



# ACU National

Australian Catholic University

Brisbane Sydney Canberra Ballarat Melbourne

## MTLC Mathematics Professional Development Days 2009

- » Full days at ACU National (Melbourne campus), including our second full-day Primary Teachers' Conference on Saturday May 30.
- » Terms 1, 2, 3 and 4 for Primary and Secondary teachers.
- » Excellent, well known presenters from ACU National and around Australia.

### Features of our Mathematics Program:

- Excellent, well known presenters from ACU National (Jill Brown, Doug Clarke, Phil Clarkson, Ann Downton, Ann Gervasoni, Donna Gronn, Marj Horne, Andrea McDonough, Anne Roche) and some of the best from around Australia (Peggy Ashton, Leicha Bragg, Pam Hammond, Barb Keld, Charles Lovitt, Ray Peck, Lynda Secombe, Matt Skoss, Gloria Stillman, Paul Swan, Jenny Vincent, Kelly Watson and Gaye Williams).
- Lots of practical ideas to take back to school, as well as insights from research and latest developments in Mathematics Education.
- Registration cost per person includes morning tea, lunch, handouts and a certificate of participation.
- These courses are all approved for VIT registration purposes.

- Where** ACU National, Melbourne Campus (St Patrick's)  
115 Victoria Parade, Fitzroy
- When** Fridays 9.00am to 3.30pm  
(but other days occasionally as specified)  
(Tea and coffee from 8.30am)
- Cost** Single registration fee \$220 per day  
(incl. GST)
- Discount** Where a school registers for 5 or more MTLC Professional Development Days, on the one form, the rate is discounted to \$200 per person, per day.
- Contact** Rose Knight  
**Phone** 9953 3277  
**Email** rose.knight@acu.edu.au
- Website** Registration and credit card payment for any of these sessions can be completed online at <http://www.acu.edu.au/150864>

# MTLC PD Days 2009

Date	Session	Presenter	Topic	Yr Level
<b>Term 1</b>				
March 6	1.1	Anne Roche/ Rose Knight	<p><b>The ins and outs of the Early Numeracy Interview: Training for beginners</b> Would you like to know more about how the interview “works,” how the tasks came about, and how it all links to growth points? If so, then come along to this full day workshop and gain expertise in using the Number and Prep Detour parts of the Early Numeracy Interview as well as seeing how the interview connects to the growth points. This session is intended for those teachers who have not yet used this interview but would like to learn more about how to set up for the interview, to use the materials, to probe students’ thinking, to record strategies, and to assign growth points to student performance.</p>	P – 4
March 20	1.2	Pam Hammond	<p><b>VELS and Whistles: Relating the Early Numeracy Interview data to VELS, Progression Points and the Continuum (repeated 28th August)</b> Is the Mathematics (formerly the Early Numeracy) Interview still relevant? Does it link to the VELS and Progression Points? Do the tasks connect to the Mathematics Continuum developed by the Education Department? This professional development day will enable participants to see the connections that have been made by our presenter between the strategies their students show they can use (via the Interview) and those in the VELS, PPs and the Continuum and how these links can assist planning. Activities and effective teaching strategies will be explored, including those from the Mathematics Continuum, which is an on-line resource that is available to all.</p>	P – 6
March 27	1.3	Charles Lovitt	<p><b>Pulling it all together: Getting the balances right</b> I feel like a juggler these days on the way to a maths class – I want to make it concrete (for my concrete learners), and I want to make it a challenge (to encourage and develop thinking), and use technology, and also relevant contexts, and cooperative group work, and cater for ‘the 7-year-gap’ of abilities, and exploit visual and kinaesthetic opportunities, and seek genuine understandings (fewer rules without meaning), and make it interdisciplinary, and ... and ... How do we get all these ingredients in harmony and balance? The session will be extremely practical and workshop many illustrations of both learning tasks and unit planning that I have found (stolen) from classrooms across Australia.</p>	5 – 9
<b>Term 2</b>				
April 24	2.1	Jill Brown	<p><b>I’m teaching Secondary Maths for the first time: Help!</b> This day is intended to support recent graduates and those teaching mathematics for the first time. Now that the reality of teaching mathematics to your own class has occurred, you may be starting to appreciate how prepared you really are for teaching, and what sort of support networks you should have developed but didn’t. This day will provide the opportunity to share ideas, questions, and concerns with others in a similar situation. This is the opportunity to get support, and establish networks with others with a range of educational experiences. Email Jill on <a href="mailto:jill.brown@acu.edu.au">jill.brown@acu.edu.au</a> prior to the day to ensure that issues of most concern to you are addressed.</p>	7 – 10
May 1	2.2	Andrea McDonough	<p><b>Developing and using open-ended maths tasks</b> Increasingly teachers are realising the power of open-ended tasks. Such tasks can be powerful, for example, in catering for mixed abilities and in providing insights into children’s understandings. In this workshop, we will consider features of open-ended tasks, how they might be used in maths lessons, and strategies for their development. The creation of open-ended tasks will form a part of the day’s activities.</p>	P – 4

May 8	2.3	Marj Horne / Phil Clarkson	<b>20 great classroom activities to make Space come alive in your classroom</b> Space/Geometry is often a neglected area of the curriculum, yet the development of spatial reasoning and visualisation is important for both continuing mathematics and enhancing life. In this workshop, a range of activities will be closely linked to thinking Mathematically and developing the conceptual understandings in the curriculum.	4 – 8
May 15	2.4	Donna Gronn	<b>ICT to enhance Mathematical learning</b> Bring your laptop and come prepared to see and make a range of items that will be immediately useful in your mathematics classroom. In this workshop you will create hundreds charts, tangrams and other activities/games that will assist your students in their mathematical learning. The day will also include the exploration of some software options to assist and extend your students mathematical learning.	P – 6
May 21 (Thurs) 7.30-9.30		Doug Clarke	<b>Helping your primary child with mathematics: A practical night for parents</b> (this evening is free of charge, but interested parents must ring Rose Knight (9953 3277) to confirm a place) Doug will explore how the teaching of mathematics in primary schools is changing and why, and the kinds of everyday activities which families can do (while shopping, cooking, travelling, playing games) which support the learning of mathematics at school. We will have some fun too!	P – 6
May 22	2.5	Leicha Bragg	<b>Games which will have students begging for more maths</b> Imagine the excitement in the air and your whole class switched on to maths. Introducing a simple maths game can give you this opportunity. However, sometimes your students are playing maths games, they are happy and having fun, but you wonder if they are really learning anything. This fun workshop explores engaging games to motivate students into effective mathematics learning. You will play games with a mathematical purpose and focus. We will also explore ways to link assessment to games. Come along and enjoy a fun-filled day and leave with materials for immediate game-playing in your middle and upper primary classroom and a new enthusiasm for teaching maths.	3 – 6
May 28 (Thurs)	2.6	Paul Swan	<b>Developing a whole school approach to mental computation.</b> A perennial favourite, Paul Swan returns from Perth to engage us in a range of great learning experiences. Mental computation is crucial, but how do we help children to develop the skills they need with the kind of flexible number sense that is so important? In this session we shall start with addition facts, move through the others and then into two-digit calculations. At the end of the day, teachers will leave with a comprehensive whole school plan that they could adapt to their particular circumstances.	P – 7
May 29	2.7	Paul Swan	<b>Engaging and motivating students to learn mathematics</b> This workshop will touch on setting interesting problems and ways to scaffold children's learning as they solve them; using trivia to develop problems; the power of children's literature as a means of developing mathematical inquiry; using manipulatives and games in ways that support and engage children in learning some tricky mathematical concepts; some mathematical magic; and maths you can eat! A fun but productive and helpful day is assured for all.	3 – 8
May 30 (Sat)			<b>ACU National 2nd Annual Primary Teachers' Conference</b> (more information to follow)	P – 6
June 12	2.8	Barb Keld	<b>Problem Solving: Teaching strategies for the Year 5-8 classroom</b> We will explore a wide range of problem solving activities, fun ways to practise number skills through board games and maths challenges, using open-ended questions and problems, and activities and strategies to support students building maths pictures in their heads.	5 – 8

June 19	2.9	Charles Lovitt	<p><b>Numeracy and genuine understandings</b></p> <p>As we clarify our understandings about numeracy and numerate citizens one aspect (among many) that emerges is supporting students to develop deeper understandings of maths concepts. We still have lots of 'rules without meaning' lurking throughout our courses. Teachers across Australia have developed many creative lessons that target this issue and it is these that will be presented and workshopped. They will be extremely practical and cover many topic areas.</p>	4 – 9
<b>Term 3</b>				
July 17	3.1	Donna Gronn / Kelly Watson	<p><b>Interactive Whiteboards: Taking advantage of this great resource in primary maths</b></p> <p>Come along to this highly interactive day when you will see, use and make some great activities for use with your electronic whiteboard in your mathematics classroom. We will introduce the Smartboard to you and assist you to explore its hidden tools, share with you some tried and tested mathematics games and activities utilising the whiteboard and assist you to adapt your own game or activity. Although we will be using some generic Microsoft software in the session, we will also be utilising the Notebook software which is specifically designed to be used on SMART Board interactive Whiteboards. This software can be downloaded from <a href="http://www2.smarttech.com/st/en-US/Support/Downloads/default.htm">http://www2.smarttech.com/st/en-US/Support/Downloads/default.htm</a> NOTE: bring your laptop preferably with SMART software loaded.</p>	P – 6
July 23 (Thurs)	3.2	Matt Skoss	<p><b>Making Middle Years' maths come alive</b></p> <p>Joining us again from Alice Springs, Matt will explore a range of practical and interesting tasks that challenge students to explore the mathematics arising from chance events, as well as some simple motion experiments that students find irresistible. A key aspect of each of the chosen tasks is that they have a low entry level, but are also a vehicle for having students engage with challenging open-ended questions that can lead into extended investigations. Tasks will have the potential to promote mathematical discussion in the classroom.</p>	5 – 8
July 24	3.3	Matt Skoss	<p><b>Secondary students experiencing meaningful and enjoyable maths: We'd like to see that!</b></p> <p>We will make the most of data – by making predictions through harnessing technology. Generating personal data is intrinsically motivating to secondary students. By dipping into our 'mathematical toolbox' and using appropriate ICT, we can extend an investigation to engage a broader range of students. Through this session, Matt will explore some practical hands-on problems to share with colleagues back at school. If the interests of the group include using some powerful software tools like Scratch, we will explore some interesting Mathematics that is accessible to all students.</p>	7 – 10
July 31	3.4	Doug Clarke / Anne Roche	<p><b>Fractions: Practical and enjoyable strategies for the challenge of teaching this difficult topic</b></p> <p>Fractions is probably the most difficult topic to teach and to learn in the middle years, but it doesn't have to be that way. In this workshop, we'll explore the big ideas of fractions, look at some very helpful assessment tasks, consider the many important representations and models with fractions, and then focus on a range of powerful classroom activities that build confidence and capability with fractions. We'll eat chocolate (in the interests of science) and we'll have lots of fun.</p>	5 – 8



Aug 14	3.5	Gaye Williams	<p><b>Helping students to develop deep understanding of big ideas in maths</b>          What does it really mean to really understand mathematics, and how can we as teachers support students in the process of developing such understandings? We will examine differences in what students can 'do' with maths as a result of differences in how they have learnt it. Using illustrations from Gaye's research, we will think about what is happening when students develop understanding of 'big ideas' rather than only rules and procedures. Tasks that have led to the development of 'big ideas' will be presented and their characteristics 'unpacked'. The role of the teacher in implementing such tasks will be examined. It is hoped that the session will provide a useful perspective on engaging students in the learning of mathematics in ways that can lead to deep understandings.</p>	5 – 10
Aug 28	3.6	Pam Hammond	<p><b>VELS and Whistles: Relating the Early Numeracy Interview data to VELS, Progression Points and the Continuum (repeat of 20th March PD)</b>          Is the Mathematics (formerly the Early Numeracy) Interview still relevant? Does it link to the VELS and Progression Points? Do the tasks connect to the Mathematics Continuum developed by the Education Department? This professional development day will enable participants to see the connections that have been made by our presenter between the strategies their students show they can use (via the Interview) and those in the VELS, PPs and the Continuum and how these links can assist planning. Activities and effective teaching strategies will be explored, including those from the Mathematics Continuum, which is an on-line resource that is available to all.</p>	P – 6
Sept 4	3.7	Ann Downton	<p><b>Multiplicative thinking: Hands on strategies for developing this important idea</b>          Multiplication and division are important ideas in the primary years. Providing opportunities for children to build up and share a range of efficient strategies for different problem types can make teaching these topics highly enjoyable, challenging and successful in Prep to Year 4. We will explore these ideas in practical and enjoyable ways.</p>	P – 4
Sept 11	3.8	Lynda Secombe	<p><b>www.keepingupwithgenYndZ.com:          Using ICT's in the Primary Mathematics Classroom</b>          New information and communication technologies continue to develop everyday and quickly become an integral part of young people's existence. Linking this ever-increasing range of ICT's with learning and learning styles in the mathematics classroom can seem daunting. During this workshop participants will explore a range of Microsoft Office software, web-based freeware and virtual manipulatives to consider the varying roles that these technologies can play in fostering mathematical learning. After engaging in a range of activities and ICT's, participants will use Photostory freeware to develop digital reflections of their mathematical learning undertaken during the day. Please bring along your digital camera, connection cable, music CD's for soundtracks and an empty USB storage device.</p>	3 – 7
<b>Term 4</b>				
Oct 9	4.1	Jill Brown / Gloria Stillman	<p><b>Maths modelling in Years 7-10: What does it look like?</b>          In the VELS, four essential elements of mathematical reasoning and thinking are described which importantly "underpin all aspects of school mathematics, [these are] problem posing, problem solving, investigation and modelling". This session will focus on what mathematical modelling looks like in practice. Mathematical modelling is both an approach to teaching and a way of doing mathematics. The day will include several elements including looking at both short and long modelling tasks; engaging with modelling tasks as learners; considering how to design and develop modelling tasks; consideration of the actual teaching practice related to the implementation of particular modelling tasks (e.g., how best to introduce a task in order to maximise the learning opportunities for students, and how to gain maximum pay-back in learning for the time invested.</p>	7 – 10

Oct 16	4.2	Ray Peck	<p><b>Strategies and resources for teaching problem solving in secondary schools</b></p> <p>What good is mathematics knowledge if it cannot be applied to solve problems? But just what is a good or real problem? How can ALL students become better at (and even enjoy) problem-solving? How can schools foster a culture of problem-solving? It's easy to ask the questions but what are the answers? This session will discuss and model effective strategies and share exemplary resources and experiences. This practical workshop will be relevant to teachers of years 7-12.</p>	7 – 12
Oct 23	4.3	Ann Gervasoni	<p><b>Intervention programs and classroom support for children who experience difficulty learning mathematics in the middle years of schooling</b></p> <p>This session will explore strategies for identifying, diagnosing and assisting children who experience difficulty learning mathematics in the middle years of schooling. The focus will be children's Number learning and we will consider classroom approaches and specialised teaching approaches that aim to accelerate children's learning.</p>	3 – 6
Nov 6	4.4	Jenny Vincent / Peggy Ashton	<p><b>Games that focus on number concepts: Catering for mixed abilities</b></p> <p>This session will focus on the implications for classroom planning when catering for a range of students' mathematical abilities. We will explore the value of games when planning for a rich learning environment, and how the use of appropriate games can facilitate access and success for students. Participants will have the opportunity to workshop a variety of games, providing an excellent resource for use in their own classroom.</p>	3 – 6
Nov 13	4.5	Marj Horne / Jill Brown	<p><b>Making sense of Structure &amp; Working Mathematically: Practical approaches for the middle years</b></p> <p>Space/Geometry is often a neglected area of the curriculum, yet the development of special reasoning and visualisation is important for both continuing in mathematics and enhancing life. In this workshop, a range of activities will be closely linked to thinking mathematically and developing the conceptual understandings in the curriculum.</p>	4 – 8
Nov 20	4.6	Anne Roche	<p><b>Getting the decimal point: Making this difficult topic meaningful and enjoyable</b></p> <p>Decimals is one of those topics that throws up a range of misconceptions with students in the middle years, and these are hard to shake. In this practical, hands-on workshop, we'll look at assessment tasks which can give us a clear picture of what students understand and where their misconceptions lie with decimals. We will then move on to a collection of enjoyable and mathematically rich classroom activities which help students to understand decimal place value and operations.</p>	5 – 8
Nov 27	4.7	Marj Horne / Donna Gronn	<p><b>Fun and games in Yrs 5 – 9 but still focusing on maths learning</b></p> <p>Children (and adults) usually like games. Thinking mathematically and skills and concepts can be developed in fun contexts. This workshop will explore some games focusing on curriculum contexts in Years 5 – 9 including all strands. Participants will take away some games they have made during the day for use in the classroom.</p>	5 – 9
Dec 2 (Wed)			<p><b>ACU Annual Conference</b> (More information to follow – watch out for this) All leaders and classroom teachers are invited to the 13th Annual Conference for Leaders in Primary and Secondary Mathematics Wednesday December 3, 2009 (9.00am to 3.30pm)</p>	P – 10



# Registration Form / Tax Invoice

This registration will form a TAX INVOICE upon payment for the Mathematics Teaching and Learning Centre Professional Development Sessions at Australian Catholic University, 2009.

School \_\_\_\_\_

School Address \_\_\_\_\_

School Phone Number \_\_\_\_\_ School Fax Number \_\_\_\_\_

Contact responsible for all correspondence \_\_\_\_\_

**Please list participants and sessions for which payment is enclosed:**

Session No.	Date of Session	Teacher's Name	Teacher's Year Level	Teacher's email address	Amount Payable
<b>Total Amount Payable incl. GST</b>					<b>\$</b>

**REGISTRATION FEES:** \$220 per person per day incl. GST.

**DISCOUNT:** Where a school registers for 5 or more MTLC Professional Development Days, on the one form, the rate is discounted to \$200 per person per day.

Numbers are strictly limited. Given the popularity of the programs and for catering reasons, it is essential that you receive confirmation of your enrolment by email prior to attending. Confirmations are sent emailed after payment is received. Positions are not held until payment is made. **All fees are non-refundable for cancellations.** Should you wish to swap to another session after enrolment, this must be done in writing, at least one week prior to your original session, otherwise a new registration fee will be charged.

Make cheques payable to "ACU National Ltd" and addressed to the **attention of Rose Knight** (ph 9953 3277; fax 9953 3535).

If you have not received a response to your paid application within two weeks of sending the cheque, please contact Rose Knight or Anne Roche on 9953 3277. You are required to bring your confirmation of enrolment on the first day.

For information on getting to ACU National (St Patrick's campus) please check on the website.

[http://www.acu.edu.au/about\\_acu/our\\_campuses/melbourne/getting\\_here/](http://www.acu.edu.au/about_acu/our_campuses/melbourne/getting_here/) for maps and details on how to get here.

Alternatively you can register and pay by credit card online at <http://www.acu.edu.au/150864>

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