1. EARLY YEARS INTERVENTION COURSE

Clayton Campus
9am - 3.30pm
Day 1: Thursday 23 February 2017
Day 2: Friday 24 February 2017
Day 3: Thursday 27 April 2017
Day 4: Friday 28 April 2017
Day 5: Monday 26 June 2017
Day 6: Thursday 24 August 2017

2. MIDDLE YEARS (YEARS 3 TO 6) INTERVENTION COURSE

Course content
- The role of specialised mathematics programs in the middle years of schooling.
- Components of the EMU Middle Years Program structure and implementation.
- Using growth points to identify students in the middle years who are vulnerable in learning mathematics.
- Prioritising students for participation in a specialised mathematics program.
- Whole number learning in the middle years: multi-digit numbers, algorithms, & reasoning strategies.
- Rational number learning and misconceptions (including fractions and decimals).
- The new EMU Assessment Interview and profiling students’ mathematical knowledge.
- Rational Number Assessment Interview, and activities and strategies to enhance rational number learning.
- Understanding difficult growth point transitions for students in the middle years in Whole Number.
- Strategies to enhance the development of reasoning strategies, including empty number lines.
- Using open tasks, effective questioning and investigations to enhance mathematical learning.
- Measurement and spatial reasoning as contexts for learning and using number.
- Strategies for the ongoing monitoring and assessment of students who are vulnerable.
- Mathematics leadership, professional learning and working with the school team.
- Analysing students’ learning: Behind the Screen.

Course length
Six day classes of six hours
Clayton Campus
9am - 3.30pm
Day 1: Thursday 23 February 2017
Day 2: Friday 24 February 2017
Day 3: Thursday 27 April 2017
Day 4: Friday 28 April 2017
Day 5: Monday 26 June 2017
Day 6: Thursday 24 August 2017

EMU ONGOING PROFESSIONAL LEARNING (AN ACCREDITATION REQUIREMENT)

In order to maintain EMU accreditation teachers who have completed the Specialist Teacher Course must participate in two days of professional learning each year. The EMU Ongoing Professional Learning Program is designed to ensure that all EMU Specialist Teachers maintain fidelity to implementation of EMU and interventions in their school setting.

There will be two days of professional learning clearly designed to improve student outcomes and build EMU teacher/leader capacity every year.

The program has been designed to build the capacity of existing EMU Specialist Teachers:
- around explicit mathematics planning and instruction using the current EMU evidenced based best practices
- through professional dialogue with their peers around Mathematics teaching and learning
- to facilitate dialogue around intervention planning with school teaching teams
- to adhere to EMU principles and guidelines

Participation in the ongoing professional learning program is essential to maintain accreditation.

Ongoing Course length
Two day program of six hours per day. Two days over the year. For venue and date information please contact Ms Karla Wells-Duerr.

EMU CONTACT
Ms Karla Wells-Duerr
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monash.edu/education/emu

MATHEMATICS INTERVENTION PROFESSIONAL LEARNING COURSES AT MONASH

GETTING READY IN NUMERACY (GRIN)

Mathematics Intervention Program

The GRIN intervention program is intended to provide support for students experiencing minor difficulties in mathematics. The program is primarily targeted at students beyond the early years of schooling and is suitable for use at both primary and secondary levels. GRIN sessions are conducted in addition to and before the regular mathematics lessons. The program is delivered by tutors who work in partnership with classroom teachers and are qualified to use the GRIN model of intervention.

OUTCOMES AND SUCCESSES

GRIN Intervention has been extraordinarily successful:
- it has a clear rationale
- it is received positively by students, tutors, and teachers
- students have gained deeper learning.

SUPPORT FOR THE PROGRAM

GRIN has already been introduced in primary and secondary schools in Victoria. It has been well received by:
- regional and state-wide networks
- principals
- teachers
- students and their parents.

HOW DOES GRIN WORK?

Qualified tutors conduct GRIN sessions with small groups of students, before the regular mathematics lesson. GRIN sessions are brief and focused – normally 15 to 25 minutes long. The key idea is for tutors to prepare the participating students for the subsequent mathematics lesson.

GRIN sessions conducted by qualified tutors will:
- prepare participating students for their subsequent mathematics lesson
- familiarise students with the relevant language and terminology that they will need during the classroom lesson
- model what students can expect to see and/or do in the lesson.

WHAT DO STUDENTS SAY ABOUT GRIN?

“I am able to answer questions more often in my maths class”

“It has helped me a lot. I enjoy going to GRIN and giving it my best shot”

“It helps me in class and makes me achieve more. GRIN is awesome fun”

“I enjoyed playing games in GRIN, and it made me feel smart”
IMPLEMENTATION IN SCHOOLS
The GRIN tutor can be a:
- teacher
- numeracy coach
- leading teacher
- teacher aide

The GRIN model relies heavily on the development of strong and timely communications between the GRIN tutor and the classroom teacher. The better the link between the GRIN intervention session and the subsequent classroom lesson, the more impact the program will have on student outcomes.

Careful consideration must be taken in selecting staff who will implement GRIN within the school. Four staff members – including GRIN tutors and teachers, from a school will attend professional learning. This is a time commitment of one full day and two afternoon sessions (2.5 hours). Once the staff have completed the professional learning, the school will become licenced to implement the GRIN program.

APPLICATION
A school selects up to 4 staff, including GRIN tutors and at least one teacher to commence GRIN – professional learning will be delivered over 3 sessions.

PROFESSIONAL LEARNING COMMENCES
- All GRIN teachers and tutors attend one day of professional learning.
- GRIN manuals and templates provided to assist with delivery and student assessment.

IMPLEMENTATION OF GRIN
- Students are selected for participation in GRIN.
- GRIN tutor sessions are timetabled.
- GRIN tutor sessions begin.

PROFESSIONAL LEARNING CONTINUES
- GRIN teachers and tutors will attend two (2.5 hours) professional learning support sessions.

GRIN LICENSED SCHOOL
- School becomes a Licensed GRIN School after 3 terms, once professional learning is successfully completed.
- Certificates issued to Accredited GRIN tutors.

GRIN CONTACT
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GRIN TUTOR QUALITIES
- Good questioning and listening skills
- Builds trusting relationships with children
- Positive relationship with classroom teachers
- Aptitude and willingness to develop maths content knowledge
- Friendly and enthusiastic
- Focused
- Highly organised
- Flexible
- Classroom management skills
- Persistent
- Clear diction and well-formed handwriting

GRIN DATES
Monash Conference Centre
Day 1: Tuesday 7 March 2017, 9am - 3:30pm
Day 2: Wednesday 10 May 2017, 2pm - 4:30pm
Day 3: Tuesday 13 June 2017, 2pm - 4:30pm

WHAT DO SCHOOLS SAY ABOUT GRIN?
“Students on GRIN program are more engaged in the classroom.”

“This instilled confidence and enthusiasm in the students.”

“This has been very positive for students that I work with in GRIN, especially in developing their confidence to ‘give it a go’ in maths.”

“This provides kids with confidence. Engages kids in maths. Kids feel that they can achieve.”

“It works; students on the program improve their attitude towards maths. Teachers find it helpful.”

“Highlights importance of front loading those students who are just below – improves confidence.”

EXTENDING MATHEMATICAL UNDERSTANDING (EMU)
Intervention Specialist Teacher Courses
Early Years
Middle Years (Year 3 - 6)
Ongoing Professional Learning

EMU is a research-based intervention program developed by Associate Professor Ann Gervasoni of Monash University. It has been shown to improve children’s knowledge and confidence with mathematics.

The program offers intensive learning opportunities for students who are experiencing difficulty in learning mathematics in the early years and beyond. Importantly it provides professional learning that offers individual or groups of teachers’ expertise and leadership in mathematical learning and teaching.

Underpinning the program is an accreditation process that ensures that teachers maintain ongoing professional learning in this essential curriculum area and have the expertise to deliver professional learning to their colleagues, and work within a whole school approach to improving learning and teaching for all.

INTERVENTION SPECIALIST TEACHER COURSES
These Specialist Teacher courses each involve field-based learning and a six day spaced learning program. The field-based learning component involves teachers planning and implementing an EMU Program (5 x 45 minute sessions per week) throughout the year.

The six day program involves workshops, data analysis and reviewing video excerpts simulating ‘behind-the-screen sessions’. Professional interaction, critical reflection, associated discussion and professional reading are important aspects of the program.

It is offered as Early Years and Middle Years Intervention courses.

1. EARLY YEARS INTERVENTION COURSE

Course content
- Understanding the nature of learning mathematics for low attaining students;
- Using data from the Mathematics Assessment Interview to identify students who are low-attaining and to prioritise children for placement in an intervention program;
- Diagnosing individual learning needs;
- Ongoing monitoring and assessment of mathematical learning;
- Planning and implementing an EMU program;
- Understanding the nature of Number growth point barriers and the nature of learning required to move beyond these barriers;
- Strategies for accelerating the learning of underperforming students in counting, place value, addition, subtraction, multiplication and division;
- The role of children’s confidence and attitude in learning mathematics;
- The role of metacognition and reflection in learning;
- The role of families and communities in enhancing mathematical learning.

Course length
Six day classes of six hours
1. EARLY YEARS INTERVENTION COURSE CONTINUED

Clayton Campus
9am - 3.30pm
Day 1: Thursday 2 March 2017
Day 2: Friday 3 March 2017
Day 3: Thursday 9 March 2017
Day 4: Friday 10 March 2017
Day 5: Monday 13 March 2017
Day 6: Thursday 16 March 2017

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Course content
- The role of specialised mathematics programs in the middle years of schooling.
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MONASH UNIVERSITY
MATHEMATICS INTERVENTION PROFESSIONAL LEARNING COURSES AT MONASH

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