

# Mathematics Links

NSW Department of Education and Training

Curriculum K-12 Directorate

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## Email Alert

### Welcome to *Mathematics Links* February 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.

**Welcome back to school for the New Year! Here's to another year of doing what I enjoy most of all – teaching mathematics.**

This email was originally developed for communicating information to NSW DET Mathematics Head Teachers. However, with all teachers now having their own Department email addresses the focus has broadened to include all DET teachers teaching mathematics 7-12. I have attached a promotional flyer that can be printed to display in your faculty staffroom advertising joining the *Maths Links* email distribution group. Keep in mind this email is best received as an email, not as a paper version, due to the hyperlinked website addresses. One click and you can view the website without typing in long URLs.

#### **Curriculum Support website updates**

- Finally, all the **7-10 teaching ideas** are actively linked. See [http://www.curriculumsupport.education.nsw.gov.au/secondary/mathematics/years7\\_10/teaching/list.htm](http://www.curriculumsupport.education.nsw.gov.au/secondary/mathematics/years7_10/teaching/list.htm)
- Year 8 teachers may be looking for some activities to teach **Pythagoras' Theorem**. You may find these useful [http://www.curriculumsupport.education.nsw.gov.au/secondary/mathematics/years7\\_10/teaching/pythagoras.htm](http://www.curriculumsupport.education.nsw.gov.au/secondary/mathematics/years7_10/teaching/pythagoras.htm)  
More material has been added to this unit of work January 2007.
- Year 10 teachers may find these **trigonometry** lessons a different way of introducing this topic to students [http://www.curriculumsupport.education.nsw.gov.au/secondary/mathematics/years7\\_10/teaching/trig.htm](http://www.curriculumsupport.education.nsw.gov.au/secondary/mathematics/years7_10/teaching/trig.htm)
- Year 11 teachers – don't forget to remind students about the wealth of information on **HSC Online**. The mathematics material

covering all Stage 6 courses is available through this page  
[http://www.curriculumsupport.education.nsw.gov.au/secondary/mathematics/years11\\_12/teaching/index.htm](http://www.curriculumsupport.education.nsw.gov.au/secondary/mathematics/years11_12/teaching/index.htm)

- Running out of ideas for teaching **General mathematics**? How do you teach students to find the median-median line of fit? What is mathematical modelling? How might you develop the idea of a sample? These and other questions are addressed in the General mathematics workshop materials accessed through [http://www.curriculumsupport.education.nsw.gov.au/secondary/mathematics/years11\\_12/teaching/general\\_maths.htm](http://www.curriculumsupport.education.nsw.gov.au/secondary/mathematics/years11_12/teaching/general_maths.htm)

### Professional learning opportunities

- During semester one 2007, the Mathematics Unit, Curriculum K-12 Directorate will be presenting one-day and two-day workshops for mathematics teachers, supplementing the workshops provided by regional consultants. While the **Patterns and algebra** workshop targets Stage 3 and Stage 4 teachers, the **Head teacher mathematics** workshops target mathematics head teachers and teachers aspiring to be head teachers. **Supporting new scheme mathematics teachers** workshops target teachers in their first few years of teaching.

For more information about these workshops go to  
[http://www.curriculumsupport.education.nsw.gov.au/secondary/mathematics/prolearn/pl\\_activity.htm](http://www.curriculumsupport.education.nsw.gov.au/secondary/mathematics/prolearn/pl_activity.htm)

- **Registration** for the workshops is now an online process and can be accessed via [http://www.curriculumsupport.education.nsw.gov.au/prolearn07/semester1/s\\_mathematics.htm](http://www.curriculumsupport.education.nsw.gov.au/prolearn07/semester1/s_mathematics.htm)

Please note that **venue** details will be sent with confirmation of registration.

- As a faculty professional learning activity have you considered a **Lesson Study** approach? Lesson Study is a model of professional development designed to assist teachers produce quality lesson plans and gain a better understanding of student learning in mathematics. The process involves a small group of teachers as a Lesson Study team, who meet regularly to plan, design, implement, evaluate and refine lessons for a unit of work. Teachers experience gradual and incremental professional growth through the collaborative development of lessons. Have a look at the Lesson Study website for more details  
<https://detwww.det.nsw.edu.au/directorates/profcurr/lessonstudy/overview.htm>

The start of a new year is an excellent time to plan faculty professional learning for the next twelve months. Don't let it slip by!

- Have you thought about joining your professional

mathematics association – MANSW? You may join as an individual member or subscribe as a school membership. They have much to offer when it comes to professional learning in mathematics. Their **Reflections** journal always provides new insight into teaching different concepts in mathematics. For more details go to <http://www.curriculumsupport.education.nsw.gov.au/primary/mathematics/prolearn/proassociations/index.htm>

### Free online mathematics resources

- **nrich maths**

This site, developed by the University of Cambridge, UK, in 2003 is excellent for engaging students in problem solving. Each month nrich publish fifteen problems and a number of games, articles and other resources, designed for use by students from the age of 5 to 19. All are tagged with curriculum content links(UK) and challenge levels. Read more about nrich at <http://nrich.maths.org/public/index.php>

- **Illuminations**

Illuminations, developed by the National Council of Teachers of Mathematics (NCTM) in USA, is designed to:

- provide (USA) Standards-based resources that improve the teaching and learning of mathematics for all students.
- provide materials that illuminate the vision for school mathematics set forth in *Principles and Standards for School Mathematics (USA)*.

Explore the library of 91 online activities that help to make maths come alive in the classroom or at home. View the collection of 524 lessons for preK-12 maths educators.

Access this site at <http://illuminations.nctm.org/>

### New scheme mathematics teachers

- Welcome to the exhilarating world of mathematics teaching. If this is your first year of teaching mathematics you may be feeling slightly overwhelmed at this point in time. Please don't let it all get on top of you. Seek assistance and support NOW because we don't want to lose you to the profession – you are far too valuable!

- Support is available through many avenues – your faculty colleagues, mentors, Head Teacher and Senior Executive. Other areas of support include **The Professional Learning and Leadership Development** website at <https://www.det.nsw.edu.au/proflearn/>

- The **Early Careers section** of this website offers – latest news; what's on; and webBoards to share experiences and resources <https://www.det.nsw.edu.au/proflearn/areas/nt/index.htm>

- Bulletins from the **Institute of Teachers** are also available from this page

- Come and talk to other new scheme maths teachers at the workshops planned for Semester 1. For more details see [http://www.curriculumsupport.education.nsw.gov.au/secondary/mathematics/prolearn/pl\\_activity.htm](http://www.curriculumsupport.education.nsw.gov.au/secondary/mathematics/prolearn/pl_activity.htm)

### Discussion

- **How well did the process of allocation of the School Certificate grades at the end of 2006 go at your school?** We would really appreciate you spending a few minutes to give some feedback on the process. I have attached a file called SC grade feedback. If you could complete this and email it back to me by 28 February it would be very much appreciated. Results and comments will be distributed through future Maths Links emails.

If you do not wish to receive further Maths Links emails please contact [carolyn.mcginty@det.nsw.edu.au](mailto:carolyn.mcginty@det.nsw.edu.au)

Till next month!