

Newsletter No. 185
June, 2002

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Monday to Friday

President: Dr Max Stephens

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2002 Ford MTQ

Ford MTQ - Call for Judges

Professional Development Opportunity.

We need your help to judge the fantastic entries for this year's Ford Maths Talent Quest. Come and help judge the Quest and get lots of ideas for MTQ and your classroom. Judging takes place from Saturday 27 to Tuesday 30 July. A flyer with details was included last month, or you can contact the MAV office or visit our website (www.mav.vic.edu.au/studact) for further details and a judging form.

Information about delivery times and procedures, as well as certificates of participation, will be sent out to schools for the first week of Term 3.

Early Years PD Series

In addition to our Hamilton series (details page 9), the MAV is also running the following series of Early Years after school PDs in Term 3, at Box Hill North Primary School:

- *Activities for Focussed Teaching of Number*
- *Activities for Focussed Teaching of Measurement*
- *Activities for Focussed Teaching of Chance & Data*
- *Activities for Focussed Teaching of Space*

See enclosed flyer or visit the MAV website for further details.

Middle Years (5-9) Maths Teachers' Day

Friday 23 August, 2002

Places are still available for this Middle Years Day, which will be particularly useful to teachers coping with mixed ability, mixed experience students in their 5-9 classrooms.

Venue: Plenty Ranges Convention Centre, South Morang (outer northern metro region)

Time: 9:30am-3:30pm

Cost: \$120 members, \$150 non-members (inc. GST). For member schools sending 4 or more teachers the cost is \$100 each (inc. GST)

The full program and registration form are available by contacting the MAV office or from our website at www.mav.vic.edu.au/pd/pd2002. **Places are limited so make a booking, with your session preferences, today!**

VCE Revision Lectures 2002

Proudly supported by The Age

This year the MAV will be hosting VCE Maths Revision Lectures for Unit 3 & 4 students at six venues around Victoria:

Glen Waverley: Wednesday 25 September

Footscray: Thursday 26 September

Traralgon: Friday 27 September

Frankston: Monday 30 September

Bendigo: Tuesday 1 October

Geelong: Wednesday 2 October



Bookings are essential. Further details and a booking form are enclosed or visit our website at: <http://www.mav.vic.edu.au/studact/index.html>

Annual Conference - Call for Options

You can still send in your options for the Annual Conference, to be held on 5 and 6 December, but don't delay! Call for options forms are available on the MAV website or you can call us at the MAV office and we will fax you one.

Free Public Lectures

Upcoming lectures in our series of free public lectures (dates and venues to be confirmed):

Thur 25 July - *Juggling the Universe*, with Dr Burkard Polster

Thur 8 Aug - *Imaginary Numbers & the Magic They Do*, with Dr Marty Ross

Thur 22 Aug - *Shadows from the Fourth Dimension*, with Dr Burkard Polster

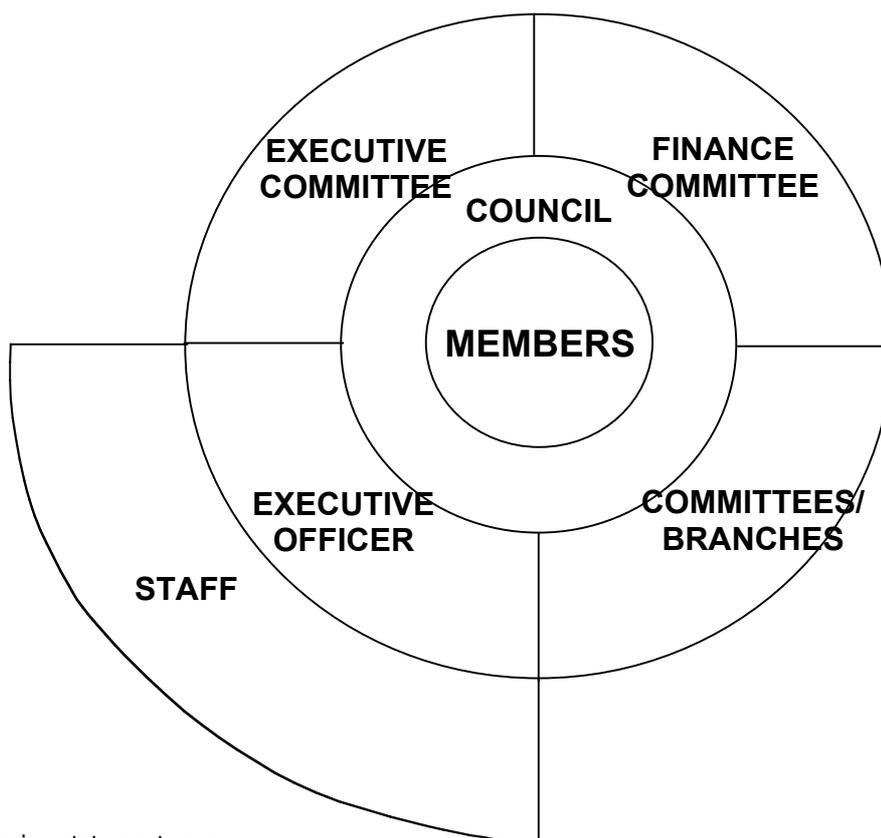
Thur 5 Sep - *The Joy of Gambling*, with Dr Marty Ross

Bookings Essential! Phone 9380 2399 or email mavoffice@mav.vic.edu.au

From the President

Restructuring the MAV

Members will be aware that the MAV has been examining its vision and mission over the past 12 months, with the aim of refocussing on our reason for existence. This has been a highly beneficial process, and has also provided an opportunity for us to look at the structure of our organisation, and where you, our members, fit in.



As our mission statement says:

The MAV is a membership driven association, which provides a voice, leadership and professional support for mathematics education.

The new structure of the association shows our members at the centre - it is your association - we are here to provide what you need, and this has assisted us in setting our strategic goals for the next couple of years.

One of the things that members have been telling us over the past 12 months (and several years!) is that there has not been enough provision of regional PD. In 2002, we have included an extensive range of regional PD opportunities in our program. These include:

- A VCE Day in Ballarat, attended by over 150 teachers
- A Middle Years day in Traralgon, to be attended by over 50 teachers
- A Primary Teachers Day in Bendigo, to be attended by over 100 teachers
- The Challenging 9's & 10's series of after school lectures in Geelong, currently being attended by over 140 teachers
- An after school session for primary teachers with Peter Sullivan in Mildura attended by over 70 teachers

Also upcoming are:

- Technology PD for Years 5 to 8 with Jill and John Vincent, in Shepparton, Swan Hill and Geelong
- CAS technology with Peter Fox, at a variety of regional venues around the state

This change in focus has allowed us to provide important services to the whole of Victoria, and feedback has been very positive. We will continue to do this in the future. For more information on any of our PD sessions, you can contact Mary Walkinshaw, our Professional Officer, at the MAV office on 9380 2399, or at mwalkinshaw@mav.vic.edu.au

Another issue that has been raised is membership. Some of our members have found that there is a lack of flexibility around multi-campus schools, small schools and those wanting journals only in their schools. We have undertaken a full review of the membership strategies for the Association, and are currently seeking input from member and non-member schools about the proposed changes.

Whilst keeping our current membership categories, we are looking at introducing an option for schools to take out additional journal and Common Denominator subscriptions as well as their current membership. This will allow individual teachers, for example, in a large school that has MAV membership, to receive copies of The Common Denominator, Prime Number or Vinculum mailed directly to them. It is important to note that this option would not confer any membership privileges on the subscriber. However, you have told us that you would like to receive your own copies of our information. This option may also be suitable for interstate/overseas schools just wanting to have our journals, but not to attend our PD events.

We are also planning to introduce a reduced school membership rate for small primary and small secondary schools. Some of these schools, especially small primary schools, have told us that they are unable to afford the full cost of school membership. Some small schools are forced to rotate their membership of subject associations. This way, we hope that it will be possible for them to remain members of the MAV.

You can view all these proposed changes on our website at: <http://www.mav.vic.edu.au/whatsnew/index.html> We are keen to hear your feedback - please let us know what you think! In the meantime, we are carrying out a phone survey with individual and school members of the association to get their opinions of these proposals. Don't be surprised if you receive a call from one of the MAV office staff. We want to know what you think before we make the necessary changes.

DR MAX STEPHENS
President

2003 National Maths Summer School, Canberra

- DATES:** 5 – 18 January, 2003.
- COST:** \$850 + GST
- ACCOMMODATION:** Private rooms at the Australian National University offering a range of facilities normally available to ANU students.
- APPLICANTS:** Fifteen places available for Victorian students. Selection is on the basis of Mathematical achievement and promise – a test will be conducted in August.
- PROGRAM:**
- Two or three in depth topics covered
 - Emphasis on doing Mathematics, rather than just listening
 - A number of non-mathematical talks and excursions
- APPLICATIONS CLOSE:** Monday 5 August, 2002

Schools who have students who are keen to attend but cannot afford either camp should contact the MAV.

For application forms call the MAV on 9380 2399, e-mail us at: mavoffice@mav.vic.edu.au or visit our website: <http://www.mav.vic.edu.au/studact/index.html>. Alternatively, fax back this form with your details to 9389 0399.

Name: _____

Fax number: _____

Email: _____

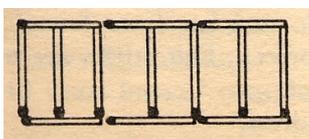
Problem of the Month

A Striking Idea

(Suitable for Year 4-8 students)

Match City's mayor had built a new, 6-celled gaolhouse. "I don't like its shape," said his wife. "If you used 12 matches, instead of the present 13, you could build a much prettier gaol - and the cells would still be of uniform size, though of a different shape."

Find 12 matches - and build a new gaol.



This problem is taken from *Think Again!*, by John Pinkney, published by Sun Books (1980).

Last Month's Solution:

- 456, 465, 546, 564, 645, 654
- 447, 474, 744
- 780, 708, 807, 870, 771, 717, 177, 762, 726, 627, 672, 267, 276, 753, 735, 573, 537, 357, 375, 744, 474, 447 (22 in all - no penalties for including 078 or 087)
- The possible sets of 3 digits are: (9, 6, 0), (9, 5, 1), (9, 4, 2), (9, 3, 3), (8, 7, 0), (8, 6, 1), (8, 5, 2), (8, 4, 3), (7, 7, 1), (7, 6, 2), (7, 5, 3), (7, 4, 4), (6, 6, 3), (6, 5, 4), (5, 5, 5).

Of the above, if there are no digits the same, then 6 numbers can be made. If two digits are the same, then 3 numbers can be made. If all the digits are the same, only 1 number can be made.

Therefore, the total number of numbers is $10 \times 6 + 4 \times 3 + 1 = 73$.

Common Denominator Deadlines – July 2002

Receipt of copy: Monday 24th June, 2002
Receipt of inserts: Monday 8th July, 2002
For mailing on: Monday 15th July, 2002
Products and services advertised and opinions expressed are not necessarily those of the Editor or the MAV.

Web Review

Worksheet Generator

DiscoverySchool.Com

<http://school.discovery.com/>

Quiz Center

DiscoverySchool.com (associated with the Discovery Channel) is a web site jam packed with information, ideas and activities for teachers, parents and students.

- Teachers can find tools, activities and lesson plans.
- Students can access study tools, games and learning adventures.
- Parents can look at education advice as well as reviews and study ideas.

I visited the part of the site that contained tools:

<http://school.discovery.com/teachingtools/teachingtools.html>

Here I generated some puzzles as well as found some useful pre-created worksheets.

This site is an excellent resource and is applicable for any year level, as many of the worksheets etc, are divided into sections which are basically early, middle and senior years. All subject areas are examined on the web site including mathematics.

Lesson Planner

PUZZLEMAKER

Clunies Ross National Science & Technology Award 2003

Nominations are now open for the Clunies Ross National Science & Technology Award 2003. The closing date for nominations is Friday 26 July, 2002.

Since 1991 these Awards have honoured sixty-seven people from every state and territory for their successful application of science and technology for the economic, social or environmental benefit of Australia.

Award recipients will be announced and presented with a silver medal at a formal ceremony and dinner to be held March 2003 in Melbourne.

Nomination forms are available from the Ian Clunies Ross Memorial Foundation:

Phone: (03) 9854 6266

Fax: (03) 9853 5267

Email: info@cluniesross.org.au

Website: www.cluniesross.org.au

Publication Reviews

Working Mathematically Series - Early Years

This series is comprised of three books, designed to provide teachers with open-ended learning tasks that generally allow for more than one solution. The books, written by classroom teachers, contain blackline masters and teachers' notes in an easy to read format.

Working Mathematically with Short Rich Tasks

\$66.00 (+p&h) for members (inc GST)

\$82.50 (+p&h) for non-members (inc GST)

Working Mathematically with Puzzles and Problems

\$22.00 (+p&h) for members (inc GST)

\$27.50 (+p&h) for non-members (inc GST)

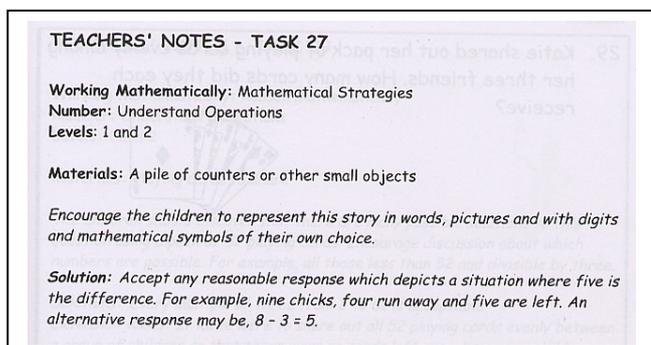
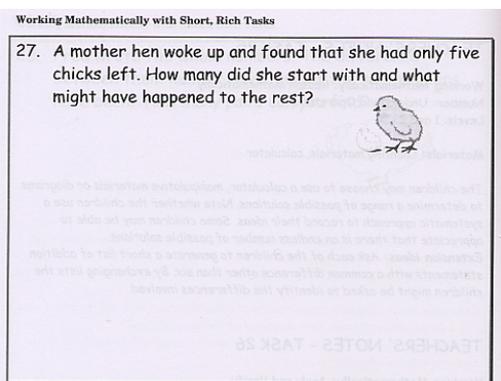
Working Mathematically a Thematic Approach

\$88.00 (+p&h) for members (inc GST)

\$110.00 (+p&h) for non-members (inc GST)

Set of three books \$116.00 for members and \$145.00 for non-members (inc GST), plus p&h

There are also sets of books suitable for Middle Years and Secondary classes. Further information can be found the MAVs Publication Catalogue available on the web site: www.mav.vic.edu.au/pubs/index



Above is a sample task and teachers' notes from Working Mathematically with Short Rich Tasks

WERMS -Written Exam Revision for Maths

A review by Michael Swanborough, Flinders
Christian College

WERMS is an excellent resource for both teachers and students. It contains a wide range of questions across all areas of study, is professionally presented and comes complete with fully worked solutions to short-answer and analysis questions. The addition of two complete practice exams makes WERMS the complete package!

WERMS are available from the MAV.

Maths Methods available now! Further Maths available early July, with Specialist Maths to follow.

Cost: \$28.50 per subject (inc. GST) plus postage

Discounts for multiple copies:

10 or more copies of a single title - \$26.00 each (inc. GST) plus postage

20 or more copies of a single title - \$23.00 each (inc. GST) plus postage

Starter Ideas for Numeracy Week 2-8 Sep

International Year of the Outback

- Look at how students in the outback learn maths
- The School of the Air
- Aboriginal counting
- The maths of Uluru
- The maths of a trip to the Outback

If you or your students wish to share further ideas, please email Pauline Rogers - progers@mav.vic.edu.au

The Macquarie Business Maths Competition

The Macquarie Business Mathematics Competition (MBMC), in August, is an online competition open to secondary school students and focuses on the application of mathematics in business.

Sample questions are now available, these are great practice for the competition and can be used as a free resource in the classroom or at home. For more information visit www.mbmc.perdisco.com



Games Days 2002

Listed below are the schools that are running Games Days in Terms 2 and 3. If you are planning to host one and would like the MAV to promote it or provide any advice/assistance, contact Pauline Rogers at the MAV on 9389 0304.

- Wednesday 19 June **Year 9 Games Day**, Blackburn High School. Contact Mike Westbrook for further information on 03-9878 4477 or via email mwe@blackburnhs.vic.edu.au or visit the MAV website: <http://www.mav.vic.edu.au/studact/index.html> Applications close Mon 3 June.
- Wednesday 24 July **Year 8 Games Day**, Penleigh and Essendon Grammar School. Contact Roger Blackman for further information on 03-9336 1855 or via email roger.blackman@pegs.vic.edu.au, or visit the MAV website. Applications close Friday 21 June.
- Tuesday 6 August **Year 7 Games Day**, Scotch College. Contact Michelle Linossier for further information on 03-9810 4374 or via email michele.linossier@scotch.vic.edu.au
- Friday 9 August **Year 10 Games Day**, Methodist Ladies' College. Contact Allason McNamara for further information on 03-9274 8108 or via email mcnamaam@mlc.vic.edu.au Application form below and on the MAV website. Applications close Friday 28 June.
- Friday 30 August **Year 6 Games Day**, Genazzano FCJ College. Contact Phil Tascone for further information on 03-8862 1000 or via email tascop@gen.melb.catholic.edu.au



MLC

YEAR 10 STATEWIDE GAMES DAY AT METHODIST LADIES' COLLEGE



The Year 10 Statewide Games Day organised by Methodist Ladies' College, in conjunction with the MAV, will be held on Friday 9 August, 2002, at Methodist Ladies' College, Barkers Road, Kew.

Schools may nominate one or two teams of four students each, at a fee of \$25 (including GST) per team. The day's activities will start at 10.00am and conclude at approximately 2.30pm and lunch will be provided. The Games Day promises to be one which is intellectually challenging, competitive and fun.

Please detach the form below and mail it, along with your entry fee to the address shown below.

Make cheques payable to Methodist Ladies' College (ABN: 55 006 036 979).

Further enquiries should be made to Allason McNamara on 03-9274 8108, or fax 03-9819 2345.

E-mail: mcnamaam@mlc.vic.edu.au

*** Tax invoice**

MATHEMATICS GAMES DAY FOR YEAR 10 STUDENTS, 9 August 2002

Methodist Ladies' College, 207 Barkers Road, Kew VIC 3101

NAME OF SCHOOL: _____

ADDRESS: _____ POSTCODE: _____

PHONE: _____ FAX: _____

EMAIL: _____

TEACHER CONTACT: _____

NUMBER OF TEAMS (@ \$25/team): _____ PAYMENT ENCLOSED (inc. GST) _____

Send this form with your payment to:

Ms A. McNamara, c/- Methodist Ladies' College, 207 Barkers Road KEW VIC 3101, **by 28 June, 2002.**

IMPORTANT: A completed copy of this form becomes a ***Tax Invoice** on payment. Keep a copy of the completed form for your records. The original must be returned with your payment. Date: ___/___/___

Year 5 Statewide Maths Games Day – St Catherine's School

The **very first** Statewide Games Day at St Catherine's School for Year 5 students, held on Wednesday 8 May, was a HUGE success! 184 students competed, with 26 different schools represented on the day, from all parts of Melbourne. Teachers and students clearly enjoyed the day and many can't wait to return next year.



Students participating in the St Catherine's Games Day

Well done to the team of staff and Year 8 students at St Catherine's School for a fantastic day!

Congratulations needs to be made to the winning teams:

Problem Solving:

- 1st: Scotch College
- 2nd: Solway Primary School
- 3rd: Penleigh and Essendon Grammar

Games:

- 1st: Penleigh and Essendon Grammar
- 2nd: Our Holy Redeemer School / St Kevin's / Wesley College (Glen Waverley)
- 3rd: Preston North East Primary School

Diagnostic Topic Tests 2000 Edition

Maths Methods – Units 1, 2, 3 & 4

Further Maths – Units 3 & 4

Specialist Maths – Units 3 & 4

Diagnostic Topic Tests

- have been specifically written for the currently accredited VCE Mathematics courses.
- allow teachers to monitor and identify students' strengths and weaknesses throughout the year.
- contain fully-worked solutions with diagnostic comments and mark allocation.
- provide questions which develop skills and competencies appropriate to each topic.
- include approaches to answering questions.
- identify concepts being tested.
- identify rules and formulas to be applied.
- offer advice and hints on effective examination techniques.

Also available for Biology, Chemistry, Physics & Accounting.

Trial Examinations 2002

Maths Methods – Units 1, 2, 3 & 4

Further Maths – Units 3 & 4

Specialist Maths – Units 3 & 4

- Exams for Units 1 & 2 are ideally suited to be used by teachers for their final testing of students.
- Exams for Units 3 & 4 allow teachers to prepare their students for the style and difficulty of the final exams.

Also available for Biology, Chemistry, Physics, Psychology, English, Accounting, Business Management, Economics and Legal Studies.

Smartstudy® Titles Now Available!

Smartstudy Maths Methods for Exam 1

Smartstudy Maths Methods for Exam 2

Smartstudy Specialist Maths for Exam 1

Smartstudy Specialist Maths for Exam 2

- Each book contains a comprehensive set of exam questions by topic along with 3 complete practice exams.
- Call NEAP for discount pricing of class sets.

Also available for Biology, Chemistry and Physics.

For further information or to be placed on the NEAP teacher mailing list, contact:

National Educational Advancement Programs (NEAP) Pty Ltd

58 Pelham Street Carlton Victoria 3053 Tel 03 9663 2523 Fax 03 9663 7182 Web Site www.neap.com.au

Professional Development 2002

Bookings are now being taken for the following professional development activities in 2002 (registration form on the back of this issue). Further workshops and their details will be published here monthly, and online at www.mav.vic.edu.au

COST:

After School PDs: \$40 per session for members; \$50 for non-members (inc. GST).

Special members offer - make 4 bookings for any combination of after school sessions and only pay for 3!

Full Day PDs: \$120 per day for members; \$150 for non-members (inc. GST). Includes lunch.

Special members offer - \$100 per person for schools sending 4 or more teachers (inc. GST)

CAS Technology Full Day Series (Mildura): Members: \$30 1 session, \$50 2 sessions, \$70 3 sessions per person (inc. GST). Non-members \$40 1 session, \$70 2 sessions, \$100 3 sessions per person (inc. GST).

<i>TERM 2</i>				
Date	Title	Yr Level	Location	Time
Mon 17 June	Primary Maths Teachers' Day	P-6	Bendigo	9:00am-3:30pm
Tue 25 June	Integrating Computers into Level 4 CSF II Maths	5-6	Swan Hill	4:30-6:30pm
Tue 25 June	Integrating Computers into Level 5 CSF II Maths	7-8	Swan Hill	4:30-6:30pm
Wed 26 June	Integrating Computers into Level 4 CSF II Maths	5-6	Shepparton	4:30-6:30pm
Wed 26 June	Integrating Computers into Level 5 CSF II Maths	7-8	Shepparton	4:30-6:30pm
<i>TERM 3</i>				
Date	Title	Year	Location	Time
Wed 31 July	Activities for Focussed Teaching of Number	P-4	Hamilton	4:30-6:30pm
Tue 13 Aug	Discovering Numeracy Online	TAFE	Brunswick	5:00-7:00pm
Wed 14 Aug	Activities for Focussed Teaching of Measurement	P-4	Hamilton	4:30-6:30pm
Thur 15 Aug	Integrating Computers into Level 4 CSF II Maths	5-6	Kew	4:30-6:30pm
Wed 21 Aug	CAS Technology Series 1. Introductory Workshop for the TI-89/92+/Voyage 200 2. Symbolic Maths Guide on the TI-92+ 3. Dynamic Geometry on the TI-92+	10-12	Mildura	9:30-11:00am 11:30am-1:00pm 2:00-3:30pm
Fri 23 Aug	Middle Years Maths (5-9) Teachers' Day	5-9	South Morang (northern metro region)	9:30am-3:30pm
Wed 28 Aug	Activities for Focussed Teaching of Space	P-4	Hamilton	4:30-6:30pm
Thur 29 Aug	Integrating Computers into Level 5 CSF II Maths	7-8	Kew East	4:30-6:30pm
Tue 3 Sep	Integrating Computers into Level 4 CSF II Maths	5-6	Geelong	4:30-6:30pm
Tue 3 Sep	Integrating Computers into Level 5 CSF II Maths	7-8	Geelong	4:30-6:30pm
Wed 11 Sep	Activities for Focussed Teaching of Chance & Data	P-4	Hamilton	4:30-6:30pm

See over for further details.

Professional Development 2002 cont.

COST:

After School PDs: \$40 per session for members; \$50 for non-members (inc. GST).

Special members offer - make 4 bookings for any combination of after school sessions and only pay for 3!

AFTER SCHOOL EVENTS	Venue	Date & Time
<p>Integrating Computers into Level 4 CSF II Mathematics (Presented by John Vincent)</p> <p>This session will introduce participants to the ways MSWord and Excel (or equivalent word processors/ spreadsheets) can be used in many creative ways in the mathematics curriculum, not just those mandated by the CSF. Participants will also learn how to use the creative multi-media programme MicroWorlds, and mention will be made of other applications as time permits. We will work with the CSF strands of Chance and Data, Shape and Space and Number to construct useable teaching units integrating the technology with the curriculum so that small groups can use the material in the numeracy block.</p> <p>To practice some of the activities please bring a laptop to the session.</p> <p>*Asterisked sessions (see left) will be run in a computer lab.</p>	Swan Hill College, Pye Street, SWAN HILL	Tue 25 June 4:30-6:30pm
	Guthrie Street PS, Guthrie Street, SHEPPARTON *	Wed 26 June 4:30-6:30pm
	Kew PS, Peel Street, KEW *	Thur 15 Aug 4:30-6:30pm
	Grovedale SC, Wingarra Drive, GROVEDALE *	Tue 3 Sep 4:30-6:30pm
<p>Integrating Computers into Level 5 CSF II Mathematics (Presented by Jill Vincent)</p> <p>This workshop session will introduce participants to the dynamic geometry software, Cabri Geometry II, and show how it can be used in Years 7 and 8. The software may be used with pre-prepared files to demonstrate relevant geometry or may be used in an open-ended manner, where students can explore, discover relationships and, with teacher guidance, develop explanations for their discoveries. The session will also include some examples of the use of spreadsheets at Years 7 and 8, and a glimpse of how the software MicroWorlds can be used to enhance understanding and enrich the learning of mathematics at this level.</p> <p>To practice some of the activities please bring a laptop to the session.</p> <p>* Asterisked sessions (see left) will be run in a computer lab.</p>	Swan Hill College, Pye Street, SWAN HILL *	Tue 25 June 4:30-6:30pm
	Guthrie Street PS, Guthrie Street, SHEPPARTON	Wed 26 June 4:30-6:30pm
	Kew High School, Burke Road, KEW EAST *	Thur 29 Aug 4:30-6:30pm
	Grovedale SC, Wingarra Drive, GROVEDALE *	Tue 3 Sep 4:30-6:30pm
<p>Activities for Focussed Teaching of Number (Presented by Peter Martin)</p> <p>Considerable focus has been placed upon open-ended questions and activities as part of the early years strategies for primary teachers. This series of four sessions has been primarily designed for early years teachers and will provide activities for focussed teaching of</p> <ul style="list-style-type: none"> • number, • measurement, • space, • chance and data. <p>Each session will explore one of these topics in turn with respect to the effective use of open-ended questions and creative group work as a means of enhancing teaching in these areas. Participants will be expected to engage in a range of activities, designed to explore and develop strategies for use in the classroom.</p>	The Hamilton & Alexandra College, Junior Campus, Chaucer Street, HAMILTON	Wed 31 July 4:30-6:30pm
<p>Discovering Numeracy Online (Presented by Dave Tout & Penny Halliday)</p> <p>Over recent years, much money and resources have been put into online resource development, often at the expense of print based or even multimedia based resources. There has been a rush to develop websites. Not all have been successful. However, there have been a number of sites that have attempted to be innovative and still cater for the needs of learners and that utilise the benefits of learning online and the WWW.</p> <p>This presentation will visit a range of numeracy or maths sites developed in the adult education sector (including Victoria's TAFE Virtual Campus) that are seen to be useful for teaching numeracy. It will also briefly consider the advantages and disadvantages to using online resources, compared to both print based and other multimedia products.</p>	"Cliveden" MAV Office, 61 Blyth Street, BRUNSWICK	Tue 13 Aug 5-7pm

AFTER SCHOOL EVENTS cont.	Venue	Date & Time
Activities for Focussed Teaching of Space (Presented by Peter Martin) See previous page for session description.	HAMILTON	Wed 14 Aug 4:30-6:30pm
Activities for Focussed Teaching of Space (Presented by Peter Martin) See previous page for session description.	HAMILTON	Wed 28 Aug 4:30-6:30pm
Activities for Focussed Teaching of Chance and Data (Presented by Peter Martin) See previous page for session description.	HAMILTON	Wed 11 Sep 4:30-6:30pm

CAS Technology Full Day Series - Mildura

COST:

Members: \$30 1 session, \$50 2 sessions, \$70 3 sessions per person (inc. GST). Non-members \$40 1 session, \$70 2 sessions, \$100 3 sessions per person (inc. GST).

CAS TECHNOLOGY FULL DAY SERIES *Proudly Supported by Texas Instruments	Venue	Date & Time
Computer Algebra Systems (CAS) in the Country Series (Presented by Peter Fox) Participants need to indicate on their PD application form which calculator they have or which one they would like Texas Instruments to supply	Chaffey Secondary College, MILDURA	Wed 21 Aug Session 1: 9:30-11:00am Session 2: 11:30am-1:00pm Session 3: 2:00-3:30pm
Session 1: Introductory Workshop for the TI-89/92+/Voyage 200 (9:30-11:00am) This workshop assumes that teachers have used a graphing calculator such as the TI-82/83/83+ range. It does NOT assume any knowledge of the TI-89/92+/Voyage200. The workshop will focus on the introduction of computer algebra systems. The workshop will focus on using a computer algebra system to perform the following operations: <ul style="list-style-type: none"> • Substitute a value into a variable • Solve an expression for a given variable • Solve an equation for a given value • Define a function • Factorise a function • Graph a function, the y = editor • Basic Calculus 		
Session 2: Symbolic Maths Guide on the TI-92+ (11:30am-1:00pm) The symbolic Maths Guide (SMG) is an APP (Application) that is in the concept or developmental stage at the moment. It is an excellent introduction to Computer Algebra Systems and it is very easy to get started. It requires students to enter the algebraic steps required to solve a problem. This workshop is suitable to high school mathematics teachers at all levels. Topics covered will include: <ul style="list-style-type: none"> • Introduction to SMG App • Solving a problem in SMG • Writing/Creating a problem in SMG • Creating a problem set in SMG Classroom applications will also be discussed.		
Session 3: Dynamic Geometry on the TI-92+ (2:00-3:30pm) The TI-92+ can be used to run either Cabri Geometry or Geometer's Sketchpad. Although a computer will give a more, user-friendly environment to work with, the calculator adds genuine portability and access to Dynamic Geometry. Topics covered will include: <ul style="list-style-type: none"> • Introduction to Dynamic Geometry • Examples of Dynamic Geometry • Drawing a triangle in Cabri • Drawing parabolas • Finding the circumcentre of a triangle Classroom applications will also be discussed.		

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ACKNOWLEDGEMENT LETTERS

Letters of acknowledgement are only sent out to attendees for full day professional development sessions. Those people attending after school professional development sessions will only be notified if a place is not available.

CANCELLATION:

If you are unable to attend a session that you have booked into, refunds will not be issued if you cancel your booking less than 48 hours prior to the session.