

Mathematics Links

NSW Department of Education and Training

Curriculum K-12 Directorate

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Email Alert

Welcome to *Mathematics Links* June 2007

Mathematics Links is an electronic update for mathematics faculty leaders and mathematics teachers informing on the latest additions to the *Curriculum Support* website, professional learning opportunities and links to relevant resources.

Curriculum Support updates

- [Teaching patterns and algebra](#)
To gain an understanding of algebra, students must be introduced to the concepts of patterns, relationships, variables, expressions, unknowns, equations and graphs in a wide variety of contexts. These introductory activities support a concrete approach to teaching patterns and algebra from Stage 3 onwards. Activities include Building Patterns 1,2 and 3, Guess my rule, an overview of a unit of work on algebraic techniques (Syll ref PAS4.1), an assessment for learning activity and Building shapes lesson and worksheet.
- Stage 6 Gifted and talented unit of work on [exponential growth and decay](#)
This unit, written by Glenn Langford (HT Elderslie HS), involves the study of growth and decay as applied to bacteria, radioactive substances, heating and cooling and world populations. It shows how to offer activities and strategies that cater to the different learning styles of students for this topic in 2 Unit and Extension 1 Mathematics.
- Have you heard of [The Stawell Gift](#)?
The most famous foot race in Australia is the Stawell Gift. It has been held in all but four years since 1878. This activity provides some authentic data about the Stawell Gift that could be used to interpret the slope of a line as a measure of speed. For more information about using this in the classroom refer to *Curriculum Support for teaching in Mathematics 7-12, 2007, Vol. 12 No. 2*.
- Half Yearly report time is fast approaching if not already upon you! The website now has some assistance in this area with a bank of report comments for Stage 4 and 5 directly related to the mathematics syllabus outcomes. On the Time to Teach website there is a whole section devoted to [report comments](#). Mathematics [report comment starters](#) are available by clicking mathematics in Stage 4 or 5.

Professional learning opportunities

- [Secondary mathematics semester 2 professional learning workshops](#) are now on the website. These Curriculum K-12 workshops supplement workshops offered by regional mathematics consultants with a focus on Head Teacher development and supporting new scheme mathematics teachers. Registration for

these workshops is online. Upcoming workshops include:

- HT Workshop Rooty Hill **30&31/08/2007**
- HT Workshop Wollongong **23&24/10/2007**
- HT Workshop Newcastle **01&02/11/2007**
- HT Workshop Port Macquarie **07&08/11/2007**
- HT Workshop Armidale **06&07/12/2007**
- Supporting new scheme mathematics teachers Rooty Hill 17/08/2007

Free online mathematics resources

- **Did you know that 18 May 2007 was [National Mathematics Day?](#)**
AAMT have instigated the first national mathematics day and provided an interesting page of activities to celebrate titled **Maths: What Counts?**
National Mathematics Day 2007 is a chance for teachers to share and promote good mathematics teaching and learning -- with each other, with students, with colleagues and with the wider community.
AAMT want it to be a celebration of mathematics in our schools.
The focus of the first National Mathematics Day was on the question '**What should school mathematics be like and be about?**' On this page you can find activities for the classroom, the school and the wider community. Our very own Peter Gould has pages from his Cooperative Problem Solving book for download here. It is certainly worth a look – could help with something different for parent teacher evening.
- **HOTmaths** is contributing to this day by providing free activities and resources. These resources will remain free on the HOTmaths site after National Mathematics Day, so if you don't have time to use them for a couple of weeks, they will still be available at www.hotmaths.com.au As well as sets of printable investigations complemented by online interactive exploratory tools, HOTmaths is providing a free online illustrated maths dictionary and free Scorcher, a drill and practice competition. A pdf about Hotmaths is attached to this email.
- **Department of Fair Trading's [Money Stuff](#) website**
The *Money Stuff!* Teachers' resources section contains print resources and video resources relevant to students in Stage 5 and Stage 6 (General). It places the mathematics of finance in context. The video resources contain a series of learning sequences including budgeting, buying stuff, paying bills, credit cards and loans. The [Money Stuff Challenge](#) contains four interactive tools to help students gain the skills and knowledge to successfully buy a car, buy a mobile phone, rent a house and work smart
[2007 Money Stuff! competition](#)
Enter the 2007 Money Stuff! Challenge and win cash prizes for you and your school. The 2007 Money Stuff! competition is open to all high school students in NSW. This year the cash pool of prizes has been raised to \$16,000. There are more competition categories, including a new age category for Year 7 to Year 9 students. The winners will receive \$250 for themselves and \$3,000 for their school. Teachers are also in the running for a cash prize. Competition closes Friday 7 September.
- **[Einstein archives online](#)**
The Einstein Archives Online Website <http://www.alberteinstein.info/> provides the first online access to Albert Einstein's scientific and non-scientific manuscripts held by the Albert Einstein Archives at the Hebrew University of Jerusalem and to an extensive Archival Database, constituting the material record of one of the most influential intellects in the modern era.
The site allows viewing and browsing of approx. 3,000 high-quality digitized images of Einstein's writings. The Archival Database allows direct access to approx. 43,000 records of Einstein and Einstein related documents. The records published in this online version pertain to Albert Einstein's scientific and non-scientific writings, his professional and personal correspondence, notebooks, travel diaries, personal documents, and third-party items contained in the original collection of Einstein's personal papers.
This website would offer an excellent opportunity for developing a web quest for junior years and images to supplement learning for Stage 6 Calculus based courses.

New scheme teachers

- At this point in time new scheme mathematics teachers should be starting to collate their evidence for supporting accreditation at professional competence standard. This page on the Professional Learning and Leadership Development website offers support and suggestions for collecting evidence
<https://www.det.nsw.edu.au/proflearn/areas/nt/ntsce01.htm>
- A brand new document is now available called **Professional Support for New Scheme Teachers - Achieving Accreditation at Professional Competence: A guide for NSW Government Schools**. I have attached the pdf file to this email. Please take the time to read the relevant sections. This advice is hot off the press! It is also available from this page as a download.
<https://www.det.nsw.edu.au/proflearn/areas/nt/index.htm>
- Another workshop for new scheme teachers has been planned for Semester 2 - [Supporting new scheme mathematics teachers](#) Rooty Hill 17/08/2007
To register online for this course go to the Curriculum Support website at http://www.curriculumsupport.education.nsw.gov.au/prolearn07/semester1/s_mathematics.htm
For more details about the workshop click on the workshop.
- **Behaviour management** is always a hot topic in your first few years of teaching – I know it was mine! Again the Professional Learning and Leadership Development website has come up with the good oil. On this page <https://www.det.nsw.edu.au/proflearn/areas/nt/resources/bm01.htm> there are links to some good sites that offer strategies that really work. A New Teacher's Survival Guide by Hannah Means is an easy read and offers one teacher's insight into her professional practice.

Discussion

- **School Certificate grades feedback summary**
In the February edition of Maths Links I attached a survey on how well your faculty coped with allocating grades using the new CPDs in 2006. Thank you to everyone who took the time to reply. I have collated the surveys that were returned and have attached the summary to this email.
In short the results were very mixed probably reflecting last year's grade allocation methods. The main points emerging included:
 - Most agreed that the grades for maths were easy to allocate for their class
 - Equal numbers agreed and disagreed that the grades for maths were easy to allocate across all Year 10 classes at their school
 - Most agreed that the CPDs assisted the grade allocation process
 - Mixed opinion about allocated grades aligning well with performance on the SC external state-wide numeracy test
 - Most felt confident that the assessment process used to allocate SC grades at their school was effective
 - Most respondents used BOS method 2 to determine grades (order of merit for Year 10 group and refer to CPDs to relate the order of merit to grades awarded)

Until next month!

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