition. Students will be competing in groups of 2 - 4, in an open-ended challenge, with an engaging, 'real-world' application. They present their entries to be judged and will be eligible to win some prizes.

MAV delivered the VCC in collaboration with Digital Learning and Teaching Victoria (DLTV). In 2022, we hope to incorporate some face-to-face challenges for stage 2, and planning is well under way for an exciting competitive student experience. The VCC is part of the Victorian Challenge and Enrichment Series funded by the Victorian Department of Education and Training.

Games Days

Delivering the Victorian Challenge and Enrichment Series games days in 2021 were quite a challenge, with COVID restrictions postponing planned face-to-face events causing events to transition to a of new virtual format. 2021 was first year that games days have been held virtually and much planning and thought was given into how to create

an engaging and successful day for students. Feedback was extremely positive, and the variety of activities delivered was varied, challenging and interesting. Interactive games and puzzles were included for the first time that students could work on within their teams either at school or working from home.

MAV would like to thank 'Think Square' for their support in delivering the virtual games days.

MIDDLE YEARS MATHS CHALLENGES (MYMC)

KEY ACHIEVEMENTS

- 75 activities successfully piloted in classrooms
- 10 activities adapted to support below level students
- MAV To help rollout in 2022 with PL and support

The Middle Years Maths Challenges (MYMC) aims to support student engagement in mathematics across Years 5–9. MYMC - Stage 1 involved designing a series of 75 highly engaging mathematics challenges on topics with which students identified. The MYMC comprises 13 Challenges for each year level as well as 10 Challenges designed specifically for students working below level. All MYMC are aligned to the Victorian Curriculum, incorporate the proficiencies and demonstrate best practice in applying these to the teaching of mathematics.

In addition, the MYMC support teachers to assess student learning against the curriculum and support students to engage positively with mathematics learning and reduce mathematics anxiety in students across the middle years.

LEARNING SEQUENCES

KEY ACHIEVEMENTS

- Five learning sequences developed and written for the Victorian Department of Education and training targeting Years 5 to 8
- Further learning sequences for year to be developed in 2022

This project provides guidance to teachers on implementing the curriculum, showcasing a variety of excellent resources and teaching strategies that can be used to engage students while improving mathematics and numeracy outcomes. MAV is pleased to be working collaboration with the Victorian Department of education to develop and promote further learning sequences that will support teachers in improving their practice whilst further engaging students in mathematics and numeracy. The learning sequences were developed and written by expert classroom educators who worked in collaboration with MAV staff and will be included as part of the Mathematics Curriculum Companion.

MIDDLE YEARS LITERACY AND NUMERACY STRATEGY (MYLNS)

KEY ACHIEVEMENTS

- Successful consortium delivering in collaboration with VALAD Solution
- Online Learning Community (OLC) workshops delivered throughout the year, produced for teachers to help them successfully deliver interventions to MYLNS students
- Further work continues in 2022

The Middle Years Literacy and Numeracy Support (MYLNS) initiative provides funding to government secondary schools, to improve outcomes for students who are at risk of finishing school without the literacy or numeracy skills they need for future work, education and training. Students are identified as being below national minimum standards in NAPLAN. Through the MYLNS initiative, schools are provided funding to release existing teachers as Literacy Improvement Teachers and/or Numeracy Improvement Teachers. In a small number of cases, schools may instead have access to a Network Teacher who works across up to four schools in place of a Literacy or Numeracy Improvement Teacher.

Due to COVID, online learning community workshops were delivered throughout the year by MAV staff. These provided a forum for support and advice to help teachers on the ground implement support for students.

This work continues in 2022 as we again collaborate with VALAD Solutions to implement this important initiative.

THE HUDDLE AND NBL: GOAL!

KEY ACHIEVEMENTS

- The MAV and The Huddle partnered to produce six independent GOAL! lessons for Year 3- 6 students that integrated basketball into the classroom to engage students in STEM learning and skill development.
- The lessons were written by MAV contractors and trialled in schools across Victoria. Feedback from teachers trialling the lessons and The Huddle Community of Practice was used to enhance the lessons.
- The lessons will be promoted and offered to Victorian primary schools across 2022. A strong relationship has been created between MAV and The Huddle with future projects planned.



THE MATHEMATICAL ASSOCIATION OF VICTORIA

FINANCIAL STATEMENTS
FOR THE YEAR ENDED 31 JANUARY 2022
ACN 004 892 755

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THE MATHEMATICAL ASSOCIATION OF VICTORIA

ABN 34 004 892 755

DIRECTORS' REPORT

Your directors present this report on The Mathematical Association of Victoria for the year ended 31 January 2022.

Directors

The names of each person who has been a director during the year and to the date of this report are:

Ms Nadia Abdelal
Qualifications Mathematics Education Consultant

Ms Claire Delaney
Qualifications Teacher

Dr Ann Downton
Qualifications University Lecturer

Mrs Kate Copping
Qualifications University Lecturer
Special responsibilities Vice President

Dr Dan Cloney
Qualifications Senior Research Fellow
Special responsibilities Chair of Finance Committee

Ms Michaela Epstein
Qualifications Mathematics Education Specialist

Mrs Louise Gray
Qualifications (Appointed 4 September 2019)
Marketing/Sponsorship

Mr Peter Karakoussis
Qualifications Teacher

Ms Allason McNamara
Qualifications Teacher

Mr Michael O'Connor
Qualifications Teacher
Special responsibilities President

Mr Juan Ospina Leon
Qualifications Teacher
Special responsibilities Chair of Finance Committee

Ms Kathryn Rodriguez
Qualifications Teacher, School Leader

THE MATHEMATICAL ASSOCIATION OF VICTORIA
ABN 34 004 892 755

DIRECTORS' REPORT (cont.)

Directors (cont.)

Ms Kerryn Sandford	
Qualifications	Teacher, School Leader/Principal
Dr Max Stephens	
Qualifications	University Research Fellow

Directors have been in office since the start of the financial year to the date of this report unless otherwise stated.

Company secretary

The following person held the position of Company secretary at the end of the financial year:

Mr Peter Saffin (Chief Executive Officer)

Principal activities

The principal activity of The Mathematical Association of Victoria during the financial year was the provision of services aimed at promoting mathematics within the community.

No significant changes in the nature of the Company's activity occurred during the financial year.

Members' guarantee

The Mathematical Association of Victoria is a company limited by guarantee. In the event of, and for the purpose of winding up of the company, the amount capable of being called up from each member and any person or association who ceased to be a member in the year prior to the winding up, is limited to \$20 for each member, subject to the provisions of the company's constitution.

At 31 January 2022 the collective liability of members was \$37,220 (2021: \$28,260).

Operating results and review of operations for the year

The loss from ordinary activities after income tax amounted to \$2,655 (2020: surplus \$345,078).

Review of operations

The results of the operations of the Company during the financial year reflect decisions taken by directors to further refine the mix of the entity's services within the ongoing framework of strategic planning and priority setting.

Significant changes in state of affairs

There have been no significant changes in the state of affairs of the Company during the year.

Events after the reporting date

No matters or circumstances have arisen since the end of the financial year which significantly affected or may significantly affect the operations of the Company, the results of those operations or the state of affairs of the Company in future financial years.

THE MATHEMATICAL ASSOCIATION OF VICTORIA

ABN 34 004 892 755

DIRECTORS' REPORT (cont.)

Future developments and results

The Company expects to maintain the present status and level of operations and hence there are no likely developments in the Company's operations.

Environmental issues

The Company's operations are not regulated by any significant environmental regulations under a law of the Commonwealth or of a state or territory of Australia.

Options

No options over issued shares or interests in the Company were granted during or since the end of the financial year and there were no options outstanding at the date of this report.

Meetings of directors

During the financial year, 6 meetings of directors (including committees of directors) were held. Attendances by each director during the year were as follows:

Board Member	Meetings eligible to attend	Meetings attended
Ms Nadia Abdelal	4	4
Ms Claire Delaney	6	6
Dr Ann Downton	2	2
Mrs Kate Copping	6	6
Dr Dan Cloney	6	6
Ms Michaela Epstein	6	5
Mrs Louise Gray	6	5
Mr Peter Karakoussis	6	6
Ms Allason McNamara	2	2
Mr Michael O'Connor	6	6
Mr Juan Ospina Leon	2	2
Ms Kathryn Rodriguez	6	4
Ms Kerry Sandford	4	4
Dr Max Stephens	6	6

Indemnification and insurance of officers and auditors

The company has paid an insurance premium to indemnify the officers acting in their capacity as officers of the company. During or since the end of the financial year, no other indemnities have been given in relation to the officers of the company.

No indemnities have been given or insurance premiums paid, during or since the end of the financial year, for any person who is or has been an officer or auditor of The Mathematical Association of Victoria.

THE MATHEMATICAL ASSOCIATION OF VICTORIA
ABN 34 004 892 755

DIRECTORS' REPORT (cont.)

Proceedings on behalf of company

No person has applied for leave of court to bring proceedings on behalf of the Company or intervene in any proceedings to which the Company is a party for the purpose of taking responsibility on behalf of the Company for all or any part of those proceedings.

The entity was not a party to any such proceedings during the year.

Auditor's Independence Declaration

A copy of the auditor's independence declaration as required under section 307C of the *Corporations Act 2001* is set out on page 5.

Signed in accordance with a resolution of the Board of Directors:



Director

Dated:



Director

Dated:

THE MATHEMATICAL ASSOCIATION OF VICTORIA
ABN 34 004 892 755

AUDITOR'S INDEPENDENCE DECLARATION UNDER SECTION
307C OF THE CORPORATION ACT 2001

I declare that to the best of my knowledge and belief, during the year ended 31 January 2022 there have been:

- i. no contraventions of the auditor independence requirements as set out in the Corporations Act 2001 in relation to the audit; and
- ii. no contraventions of any applicable code of professional conduct in relation to the audit.



Sean Denham

Dated: *13th April 2022*
Sean Denham & Associates
Suite 1, 707 Mt Alexander Road
Moonee Ponds VIC 3039

THE MATHEMATICAL ASSOCIATION OF VICTORIA
ABN 34 004 892 755

STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME
FOR THE YEAR ENDED
31 JANUARY 2022

	Note	2022	2021
		\$	\$
Revenue	2	1,955,272	2,063,852
Other revenue	2	44,562	313,104
Employee benefits expense		(927,040)	(856,030)
Depreciation and amortisation expense		(60,691)	(57,600)
Impairment losses on financial assets		(5)	(1,275)
Membership expenses		(79,911)	(97,366)
Publications and journals		(226,391)	(216,161)
Annual Conference		(88,427)	(145,277)
Student activities		(38,058)	(16,090)
Professional development		(166,682)	(133,238)
Other expenses		(415,284)	(508,841)
		<hr/>	<hr/>
Profit for the year		(2,655)	345,078
Other comprehensive income for the year		<hr/>	<hr/>
		-	-
		<hr/>	<hr/>
Total comprehensive income/(loss) for the period		<u>(2,655)</u>	<u>345,078</u>

THE MATHEMATICAL ASSOCIATION OF VICTORIA
ABN 34 004 892 755

STATEMENT OF FINANCIAL POSITION
AS AT 31 JANUARY 2022

	Note	2022 \$	2021 \$
CURRENT ASSETS			
Cash and cash equivalents	3	1,008,777	889,964
Trade and other receivables	4	59,712	158,323
Inventories	5	39,574	54,782
Other assets	6	44,594	44,478
TOTAL CURRENT ASSETS		<u>1,152,657</u>	<u>1,147,547</u>
NON-CURRENT ASSETS			
Property, plant and equipment	7	1,720,668	1,677,710
Intangible assets	8	82,248	108,285
TOTAL NON-CURRENT ASSETS		<u>1,802,916</u>	<u>1,785,995</u>
TOTAL ASSETS		<u>2,955,573</u>	<u>2,933,542</u>
CURRENT LIABILITIES			
Trade and other payables	9	140,890	119,844
Other liabilities	10	257,534	297,657
Employee benefits	11	129,913	108,084
TOTAL CURRENT LIABILITIES		<u>528,337</u>	<u>525,585</u>
NON-CURRENT LIABILITIES			
Employee benefits	11	-	11,804
TOTAL NON-CURRENT LIABILITIES		<u>-</u>	<u>11,804</u>
TOTAL LIABILITIES		<u>528,337</u>	<u>537,389</u>
NET ASSETS		<u>2,427,236</u>	<u>2,396,153</u>
MEMBERS' FUNDS			
Retained surplus/(deficit)		1,046,967	1,049,622
Reserves	12	1,380,269	1,346,531
TOTAL MEMBERS' FUNDS		<u>2,427,236</u>	<u>2,396,153</u>

THE MATHEMATICAL ASSOCIATION OF VICTORIA
ABN 34 004 892 755

STATEMENT OF CHANGES IN EQUITY
FOR THE YEAR ENDED
31 JANUARY 2022

	Asset Revaluation Reserve \$	Retained Earnings \$	Total \$
Balance at 1 February 2020	1,346,531	704,544	704,544
Comprehensive Income			
Profit for the year	-	345,078	345,078
Other comprehensive income	-	-	-
Total comprehensive income	-	345,078	345,078
Balance at 31 January 2021	1,346,531	1,049,622	2,396,153
Comprehensive Income			
Deficit attributable to the entity	-	(2,655)	(2,655)
Other comprehensive income	33,738	-	-
Total comprehensive income	33,738	(2,655)	(2,655)
Balance at 31 January 2022	<u>1,380,269</u>	<u>1,046,967</u>	<u>2,393,498</u>

THE MATHEMATICAL ASSOCIATION OF VICTORIA
ABN 34 004 892 755

STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED
31 JANUARY 2022

	Note	2022 \$	2021 \$
Cash flows from operating activities			
Receipts from customers		2,055,805	2,338,104
Payments to suppliers and employees		(1,895,635)	(2,017,518)
Interest received		2,517	2,340
Net cash provided by operating activities	11	162,687	322,926
Cash flows from investing activities			
Payments for purchase of property and equipment		(43,874)	(17,351)
Net cash used in investing activities		(43,874)	(17,351)
Net increase in cash held		118,813	305,575
Cash at the beginning of the year		889,964	584,389
Cash at the end of the year	3	1,008,777	889,964

THE MATHEMATICAL ASSOCIATION OF VICTORIA

ABN 34 004 892 755

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED

31 JANUARY 2022

The financial report covers The Mathematical Association of Victoria as an individual entity. The Mathematical Association of Victoria is a not-for-profit Company limited by guarantee, incorporated and domiciled in Australia.

The functional and presentation currency of The Mathematical Association of Victoria is Australian dollars.

Comparatives are consistent with prior years, unless otherwise stated.

Basis of Preparation

In the Directors' opinion, the Company is not a reporting entity since there are unlikely to exist users of the financial statements who are not able to command the preparation of reports tailored so as to satisfy specifically all of their information needs. This special purpose financial report has been prepared to meet the reporting requirements of the *Australian Charities and Not-for-profits Commission Act 2012*.

The financial statements have been prepared in accordance with the recognition and measurement requirements of the Australian Accounting Standards and Accounting Interpretations, and the disclosure requirements of AASB 101 *Presentation of Financial Statements*, AASB 107 *Statement of Cash Flows*, AASB 108 *Accounting Policies, Changes in Accounting Estimates and Errors* and AASB 1054 *Australian Additional Disclosures*.

The financial statements have been prepared on an accruals basis and are based on historical costs modified, where applicable, by the measurement at fair value of selected non-current assets, financial assets and financial liabilities.

Significant accounting policies adopted in the preparation of these financial statements are presented below and are consistent with prior reporting periods unless otherwise stated.

Summary of Significant Accounting Policies

(a) Revenue and other income

Revenue from contracts with customers

The core principle of AASB 15 is that revenue is recognised on a basis that reflects the transfer of promised goods or services to customers at an amount that reflects the consideration the Company expects to receive in exchange for *those goods or services*. Revenue is recognised by applying a five-step model as follows:

1. Identify the contract with the customer
2. Identify the performance obligations
3. Determine the transaction price
4. Allocate the transaction price to the performance obligations
5. Recognise revenue as and when control of the performance obligations is transferred

Generally the timing of the payment for sale of goods and rendering of services corresponds closely to the timing of satisfaction of the performance obligations, however where there is a difference, it will result in the recognition of a receivable, contract asset or contract liability.

None of the revenue streams of the Company have any significant financing terms as there is less than 12 months between receipt of funds and satisfaction of performance obligations.

THE MATHEMATICAL ASSOCIATION OF VICTORIA

ABN 34 004 892 755

NOTES TO THE FINANCIAL STATEMENTS

FOR THE YEAR ENDED

31 JANUARY 2022

Summary of Significant Accounting Policies (cont.)

(a) Revenue and other income (cont.)

Specific revenue streams

The revenue recognition policies for the principal revenue streams of the Company are:

Sale of goods

Revenue from the sale of goods is recognised upon the delivery of goods to customers.

Rendering of services

Revenue from the rendering of a service is recognised upon the delivery of the service to the customers.

Membership fees

Membership fees are recognised when invoiced.

Government grants

Government grants are recognised at fair value where there is reasonable assurance that the grant will be received and all grant conditions will be met. Grants relating to expense items are recognised as income over the periods necessary to match the grant to the costs they are compensating. Grants relating to assets are credited to deferred income at fair value and are credited to income over the expected useful life of the asset on a straight-line basis.

Government assistance

Government assistance has been received during the year under the JobKeeper, Cash Flow Boost and Victorian Government grant programs. Payments under these programs are recognised as revenue once the entity is entitled to receive the payments. A receivable is recognised at year end for any payments that the entity is entitled to that have not been received.

Other income

Other income is recognised on an accruals basis when the Company is entitled to it.

b. Goods and services tax (GST)

Revenue, expenses and assets are recognised net of the amount of goods and services tax (GST), except where the amount of GST incurred is not recoverable from the Australian Taxation Office (ATO).

Receivables and payable are stated inclusive of GST.

c. Inventories

Inventories are measured at the lower of cost and net realisable value.

d. Property, plant and equipment

Each class of property, plant and equipment is carried at cost or fair value less, where applicable, any accumulated depreciation and impairment.

Land and buildings

Land and buildings are measured using the revaluation model.

Assets measured using the revaluation model are carried at fair value at the revaluation date less any subsequent accumulated depreciation and impairment losses. Revaluations are performed whenever there is a material movement in the value of an asset under the revaluation model.

THE MATHEMATICAL ASSOCIATION OF VICTORIA
ABN 34 004 892 755

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED
31 JANUARY 2022

Summary of Significant Accounting Policies (cont.)

d. Property, plant and equipment (cont.)

Plant and equipment

Plant and equipment are measured using the cost model.

Depreciation

Property, plant and equipment is depreciated on a straight-line basis over the assets useful life to the Company, commencing when the asset is ready for use.

The depreciation rates used for each class of depreciable asset are shown below:

Fixed asset class	Depreciation rate
Buildings	2-12%
Plant and Equipment	12-25%
Furniture, Fixtures and Fittings	9%
Computer Software	20-25%

At the end of each annual reporting period, the depreciation method, useful life and residual value of each asset is reviewed. Any revisions are accounted for prospectively as a change in estimate.

Gains and losses on disposals are determined by comparing proceeds with the carrying amount. These gains or losses are included in the statement of profit or loss and other comprehensive income. When revalued assets are sold, amounts included in the revaluation reserve relating to that asset are transferred to retained earnings.

e. **Financial instruments**

Financial instruments are recognised initially on the date that the Company becomes party to the contractual provisions of the instrument.

On initial recognition, all financial instruments are measured at fair value plus transaction costs (except for instruments measured at fair value through profit or loss where transaction costs are expensed as incurred).

Financial assets

All recognised financial assets are subsequently measured in their entirety at either amortised cost or fair value, depending on the classification of the financial assets.

Classification

On initial recognition, the Company classifies its financial assets into the following categories, those measured at:

- amortised cost

Financial assets are not reclassified subsequent to their initial recognition unless the Company changes its business model for managing financial assets.

THE MATHEMATICAL ASSOCIATION OF VICTORIA
ABN 34 004 892 755

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED
31 JANUARY 2022

Summary of Significant Accounting Policies (cont.)

e. Financial instruments (cont.)

Financial assets (cont.)

Amortised cost

Assets measured at amortised cost are financial assets where:

- the business model is to hold assets to collect contractual cash flows; and
- the contractual terms give rise on specified dates to cash flows are solely payments of principal and interest on the principal amount outstanding.

The Company's financial assets measured at amortised cost comprise trade and other receivables and cash and cash equivalents in the statement of financial position.

Subsequent to initial recognition, these assets are carried at amortised cost using the effective interest rate method less provision for impairment.

Interest income, foreign exchange gains or losses and impairment are recognised in profit or loss. Gain or loss on derecognition is recognised in profit or loss.

Impairment of financial assets

Impairment of financial assets is recognised on an expected credit loss (ECL) basis for the following assets:

- financial assets measured at amortised cost

When determining whether the credit risk of a financial assets has increased significant since initial recognition and when estimating ECL, the Company considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis based on the Company's historical experience and informed credit assessment and including forward looking information.

The Company uses the presumption that an asset which is more than 30 days past due has seen a significant increase in credit risk.

The Company uses the presumption that a financial asset is in default when:

- the other party is unlikely to pay its credit obligations to the Company in full, without recourse to the Company to actions such as realising security (if any is held); or
- the financial assets is more than 90 days past due.

Credit losses are measured as the present value of the difference between the cash flows due to the Company in accordance with the contract and the cash flows expected to be received. This is applied using a probability weighted approach.

THE MATHEMATICAL ASSOCIATION OF VICTORIA
ABN 34 004 892 755

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED
31 JANUARY 2022

Summary of Significant Accounting Policies (cont.)

e. Financial instruments (cont.)

Financial assets (cont.)

Trade receivables

Impairment of trade receivables have been determined using the simplified approach in AASB 9 which uses an estimation of lifetime expected credit losses. The Company has determined the probability of non-payment of the receivable and multiplied this by the amount of the expected loss arising from default.

The amount of the impairment is recorded in a separate allowance account with the loss being recognised in finance expense. Once the receivable is determined to be uncollectable then the gross carrying amount is written off against the associated allowance.

Where the Company renegotiates the terms of trade receivables due from certain customers, the new expected cash flows are discounted at the original effective interest rate and any resulting difference to the carrying value is recognised in profit or loss.

Other financial assets measured at amortised cost

Impairment of other financial assets measured at amortised cost are determined using the expected credit loss model in AASB 9. On initial recognition of the asset, an estimate of the expected credit losses for the next 12 months is recognised. Where the asset has experienced significant increase in credit risk then the lifetime losses are estimated and recognised.

Financial liabilities

The Company measures all financial liabilities initially at fair value less transaction costs, subsequently financial liabilities are measured at amortised cost using the effective interest rate method.

The financial liabilities of the Company comprise trade payables, bank and other loans and lease liabilities.

Bank overdrafts are secured by a first mortgage over the property at 16 Blyth Street, Brunswick.

f. Impairment of non-financial assets

At the end of each reporting period the Company determines whether there is an evidence of an impairment indicator for non-financial assets.

Where an indicator exists and regardless for indefinite life intangible assets and intangible assets not yet available for use, the recoverable amount of the asset is estimated.

Where assets do not operate independently of other assets, the recoverable amount of the relevant cash- generating unit (CGU) is estimated.

The recoverable amount of an asset or CGU is the higher of the fair value less costs of disposal and the value in use.

Value in use is the present value of the future cash flows expected to be derived from an asset or cash- generating unit.

Where the recoverable amount is less than the carrying amount, an impairment loss is recognised in profit or loss.

Reversal indicators are considered in subsequent periods for all assets which have suffered an impairment loss.

THE MATHEMATICAL ASSOCIATION OF VICTORIA
ABN 34 004 892 755

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED
31 JANUARY 2022

Summary of Significant Accounting Policies (cont.)

g. Intangible assets

Software

Software has a finite life and is carried at cost less any accumulated amortisation and impairment losses. It has an estimated useful life of between one and four years.

h. Cash and cash equivalents

Cash and cash equivalents comprises cash on hand, demand deposits and short-term investments which are readily convertible to known amounts of cash and which are subject to an insignificant risk of change in value.

i. Employee benefits

Provision is made for the Company's liability for employee benefits arising from services rendered by employees to the end of the reporting period. Employee benefits that are expected to be wholly settled within one year have been measured at the amounts expected to be paid when the liability is settled.

Employee benefits expected to be settled more than one year after the end of the reporting period have been measured at the present value of the estimated future cash outflows to be made for those benefits.

Obligations for contributions to defined contribution superannuation plans are recognised as an employee benefit expense in profit or loss in the periods in which services are provided by employees.

j. Adoption of new and revised accounting standards

The Company has adopted all standards which became effective for the first time at 31 January 2021, the adoption of these standards has not caused any material adjustments to the reported financial position, performance or cash flow of the Company.

Critical Accounting Estimates and Judgments

The directors make estimates and judgements during the preparation of these financial statements regarding assumptions about current and future events affecting transactions and balances.

These estimates and judgements are based on the best information available at the time of preparing the financial statements, however as additional information is known then the actual results may differ from the estimates.

THE MATHEMATICAL ASSOCIATION OF VICTORIA
ABN 34 004 892 755

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED
31 JANUARY 2022

Note 2: Revenue and Other Income
Revenue from continuing operations

	2022	2021
	\$	\$
Revenue		
- Membership fees	406,963	393,838
- Seminars and conferences	280,220	304,415
- Student activities	154,429	142,467
- Publications and solutions	270,344	328,975
- Professional development	362,561	223,296
- Grants and sponsorship	480,755	670,861
	<u>1,955,272</u>	<u>2,063,852</u>
Other income		
- Interest	2,517	2,340
- Miscellaneous	14,045	14,764
- Government assistance	28,000	296,000
	<u>44,562</u>	<u>313,104</u>

Included in the above amounts are the following amounts received from Government;
Commonwealth Government Australian Taxation Office

	28,000	296,000
Victorian Department of Education and Training	297,976	213,831
	<u>325,976</u>	<u>509,831</u>

Note 3: Cash and cash equivalents

Cash at bank	110	231
Cash on hand	1,008,667	889,733
	<u>1,008,777</u>	<u>889,964</u>

Note 4: Trade and other receivables

Trade receivables	<u>59,712</u>	<u>158,323</u>
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The carrying value of trade receivables is considered a reasonable approximation of fair value due to the short-term nature of the balances.

The maximum exposure to credit risk at the reporting date is the fair value of each class of receivable in the financial statements.

Note 5: Inventories

CURRENT		
Publications - at cost	39,574	54,782
	<u>39,574</u>	<u>54,782</u>

THE MATHEMATICAL ASSOCIATION OF VICTORIA
ABN 34 004 892 755

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED
31 JANUARY 2022

	2022	2021
	\$	\$
Note 6: Other assets		
Prepayments	44,594	44,454
Accrued income	-	24
	<u>44,594</u>	<u>44,478</u>
Note 7: Property, plant and equipment		
LAND AND BUILDINGS		
Freehold Land - at fair value	1,380,269	1,346,531
Buildings - at cost	512,157	482,457
Less accumulated depreciation	(217,426)	(209,389)
	<u>294,731</u>	<u>273,068</u>
Total land and buildings	<u>1,675,000</u>	<u>1,619,599</u>
PLANT AND EQUIPMENT		
Plant and equipment - at cost	410,323	402,104
Less accumulated depreciation	(364,655)	(343,993)
	<u>45,668</u>	<u>58,111</u>
Total property, plant and equipment	<u>1,720,668</u>	<u>1,677,710</u>
Note 8: Intangible assets		
Software - at cost	752,389	746,434
Accumulated amortisation and impairment	(670,141)	(638,149)
	<u>82,248</u>	<u>108,285</u>
Note 9: Trade and other payables		
CURRENT		
Trade payables	26,162	20,728
GST payable	41,050	33,037
Accrued expenses	32,095	28,642
Other liabilities	41,583	37,437
	<u>140,890</u>	<u>119,844</u>
Note 10: Other liabilities		
CURRENT		
Memberships received in advance (net of subscriptions)	257,534	297,657

Included in the 2021 figure is an amount of \$50,278 received in advance from the Victorian Department of Education and Training, no income was received in advance from a Government department in 2022.

THE MATHEMATICAL ASSOCIATION OF VICTORIA
ABN 34 004 892 755

NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEAR ENDED
31 JANUARY 2022

	2022	2021
	\$	\$
Note 11: Employee benefits		
Current		
Provision for annual leave	63,789	60,215
Provision for long service leave	66,124	47,869
	<u>129,913</u>	<u>108,084</u>
Non-current		
Provision for long service leave	<u>-</u>	<u>11,804</u>
Note 12: Reserves		
Asset revaluation reserve	<u>1,380,269</u>	<u>1,346,531</u>
<p>The asset revaluation reserve records fair value movements on freehold land and building located in 61 Blyth Street, Brunswick held under the revaluation model.</p>		
Note 11: Reconciliation of cash flow from operations with surplus from ordinary activities after income tax		
(Deficit)/surplus after income tax expense	(2,655)	345,078
Non-cash flows in profit		
- depreciation	60,691	57,600
Changes in assets and liabilities:		
- Decrease/(increase) in trade and other receivables	98,611	(42,633)
- (increase) / decrease in inventories	15,208	(8,894)
- (increase) / decrease in other assets	(116)	-
- Increase/(decrease) in trade and other payables	21,046	(21,796)
- (Decrease) in amounts in advance	(40,123)	(484)
- Increase / (decrease) in employee benefits	10,025	(5,945)
Net cash provided by operating activities	<u>162,687</u>	<u>322,926</u>

Note 12: Comparative Figures

Where required by Accounting Standards, comparative figures have been adjusted to conform with changes in presentation for the current financial year.

When the Company applies an accounting policy retrospectively, makes a retrospective restatement or reclassifies items in its financial statements, a statement of financial position as at the beginning of the earliest comparative period must be disclosed.

Note 13: Company Details

The registered office and principal place of business of the Company is:
16 Blyth Street, Brunswick VIC 3056.

THE MATHEMATICAL ASSOCIATION OF VICTORIA
ABN 34 004 892 755

DIRECTORS' DECLARATION

The directors of the Company declare that:

1. The financial statements and notes, as set out on pages 1 to 12 are in accordance with the *Australian Charities and Not-for-profits Commission Act 2012* and:
 - (a) comply with Australian Accounting Standards and the *Australian Charities and Not-for-profits Commission Regulation 2013*; and
 - (b) give a true and fair view of the financial position as at 31 January 2022 and of its performance for the year then ended on that date of the Company.

2. In the directors' opinion there are reasonable grounds to believe that the Company will be able to pay its debts as and when they become due and payable.

This declaration is made in accordance with a resolution of the Board of Directors.



Director

Dated:



Director

Dated:

THE MATHEMATICAL ASSOCIATION OF VICTORIA

INDEPENDENT AUDIT REPORT TO THE MEMBERS OF
THE MATHEMATICAL ASSOCIATION OF VICTORIA

Opinion

I have audited the accompanying financial report, of The Mathematical Association of Victoria, which comprises the statement of financial position as at 31 January 2022, statement of changes in equity, statement of cash flows and the statement of profit or loss and other comprehensive income for the year then ended, notes comprising a summary of significant accounting policies and the directors' declaration.

In my opinion, the accompanying financial report of The Mathematical Association of Victoria has been prepared in accordance with Division 60 of the *Australian Charities and Not-for-profits Commission Act 2012 (ACNC Act)*, including:

- a) gives a true and fair view of the Company's financial position as at 31 January 2022 and of its financial performance for the year then ended; and
- b) complies with Australian Accounting Standards and Division 60 of the *Australian Charities and Not-for-profits Commission Regulation 2013*.

Basis for Opinion

I conducted my audit in accordance with Australian Auditing Standards. My responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Report section of my report.

I am independent of the company in accordance with the *Australian Charities and Not-for-profits Commission Act 2012* and the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110 Code of Ethics for Professional Accountants (the Code) that are relevant to my audit of the financial report in Australia.

I have also fulfilled my other ethical responsibilities in accordance with the Code.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Emphasis of Matter - Basis of Accounting

We draw attention to Note 1 to the financial report, which describes the basis of accounting. The financial report has been prepared for the purpose of fulfilling the Company's reporting responsibilities under the ACNC Act. As a result, the financial report may not be suitable for another purpose. My opinion is not modified in respect of this matter.

Responsibility of the Board for the Financial Report

The board of the Company are responsible for the preparation of the financial report that gives a true and fair view and have determined that the basis of preparation described in Note 1 of the financial report is appropriate to meet the requirements of the ACNC Act and the needs of the members. The board's responsibility also includes such internal control as the board determine is necessary to enable the preparation of a financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

In preparing the financial report, the board are responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting unless the board either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

Auditor's Responsibility for the Audit of the Financial Report

My objectives are to obtain reasonable assurance about whether the financial report as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Australian Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial report.

As part of an audit in accordance with Australian Auditing Standards, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the board.
- Conclude on the appropriateness of responsible entities' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in our auditor's report to the related disclosures in the financial report or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial report, including the disclosures, and whether the financial report represents the underlying transactions and events in a manner that achieves fair presentation.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.



Sean Denham

Dated: 13th April 2022
Suite 1, 707 Mt Alexander Road
Moonee Ponds VIC 3039



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