

Welcome to the October edition of the In2science newsletter. There are just three weeks left of placement for the year. As we come to the end of our current placements we are able to reflect with pride on what we have achieved this year. Here are some statistics on the year's success to date:

- **177** Mentor placements
- Over **150** teachers involved
- Over **6,000** students having access to a Mentor.

The success of the program comes down to two groups of people:

1. Our diligent university students who volunteer their time to help engage the next generation of scientists.
2. The teachers willing to have the Mentors in their classes and maximise the benefits they bring.

- Thank you -

The recent research evaluation by the Centre for the Study of Higher Education (CSHE) has helped us considerably in identifying the benefits for schools and building up a picture of making the program sustainable in a school setting.



In2science News

In2science Board Member, **Dr Alan Finkel** has decided to step down due to increased external commitments. Alan has served on the Board for over a year and his passion and enthusiasm for the promotion of science will be missed. Alan is Chancellor of Monash University and a champion of science education. He has been involved in the [STELR](#) project which many schools have taken up and is behind the science magazine [Cosmos](#). In2science would like to thank Alan for his contribution and hope he can maintain contact with the program over the coming years.

Placement dates

Placements officially finish in the week of **26th October**.

Long serving Mentors – This semester saw the following Peer Mentors complete their **third** round of placement. These students have been able to contribute not only expertise in the classroom and been good role models, they have also contributed to the **In2science** program by helping recruit new mentors and attend their training sessions. Many thanks to each of you and we look forward to handing out your letters of commendation towards the end of this year.

La Trobe University

Emma Thornton, BSc/Nanotechnology
Justine Zuidema, BA/BSc
Shainie Jesurasan, Medical Science
Emma Siu, Biological Sciences
Daniela Soccio, Biotechnology and Cell Biology
Jonathon Thompson, Environmental management and Ecology
Jess Walton, BSc/Law
Sophie Wayth, BSc/Science Education

The University of Melbourne

Josh Wayman, BSc
Xin-Fang Yu, BA/BSc
Charlotte Hughes, Biomedical Science

In2science roadshows – this year we are running two roadshows to regional Victoria. The **In2nanotech** roadshow will visit schools in the northern and alpine areas. Schools already booked in are Wangaratta HS, Euroa SC, Mansfield SC, Beechworth SC, Bright P-12 Coll and Myrtleford P-12 Coll.

We will also be running a biotechnology roadshow in conjunction with the [Get into Genes](#) program. Called **In2biotech**, this will look at the issue of climate change and the work being done to use biotechnology to address these issues from an agricultural perspective. This roadshow will be visiting schools in the Wimmera District including Stawell SC, Warracknabeal SC, Murtoa SC and Dimboola Memorial SC.

Both roadshows will be running the first week of December and we look forward to visiting the schools and working with their students.

In2science Prizes

In2science prize winners for semester 2 – Prize draw was done on the 5th October with the following schools, teachers and Mentors being drawn at random:

Prize	Donated by:	Winner
1x Teacher - <i>Nature of Biology – book 1</i> 1x Teacher - <i>Nature of Biology – book 2</i> 1x Teacher - <i>Nature of Biology – book 2 – teachers resource manual</i> 1x Mentor - <i>Science Alive – level 6</i> 1x Mentor - <i>Science Quest 1</i> 1x Mentor - <i>Science Quest 2</i> 1x Mentor - <i>Science Quest 3</i>	Jacaranda books John Wiley & Sons Ltd www.jaconline.com.au/	Sarah Green (Northcote HS) James Anderson (Wantirna Coll) Anna Burroughs (Fitzroy HS) Tenille Butera Mardi Bassett Dee Peng Ruth Colley
A year subscription to Australian science magazine COSMOS 1x Teacher 1x Peer Mentor	Cosmos Magazine www.cosmosmagazine.com Luna Media	Virginia Watson (Ringwood) Lux (Leon) Huang
Global warming mug 1x Teacher 2x Peer Mentor	In2science	Naomi Edrees (Eltham HS) Michael Wong Krystal Jessop
6 teachers who teach Chemistry or have an interest in Chemistry will have the opportunity to participate in hands on activities within laboratories at the Department of Medicinal Chemistry, Pharmacy and Pharmaceutical Sciences, Monash University, Parkville. This will occur at a date to be decided in December '09 - 6X Teachers (2 from each of three winning schools)	The ARC Centre of Excellence for Free Radical Chemistry and Biotechnology www.freeradical.org.au/	Footscray CC X2 Preston Girls SC X2 Westall SC X2
One year's annual subscription to STAV (or free registration at a STAV conference if already a member) X1 teacher	Science Teachers Association of Victoria www.stav.vic.edu.au	Hakoum El-Houli (RDSC)
One year's annual student subscription to STAV X1 Mentor	Science Teachers Association of Victoria www.stav.vic.edu.au	Sophie Wayth

Prize winners will be contacted directly by the donating company or In2science.

In2science Day for Y9 students Wednesday 2 December 2009, the University of Melbourne

The In2science program would like to invite **Year 9 students** in our partner schools to attend a day of exciting science activities to be held at the **University of Melbourne's Parkville campus**.

WHEN: Wednesday 2 December 2009 from 10.00 - 2.15

Your class(es) will have the opportunity to explore different aspects of science and technology by way of practical activities, interactive seminars and demonstrations. The day will finish with a bang during the physics show. Our current Mentors will also be participating on the day; a chance to see them in their own environment!

Classes will be allocated to the sessions on a first-in-best-dressed basis with all students participating in one practical based activity, and one lecture based activity. This will allow them to experience a range of tertiary teaching and learning styles.

To Register

Email Alison Wray at the Faculty of Science, University of Melbourne at asw@unimelb.edu.au or (03) 8344-4367 by **Wednesday 4 November**.

Please include your name, your schools name, contact details, name of the Mentor currently working with your class, and the number of students that you aim to bring on the day.

Please note - We wish to ensure that current Year 9 classes working with a mentor have the first priority to be involved, however, if you feel that other year 9 classes would benefit, then please indicate this in your registration email.

Four partner schools attended our pilot event in 2008. One of the link teachers made these comments "A *very constructive day which gave the students an opportunity to explore the different areas of science. The activities were engaging, the students were kept on task for the entire time they were at the university, the program gave the students a realistic feel of what it is like to be in a university setting*".

We look forward to welcoming your students.

Mentoring in Action

At **Canterbury Girls SC**, Mentor Scott has been having a great time in Y7 science. He has been able to help students understand the working of the eye through a dissection practical and he has been helping students get to grips with the properties of metals. Scott and the class teacher have been working extremely well together to maximise the benefits of his time at the school.

Mentor Nicole has been working with a group of energetic and enthusiastic Year 7 students. They have been using the laboratory equipment to help learn about chemical solutions and are now investigating recycling waste and water usage. As well Nicole has been working with Year 12 biology students, helping them to produce DNA trees via an online program. Both the students and teachers at **Wheeler Hill SC** are learning a lot from Nicole.

At **Strathmore SC**, Mentor Jenny has been helping out in mathematics and science. Students were really valuing the extra support they get in the class and commented that they got their work done more quickly. Well done Jenny. Also at the school is Mentor Hewitt. She has been working with a Y10 science class and has been able to challenge her own confidence by presenting to the students about what university is like and her own studies. Hewitt has a great rapport with both teacher and students, well done.



Mentor Scott demonstrates a dissection

At **University HS**, Mentor David has been having a great time explaining how viruses operate in the body. David has been a great help to the teacher offering support to deliver content away from the teachers specialism.

At **Mill Park SC**, Mentor Michael has been assisting students in Y10 get to grips with aspects of human biology. Students were investigating the skeleton and had to draw a life size version.

Mentor Valli is now on her fourth placement. At **Melbourne Girls' College** she has been working with students in Mathematics. Valli has a great rapport with the students and they value the extra support and enthusiasm she can offer.

Preston Girls SC is doing an amazing job with their six Mentors!!! Not only are Mentors helping support the STELR program delivery they are supporting many other classes. Mentors Shugi and Sophie are **Team Mentoring** – a first for the program. Sophie is a very experienced Mentor and first timer Shugi has found it wonderful to work with her and learn the skills of Mentoring. They both made an excellent joint presentation on energy and global warming issues on a recent visit. Well done. Mentor Matt has been working with a class looking at evolution and genetics. Students have investigated flight, looking at wing shape and adaptations of birds to their environment. Great work Matt. This school probably has the highest ratio of Mentors to school students – the science staff are to be congratulated.

At **Crusoe 7-10 SC** in Bendigo, Mentor Penny has been helping out in mathematics. The school uses a team teaching approach with classes being paired up. The extra helping hand of a Mentor is extremely valued in these situations. Great work Penny.

At **Mac Robertson Girls' HS**, Mentor Stefan has been having a great time working with the Y9 students on environmental chemistry and has an excellent working relationship with the class teacher. They have been gaining his expert knowledge of chemistry as they have undertaken titrations to investigate the quality and value for money of different antacid products. Well done Stefan.

Mentor Sarah has been getting immersed in science at **Fitzroy HS**. Sarah has been helping Y7 students in their understanding of metals and chemistry, keen to inspire the next generation of young scientists. Wonderful work Sarah.

Footscray CC, Mentor Cemil has built a great rapport with both the class teacher and students, assisting with physics activities along with some chemistry and biology. Cemil was doing a great job helping students test light and how it interacts with different lenses. Well done.

At **Lalor North SC** Mentor Jess has been working with the students on their studies of space. Supported by the class teacher Jess is organising a trip into La Trobe University Physics department to see the telescopes and have a talk on space and solar activity. Well done Jess.

Finally, students at **Westall SC** have been benefiting from the expertise of Mentor Leon. The year 11 physics class has had an opportunity to quiz Leon about his own studies in great detail and gain from his experience in engineering. He has been able to assist them in the revision of their course work from term 3 and is all fired up to help them explore the concept of waves during term 4. The class teacher Shane - who is new to the program- is also benefiting from Leon's visits. Together they are designing a multimedia component to help the students learn about waves.

These are just a snapshot of our many Mentors on placement and the wonderful work they are doing with both students and teachers.

Information for Schools

Please ensure that the classes the Mentors are working with know when the Mentor's last week will be. It is amazing how attached the students get to the Mentors and it is important that they are aware of when the Mentor's last lesson with them is.

In2science Evaluation documents will be sent out to the schools soon. This semester we are trialling the use of an **online form** for class teachers and link Teachers to fill in. School students will still receive a hard copy and teachers will be asked to complete a hard copy of the feedback to Mentors sheet. It would be fantastic if these simple documents could be

completed. It is only by undertaking evaluations that we can determine how successful the program is and the benefits being achieved. It is also a way in which we can learn about issues regarding the program and then endeavour to put them right.

The recent **CSHE** evaluation is being used to enhance the documentation we send to schools and we will be compiling a new School's Pack for Link Teachers that should be a more user friendly and useful document. It will contain case study examples of best practice from the schools that participated in the evaluation. The aim being to help Link Teachers ensure the program is sustainable and continues to evolve within their schools.

Here is one example from the case study section about how a teacher has utilised a Mentor:

Inspiring Year 10 students through 'hands on' with advanced chemistry

How do you give Year 10 kids a taste of exciting chemistry when you are limited to small experiments and simple equipment? The answer may be to introduce more complex tasks, using more advanced techniques. This was Greg's* rather daring plan for his general science class – to develop a series of problem-solving experiments, using the large pipettes and volumetric flasks normally reserved for VCE chemistry.

*Typically this is the stuff that they wouldn't use until they got into VCE chemistry. But **we decided that nobody's going to take VCE chemistry until they see how interesting it can be** ... And to be perfectly honest, I was a bit nervous, thinking 'Oh, they are going to break all these things, and they cost twenty or thirty dollars each!'*

*I had a really good mentor at that time ... an outstanding mentor. Having her in the classroom with me meant that students could get a second opinion, that they could ask for assistance, and they didn't have to wait for me to get around. I think we did really well. We didn't break anything. The kids really, really enjoyed it because they got to use fancy kinds of exciting equipment that normally nobody would trust them with. **And I think that having a mentor actually made it all much easier, not only for me but for the students as well.***

(Greg*, science teacher)

* Not the person's real name, for ethical reasons.

The Science Experience – Your Y9 students may be interested in participating in the science experience this year (formerly Siemens Science Experience). All three partner universities will be hosting events. Check out the [website](#) to find out more.

Information for Mentors

Placements will run until the week of **26 October**.

Thank you for all your hard work this semester. Many of you have already said you are going to keep visiting the school after the week of the 26th which is great. It is important that the schools and students know when your last week is so they can officially say goodbye.

1. **Evaluations** – we ask you to give us feedback and this is done using the [online](#) form.

An email will be sent out to remind you to fill it in at the end of the placement.

Facebook – We now have well over 50 Mentors, past and present signed up for the In2science group. It is great to see Mentors sharing their experiences and seeking advice from each other. If you have not yet had a look then check it out. Do contribute to the discussions and post questions you have regarding activities you are doing on placement. The more use the discussions get, the more it can benefit everyone – happy blogging. **Do join if you are finishing Uni this year – it is a great way to keep in touch.**

Mentor Help - We still require some more Mentors to help out on the **In2science Day** at the University of Melbourne on Wednesday 2 December. If you can spare some time please contact Alison asw@unimelb.edu.au.

Recruitment for 2010 Mentors is well underway. Please feel free to offer your help to talk to fellow students about the program in lectures and lab sessions. Please tell your friends about the program and what you have gained from the experience. Applications are made online at: <http://www.latrobe.edu.au/scitecheng/mentoring/registration.htm>

If you have not let John or Jacinta know your interest in mentoring again next year then please let us know. You may be finishing uni this year so please keep us informed.

Don't forget to keep a record of your travel expenses for reimbursement of up to \$10.00 per week. Travel claim forms are located at the back of your Peer Mentor's pack or on the [website](#).

News from the Institutions

La Trobe University

Nancy Millis Lecture

Lecture title: The challenges of developing vaccines for the world's poorest. Do hidden molecules hold the key?

Presenter: Professor Michael Good - **Director, the Queensland Institute of Medical Research, Winner of the 2009 Eureka Prize for Leadership in Science**

Date: Monday 19th October 2009

Time: 6pm – 7pm

Where: Hooper Lecture Theatre, La Trobe University, Bundoora Campus.

Lecture title: My 80 year journey through learning and life

Presenter: Mary White, Australia's foremost paleo-botanist

Date: 26 Oct 2009

Time: 1:00 PM - 2:00 PM

Location: Agora Cinema, La Trobe University, Bundoora Campus.

(Videoconference to: Room 4101 at Albury- Wodonga and BUS133 at Bendigo campuses)

RSVP to Kristen Pascoe

Faculty of Science, Technology and Engineering

E: k.pascoe@latrobe.edu.au | T: 9479 2556

All are most welcome to attend these free public lectures

The University of Melbourne

In2science Y9 event Wednesday 2 December (see information above)

Course Information Day for Year 12 students will be held on Thursday 17 December

<http://www.futurestudents.unimelb.edu.au/events/vic/cid.html>

PD days for teachers:

What: in-service day 2009 – A focus on the new "Study Design" for VCE Physics

When: 13 November 2009 from 9am – 3.30pm

Where: Laby Theatre (see map details above)

How: Return registration form by Friday 30 October 2009

Who: Direct enquiries to [Julie Warden](#) (T: 03 8344 5447)

Cost: \$99 (includes GST, writing materials, notes and lunch)

<http://physics.unimelb.edu.au/Community/Physics-Outreach>

School of Botany Biennial two-day teachers' Conference 2009:

- Date:** Thur 3rd December, Fri 4th December 2009
Time: 9.00am to 3.30pm each day (2 days)
Venue: The School of Botany, University of Melbourne,
Parkville Campus
Cost: Free of charge

For further information, to join our email list, or to book for the conference, contact Marie Thorpe on 8344 5071 or email thorpem@unimelb.edu.au.

<http://www.botany.unimelb.edu.au/botany/schoolresources/teaprofdev.html>

The Chemistry Education Association, in conjunction with the **School of Chemistry, University of Melbourne**, presents an *in-service day* of interest to Chemistry teachers. The lectures will highlight some exciting recent developments and applications of Chemistry. The workshops are practical laboratory activities. It is also a great way to network with teaching colleagues.

- Date:** Tuesday 24 November 2009
Time: 8.30 am to 4.00 pm
Venue: Bio 21 Institute, The University of Melbourne

http://www.cea.asn.au/chemistry_news.html

Monash University

Finding the good oil

A team from the engineering and arts faculties will develop a system to produce competitively-priced chemicals and alternative diesel fuels from second-generation feedstocks such as waste construction wood and plantation residues.

Monash mathematicians attempt the conversion of rugby league kickers

Monash University mathematician Dr Burkard Polster and his colleague Dr Marty Ross, have applied their mathematical insights to the game of Rugby League, in an attempt to improve players' kicking for conversions.

Websites to try

Here are a couple of sites that may be of interest:

<http://www.schoolscience.co.uk> this site has been updated and is a great resource for both students and teachers on a range of topics and innovative teaching ideas.

Impact World

Read stories and watch films that tell you how engineering and science are helping build the world around us.

Did you know 2010 will be the International Year of Biodiversity as designated by the UN.

The In2science Team

John McDonald
j.mcdonald@latrobe.edu.au

Jacinta Hubble
Jacinta.hubble@lsci.monash.edu.au

Alison Wray
asw@unimelb.edu.au



Department of Education and
Early Childhood Development

