



ACADEMY

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MATHEMATICS PROGRAM REVIEW

In 2021, our College embarked on a review of the Mathematics Curriculum. This review, led by Education Consultant, Liz Monahan, invited staff, students and parents to provide **feedback on their daughters' experience** of Mathematics here at Academy from Years 7 through to 10. We aimed, through this process, to re-envision our Mathematics program to best support student engagement and achievement.

The Process

We are very appreciative of the generous participation of students, parents and staff in this process. Over 450 students, and 100 parents completed initial feedback surveys. Subsequently, numerous students, parents and all Mathematics staff participated in individual and group interviews as well and this data was then compiled, analysed and presented to the school for discussion and action.

Review Findings

The review revealed that most students and parents, as well as staff, were supportive of the Mathematics program in the Middle and Senior Years, approving in particular of the flexibility afforded in Academy offering a variety of Mathematics pathways for students to pursue. The feedback provided on our Maths Pathways Program at Year 7 & 8 was more diverse in nature.

Many families supported the use of this mastery program (which commenced at Academy in 2015). This positive feedback suggested that students and parents liked that students could work independently at their own pace, not feeling overwhelmed and with the ability to repeat modules if needed to consolidate learning. The more capable students appreciated that they were not repeating topics they already understood, as they would have to do in a traditional classroom set up. Many students commented that their engagement increased because they had the ability to choose a direction in their learning. Feedback that did not support the program commented on the limited opportunity for explicit teaching, the repetitiveness of the program, and that the rigidity in mastering modules was in fact demotivating. Furthermore, some feedback suggested that while the Pathways program had merit, using it over two full years was demotivating for students and did not adequately prepare them for the change in practice at Year 9.

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Future Directions

The Mathematics staff here at Academy are committed to excellence and the review process provided us with much to consider. The polarized view of the Maths Pathways program required our staff to think carefully about how we might make changes in the Junior Mathematics program that capitalized on the strengths of the program, while addressing some of its perceived shortfalls.

A number of changes to the Junior Mathematics curriculum are planned for 2022, in light of this review.

Year 7

- The Maths Pathways program will continue to be utilized in a more flexible manner in Year 7 (as outlined below). We believe that this program provides us with the best opportunity to transition a diverse range of students into secondary school that targets students at their particular point of need;
- Instead of commencing with the Maths Pathways program right away, Year 7s will commence the year working on basic mathematics skills in a more traditional style classroom set up. This time to settle in and transition to secondary school life will ensure that there is an established relationship between teacher and student and a **better understanding of the students' learner profiles. Once this is established, all students will begin to the diagnostics for the Maths Pathways Program;**
- Instead of each and every student having total discretion over which areas they choose to cover, there will be focus areas for each cycle. This means that all students in the class will be working on the same, if not similar topics, at their own level. This will allow for some explicit whole class teaching and more small group work as well as individual work with the class teacher.
- To overcome the rigidity of the mastery element of the Maths Pathway Program, teachers will enable students to correct any mistakes they may have made so that **they don't have to redo the whole module. This will allow students to progress more readily, hence increasing their engagement and motivation.**

We believe that utilizing the Maths Pathways Program in Year 7 provides us with the ideal tool to consolidate numeracy skills in all our students, whatever their skill level. Additionally, the comprehensive data provided by the program helps staff identify and intervene where necessary to ensure students are better able to cope with the rigor of secondary Mathematics.

Year 8

- Our Year 8 program will utilize Maths Pathways in Semester 1, as it did in Year 7. Instead of each and every student having total discretion over which areas they choose to cover, there will be focus areas for each cycle. This means that all students in the class will be working on the same, if not similar topics, at their own level. This will allow for some explicit whole class teaching and more small group work, as well as individual work with the class teacher.
- To overcome the rigidity of the mastery element of the Maths Pathway Program, teachers will adopt the same practice as will occur in Year 7. As mentioned above, teachers will enable students to progress more readily from one module to another, without the rigid expectation that an error means a student must redo the entire module.

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- The Maths Pathways Program will be phased out altogether in Semester 2, with students engaging in a more traditional model of classroom practice. This transition in Year 8 will give students the opportunity to transition more seamlessly into the Year 9 Mathematics classroom and beyond.
- The Maths Department will use data from Maths Pathway and other Problem Solving tasks to target groups using the more traditional model of classroom practice. These groups will enable us to teach at an appropriate level for the students whilst also being able to push the students to reach their potential.

The staff here at Academy welcome the opportunity to work in this new way in 2022, committed, as always, to providing students with an ideal educational experience. Of course, 2022 will also be one where we continue to make further changes, as appropriate, to best serve the needs of our students.

We are very appreciative to all members of our community who so graciously contributed to this process. We thank you for your patience as we evaluated the feedback and made plans for 2022. We look forward to working with you and your daughters again in 2022.