



## Latest events >>

For the latest events and conference information go to STAV's website:

[www.stav.org.au](http://www.stav.org.au)

For information about science activities & competitions go to:

[www.stav.org.au](http://www.stav.org.au)

## Contents

- 2 STAV contacts
- 3 President's report
- 3 Project Officer's report
- 4 STS report
- 4 Science Drama report
- 4 Adapting to Climate Change
- 5 STS dates
- 5 New members
- 6 Conference information
- 8 Free Range Science
- 10 STAV Physics Workshops: Electricity & Motion
- 13 STAV important dates

## Conferences/Events

**The STAV event calendar** which includes all PD/conferences and science activities for the year is available on the STAV website: [www.stav.org.au](http://www.stav.org.au).

### Science Leaders' Conference 2011

Friday 13 and Saturday 14 May. More details on page 6 and on STAV's website.

### Physics Workshops 2011

These popular small-group workshops will be conducted again in 2011 at STAV House. Opportunities are also available for schools, including regional areas, to conduct the workshops in-house. Refer to page 10 of this newsletter and our website for more information <http://www.sciencevictoria.com.au/otherPD.html>

### Beginning Science Teachers Conference 2011

Monday 4 April. More details on page 6 and on STAV's website.

### Primary and Middle Years Science Teachers Conference 2011

Tuesday 24 May 2011. More details on page 6 and on STAV's website.

### Science Talent Search

Start planning now for the 2011 Science Talent Search. More information on pages 4 and 5, and on the STS website [www.sciencevictoria.com.au/sts](http://www.sciencevictoria.com.au/sts).

## Adapting to Climate Change



### Adapting to Climate Change New activities

Written by STAV Publishing. More information on page 4.

### Battle of Los Angeles

FREE movie tickets for eContact readers only. See page 12.



## STAV Contacts

### STAV Council

#### Soula Bennett

President  
Quantum Victoria  
president@stav.vic.edu.au

#### Joanna Alexander

Vice President and Treasurer  
Vermont Secondary College  
alexander.joanna.j@edumail.vic.gov.au

#### Joanne Roberts

Honorary Secretary  
Templeton Primary School  
roberts.joanne.s@edumail.vic.gov.au

#### Catherine Zerbe

Honorary Secretary  
Alexandra Secondary College  
zerbe.catherine.e@edumail.vic.gov.au

#### Suzanne O'Shannessy

Public Officer  
execdirector@stav.vic.edu.au

#### John McDonald

La Trobe University  
j.mcdonald@latrobe.edu.au

#### Catriona Tweedie

Balwyn High School  
Catriona.Tweedie@balwynhs.vic.edu.au

#### Pamela McLeod

Australian Institute of Policy & Sciences  
mcleodp@unimelb.edu.au

#### Jodie Tilley

Mooroolbark College  
tilley.jodie.n@edumail.vic.gov.au

### Beginning Science Teachers' Network

#### Peter Morgan

### Psychology Sub-Committee

#### Position Vacant

### STS Co-Directors

#### Josie Crisara

Aitken College  
jcrisara@ozemail.com.au

#### Peter Craig

Mt Waverley Secondary College  
pjcraig@netspace.net.au

#### Leonie Lang

leonielang@optusnet.com.au

#### Viv Eckersley

Aitken College  
veckersley@aitkencollege.edu.au

#### Miranda McKellar

Hoppers Crossing Secondary College  
mckellar.miranda.m@edumail.vic.gov.au

#### Ellen Finlay

STS Project Officer

### Science Drama Director

#### Jan Campione

Pascoe Vale Girls College  
cam@pvgc.vic.edu.au

### STAV Journal Editors

#### Ellen Finlay

Managing Editor  
projects@stav.vic.edu.au

#### Barb Brook

Let's Find Out  
brookbl@optusnet.com.au

### STAV Business Centre

#### Suzanne O'Shannessy

Executive Director  
Ph: 9385 3999  
execdirector@stav.vic.edu.au

#### Anne Heard

Receptionist  
Ph: 9385 3999  
stav@stav.vic.edu.au

#### Kerry Gledhill

Accounts Officer  
Ph: 9385 3908  
payments@stav.vic.edu.au

#### Ellen Finlay

STAV Publishing  
Ph: 9385 3999  
projects@stav.vic.edu.au

#### Kellie Jackson

Desktop Publisher  
Ph: 9385 3903  
publications@stav.vic.edu.au

#### Annette McKenna

Office Assistant  
Ph: 9385 3904  
admin@stav.vic.edu.au

### Science Victoria

Science Victoria hosts professional development activities on behalf of the Science Teachers' Association of Victoria Inc. (STAV)

### STAV is now an Inc.

STAV has successfully migrated from a company regulated by ASIC to an incorporated association regulated by Victoria's Department of Justice. This change was approved at the 2006 AGM. The change simplifies the laws governing STAV and reduces regulatory costs. It has no other substantial impact.

### Life Members

David Cohen	Gretta Wilkinson
Rod Fawns	Don Lugg
Dick Gunstone	Mark Learmonth
Jim Stevenson	

## Contact enquiries

**?** For enquiries about **Contact newsletter** including advertising opportunities please contact the STAV Publications Officer phone: (03) 9385 3903 or email: publications@stav.vic.edu.au

**Contact** newsletter is also accessible in an electronic version via email as a PDF. The electronic version is available up to 1 week earlier than the distribution of the printed copies of Contact.

If you prefer to receive Contact newsletter by email rather than the printed version please email STAV: stav@stav.vic.edu.au

## President's Report



We bid farewell to February, which has always been a busy time with the commencement of the school year and the hosting of the VCE Conferences. Delegates to the conferences had an opportunity to attend excellent workshops as well as

listen to outstanding keynote presentations ranging from "Exploring student difficulties with Mechanics and Electricity", to "Genetic Testing, The Advances and the Challenges", discovering first generation "Printed Solar Cells" and being informed about "Metal Complexes designed for diagnosis and therapy".

I would like to thank all who have been involved in the organisation of the conferences from the team at STAV, the AIP, the CEA, the keynote speakers, presenters and the sponsors.

### Australian Curriculum Update

The F-10 Australian Curriculum, Science is available online, outlining each of the strands and the associated resources. Please visit the following website for further information:

<http://www.australiancurriculum.edu.au/Science/Curriculum/F-10>

There have also been some changes made to the "Science as a Human Endeavour" and the "Science Inquiry Skills" strands.

Science as a Human Endeavour has been modified from a maximum of five to two sub-strands, "Nature and development of Science" and "Use and influence of science".

Science Inquiry Skills has also been modified to include a maximum of five sub-strands instead of eight, "Questioning and predicting", "Planning and conducting", "Processing and analyzing data and information", "Evaluating" and "Communicating".

### Pilot implementation and standards validation

Schools can register interest in a pilot implementation program that will focus on gathering empirical data on (a) the instructional time required to effectively deliver the new curriculum, and (b) the validation of the achievement standards based on samples of student work. This pilot program will be managed by the VCAA in partnership with DEECD, CECV and Independent Schools Victoria. The pilot will involve schools implementing one or more subjects at one or more year levels and some schools implementing all four subjects across a year level. It is expected that the pilot would occur over terms 2 and 3 of 2011. Schools can register their initial interest at <http://www.vcaa.vic.edu.au/natcurric/trialschools.html>

### Senior Secondary courses

It is expected that policy decisions about the development of new Australian curriculum-based senior secondary subjects in English, Mathematics, Science and History, together with decisions about associated timelines, will be taken in the first half of 2011. No changes to the senior secondary curriculum in Victoria will be made as a result of the development of the Australian Curriculum before 2014.

**Soula Bennett**

**STAV President**

## Project Officer's Report



STAV Publishing Project Officer's Report

Trial exam order forms are available on the STAV Publishing website [www.sciencevictoria.com.au/stavpublishing/index.html](http://www.sciencevictoria.com.au/stavpublishing/index.html). Alternatively you can contact

me by phone, fax or email and I will send you a form. Orders are due by Monday April 11, 2011. You can still order after this date but if your order is too late I can't guarantee that I'll have enough papers to fill your order. Exam papers will be delivered to schools by Monday 3 May if you ordered by the due date.

The Beginning Science Teachers' Handbook is a useful resource for all beginning or inexperienced science teachers and is particularly useful for those who are unable to attend the Beginning Science Teachers' conference. Several articles are based on past Beginning Science conference sessions.

STAV Publishing has recently released a series of activities on adapting to climate change. These activities are suitable for VELS levels 5 and 6. They are provided as pdf files and are suitable for use on electronic whiteboards. You can find these free activities on STAV's website [www.stav.org.au](http://www.stav.org.au)

**Ellen Finlay**

**Project Officer, STAV Publishing**

**Phone: 9385 3999**

**Fax: 9386 6722**

**Email: [projects@stav.vic.edu.au](mailto:projects@stav.vic.edu.au)**

## Science Talent Search Report



STS handbooks for 2011 were mailed to STAV members and subscriber schools in early February. If you haven't received a copy, contact the STAV office to be sent one. You can also get copies of the handbook and other valuable information from the website [www.sciencevictoria.com.au](http://www.sciencevictoria.com.au).

All entry is by online registration. If you want to use proformas to collect student and judge information before you enter the data, we have provided a student form and a judge form on the website. Please ensure that you enter online data carefully. STAV doesn't correct entries for you unless you pay a fee. Please also ensure that you enter your email address accurately otherwise you won't be able to re-enter the system and you won't receive emails containing competition information.

If you'd like to try STS this year for the first time and you need some assistance, contact the STAV office.

We look forward to another very successful year of STS.

**Leonie Lang**

**STS Co-Director**

### STS Sponsors

**Would your organisation like to become an STS sponsor? As well as supporting science education and young scientists, there are other benefits for sponsors. Visit our website: [www.sciencevictoria.com.au/sts/sponsor.html](http://www.sciencevictoria.com.au/sts/sponsor.html)**

## Science Drama Awards Report



Now that you are back in the classroom, you may be looking for new ways to reinvigorate your teaching of science. Have you considered Science Drama? To find out what our competition involves, sign up for the following workshop:

Date: Thursday, March 17

Venue: Canterbury Girls' Secondary College, Mangarra Rd. Canterbury 3126

Time: 4.30pm – 5.30 pm

Presenters: Helene Hiotis and Naomi Murdoch

Registration of interest: STAV Business Centre 9385 3999 by Monday March 14.

### Competition dates are as follows:

- April 27 Entry forms due (late entries will incur a fee of \$20.00)
- May 3 Entry Information Kits sent upon receipt of Entry Form
- August 8 DVD entry and kit due.
- August 14 Preliminary judging of DVD entries.
- August 17 Finalist kits sent to entrants.
- Sept 9 Performance Night: Canterbury Girls' Secondary College

Competition details and forms are available on the STAV website.

**Jan Campione**

**Director**

**Science Drama Awards**

## Adapting to Climate Change



### Adapting to Climate Change

**New activities – free on STAV's website**

STAV Publishing has recently completed a suite of activities about adapting to climate change. The activities, suitable for VELS levels 5 & 6, are available online as pdf files. Yvonne Sanders, co-author of STAV Publishing's very popular *Better Links* book (now out of print), is the author. The files have live links embedded and will work well with an electronic whiteboard, or they can be printed in hardcopy and used in conjunction with the accompanying teacher notes to source the urls. The full package includes fifteen activities (seven for level 5 and eight for level 6), suggested answers, links to VELS and comprehensive teacher notes.

**[www.stav.org.au](http://www.stav.org.au)**

## Science Talent Search 2011

**2011 Theme: React to Chemistry**

**Online registration opens 7 March**

**Judging Day:** Saturday 13 August.

**Exhibition and Presentation Day:** Wednesday 2 November 2011.

Check the Science Talent Search website for information about the competition  
[www.sciencevictoria.com.au/sts](http://www.sciencevictoria.com.au/sts)



The Department of Education and Early Childhood Development is proud to be the major sponsor for the Science Talent Search.

## Science Drama Awards 2011

Entry forms due: 27 April

DVD entries due: 8 August

Preliminary judging: 14 August

Finals performance: 9 September

### Do you know?

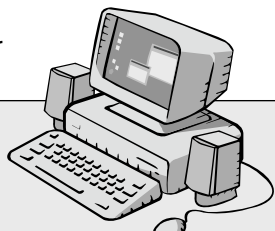
You can download back issues of *Contact* from the STAV website? For past editions, go to <http://www.stav.org.au/html/journalsNewsletter.html>

### Do you also know?

STAV has a science education links page on our website. There are links to various sites for biology, chemistry, physics, psychology, general science, government departments, other subject associations and more... Go to <http://www.stav.org.au/html/scienceLinks.html>

### Have a browse

Browse our website to see what information is available to you – you'll find information about conferences and workshops, trial exams, science education resources, membership, our journals and newsletters, Science Talent Search, science events run by other organisations, Science Drama Awards and other student activities, National Science Week, Laboratory Technicians group (LabTech) and much more. Go to <http://www.stav.org.au>



**The Science Teachers' Association of Victoria Inc. (STAV) has a new ABN 59 004 145 329**

## New Members

Welcome to the following new individual members of STAV

Chris Anders	Eve Kolev
Phillip Anderson	Myron Kuipers
Mark Barnes	Jane Mooney
Michael Dunn	Stephanie Nelson
Michelle Grant	Chris Rogerson
Jacinta Greer	Shankari Seevanayagam
Rebecca Johns	Ross Taylor
Therese Holland	Penny Vaik

## STAV Membership 2011

STAV Individual Membership fees:

Individual Primary	\$125
Individual Secondary	\$140
Individual both Primary/Secondary	\$175
Laboratory Technicians	\$105

The subscription of a member ceases to be effective if payment is not received prior to or on the date of renewal, as a result, membership and all rights pertaining thereto will lapse. Upon payment of all arrears, membership will resume from the date of payment.

## How to join STAV

Download a form from our website  
[www.stav.org.au/html/membership.html](http://www.stav.org.au/html/membership.html)

You can also join online from this site.

Alternatively, contact the STAV office for more information: 03 9385 3999

## Labtech list

The Labtech list has been set up by STAV as a discussion forum where Laboratory Technicians can exchange information, share ideas and seek advice.

We ask science co-ordinators to encourage their Laboratory Technicians to become a member of Labtech and participate in the discussion group.

It is free to join. Go to the Science Victoria website for more information:

[www.sciencevictoria.com.au/labtech.html](http://www.sciencevictoria.com.au/labtech.html)



# Upcoming Conferences – dates & rates

**For all conference/PD information including programs and online registration check the Science Victoria website approximately 6 - 8 weeks prior to each conference:**

[www.sciencevictoria.com.au/conferences.html](http://www.sciencevictoria.com.au/conferences.html)

These programs can also be found on the VIT Pdi search engine – all listed programs reference the standards of professional practice for renewal of VIT registration [www.vit.pdi.vic.edu.au](http://www.vit.pdi.vic.edu.au)

## VCE Conference Series 2011

**Psychology** – 2011 dates and rates TBA

## Physics Workshops

These workshops are intended for teachers of years 5-10 science who wish to develop their own conceptual understanding; the concepts are presented at the level of year 9 – 11 students.

**Newton's Laws of Motion** – 1 April and 14 October 2011

**Electricity** – 11 March and 11 November 2011

More information and registration details at [www.sciencevictoria.com.au/otherPD.html](http://www.sciencevictoria.com.au/otherPD.html)

## Beginning Science Teachers Conference

**2011** – Monday 4 April 2011 at Darebin Arts & Entertainment Centre, rates TBA

## DEECD 2011 Professional Learning

**Switched on Secondary Science Professional Learning Program**

Southern Metropolitan Region: Monday 21 March.

Loddon Mallee Region: Wednesday 2 and Thursday 3 March; Thursday 31 March

Gippsland Region: Tuesday 15 and Wednesday 16 March; Thursday 7 April.

For more details and to register please contact your DEECD Regional Office.

## Science Leaders Conference 2011

**Friday 13 and Saturday 14 May 2011 at The Sebel Heritage, Heritage Avenue, Chirnside Park**

Theme: *Developing Leadership*

Register online at

<http://www.sciencevictoria.com.au/confSCO.html>

For coordinators, managers, leading teachers and science educators aspiring to leadership

### Speakers include:

**Janet Matton** Vice President, Sales Enablement & Operations, IBM, Australia / New Zealand

Title: The Evolution of a Smart Planet.

**Dr Craig Hased** Monash University

Title: Mindfulness: Science, Practice and Philosophy

**Debra Ferguson** RedDeb Consulting

Title: We've All Met One! Managing the Difficult Behaviours we Encounter

### Topics include:

- Goals and directions for your department
- Energising minds in science
- Dealing with difficult people
- Leadership styles – strengths & weaknesses
- Wikis in the science department
- Science games and challenges

## Primary and Middle Years Science

**Teachers Conference 2011** – Tuesday 24 May 2011 at Darebin Arts & Entertainment Centre, rates TBA

**STAVCON 2011** – Monday 28 and Tuesday 29 November 2011 at La Trobe University.

**Contact the STAV business centre: Phone: 9385 3999 or email: [stav@stav.vic.edu.au](mailto:stav@stav.vic.edu.au)**

## Science Circles Books 1 and 2

These exciting books were produced by STAV Publishing and Blake Education.

**Author: Cheryl Jakab**

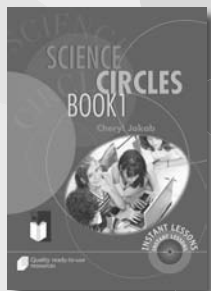
Science circles contains a wide range of classroom activities designed to engage students in extensive discussion while exploring science topics. The *Science circles* approach is developed from the concept that understanding is discourse-based. Scientific literacy is built when students can practise using correct terminology to give explanations and construct arguments based on evidence.

### Book 1

**Suitable for years 7 & 8**

#### Contents:

The nature of science – Using science  
 Biology – Classifying living things  
 Biology – Units of life  
 Chemistry – Units of matter  
 Chemistry – Out of the mix  
 Earth science – Cracked egg  
 Physics – Looking at light  
 Physics – Electric circuits  
 Environment – Future energy supplies  
 Astronomy – Earth, Moon and Sun  
 Planning and self-evaluation

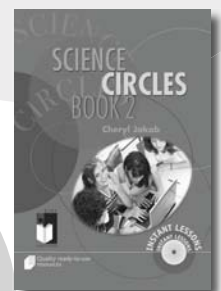


### Book 2

**Suitable for years 7 & 8**

#### Contents:

The nature of science – Working scientifically  
 Biology – Body works  
 Biology – Living plants  
 Chemistry – Make mine metal  
 Chemistry – Chemicals reacting  
 Earth science – The Earth's top layer  
 Physics – About heat  
 Physics – Using machines  
 Environment – Ecosystems  
 Astronomy – Our solar system  
 Planning and self-evaluation



**\$37.95** Members/subscribers **\$39.95** Non-members **per book**

For more information and sample activity pages go to [www.stav.org.au](http://www.stav.org.au) and click on Publications and Resources.

## Beginning Science Teachers' Handbook

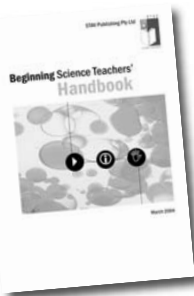
The handbook contains ideas, information and advice on how to cope whilst at the same time improving your teaching and professional performance.

#### What does it cost?

**\$25** incl. GST Members  
**\$35** incl. GST Non members  
 plus Postage & handling \$8.00

The content includes:

- Learning the Science Faculty Ropes
- Classroom Management
- Teaching Classes of Mixed Abilities/ Individual Differences
- Engaging and Extending Students in your Science Class
- Professional Conduct and Standards of Practice
- Science Safety
- Getting Involved with your Professional Association
- Getting the Best out of Extension Education
- Developing a Science Assessment Toolbox
- eLearning and Science
- Resources and Websites List.



#### How to order:

Fax a purchase order to:  
 STAV Publishing Fax: 9386 6722  
**For Enquiries phone: 9385 3999**



## Concept cartoons in science education

This is a 200 page blackline masters book consisting of science concept cartoons covering topics such as:

- ecology
- materials
- electricity and magnetism
- forces and motion
- light
- sound
- the Earth and beyond
- energy resources
- energy transfer



**20% off during February and March**

The cartoons can be used at primary and secondary levels. They are supported by teacher notes which include concise explanations of each concept as well as suggested strategies on how to use them effectively. The materials can be copied for educational purposes by the purchaser.

**\$80** (Inc. GST) STAV Individual members  
**\$92** (inc GST) School subscribers/Non-members

Postage and handling \$8.00

For enquiries contact: **Ellen Finlay**  
 (03) 9385 3999 or  
 email [projects@stav.vic.edu.au](mailto:projects@stav.vic.edu.au)





## Free Range Science - in regional Victoria

Events designed to engage adults and families with science Royal Institution of Australia (RiAus)

Suitable for teachers and students.

RiAus recommends that you register for each event to assist with their planning.

### Mind Matters @ Shepparton

Thursday 17 March 6.00-7.30pm

Goulburn Valley Hotel, 223 High Street, Shepparton, Victoria 3630

Free – book at <http://mindmattersshepparton.eventbrite.com/>

Why do London taxi drivers have larger areas of the brain associated with navigation? Can you 'train your brain' in the same way you can train for a marathon? Can a stimulating environment really delay onset of brain diseases like Alzheimer's or Parkinson's?

The brain is hugely complex, with vast neural networks containing billions of neurons. But it's not hard-wired for life. Join comedian Rob Lloyd and neuroscientist Anthony Hannan as they explore how adaptive, flexible and responsive to change our brains are.

In association with the Florey Neuroscience Institutes

### Scones and a Scientist @ Shepparton

Friday 18 March 10am – 11.30am

The Connection, 7291 Peter Ross-Edwards Causeway, Shepparton Mooroopna Victoria

Free – book at <http://sconesandascientist.eventbrite.com/>

Have you or someone you know been affected by neurological disease? Are you a health professional working in this field?

If you would like to know more about the latest scientific research from the Florey Neuroscience Institutes, please join us for a special meet and greet session with neuroscientist Anthony Hannan.

This morning tea will give you the opportunity to ask questions of a leading neuroscience researcher during Brain Awareness Week.

### Mind Matters @ Wodonga

Friday 18 March 6.00-7.30pm

Three Monkeys Tavern, 64 Gateway Island, Lincoln Causeway, Wodonga, Victoria 3690

Free- book at <http://mindmatterswodonga.eventbrite.com/>

In association with the Florey Neuroscience Institutes

### Free Range Science presents the Beauty of Bugs @ Colac Karna Festival

Saturday 19 March, 10am-5pm

Memorial Gardens, Colac, Victoria

Free – book at <http://beautyofbugs.eventbrite.com/>

Get up close and personal with the wonderful world of creepy crawlies. Join the Scientwists who will introduce you to bug structure and function with hilarious live shows, workshops and interactive workstations. Meet an entomologist who can tell you about being a professional bug fanatic and help you to identify your insects. There is something for everyone in the Free Range Science tent at the Colac Karna Festival

### About RiAus and Free Range Science:

The RiAus ([www.riaus.org.au](http://www.riaus.org.au)) is a charitable organisation which strives to bring science to people and people to science. It creates real and virtual spaces in which people can listen, talk and think about science in all its shapes and forms and develop innovative and accessible ways of engaging the general community, raising scientific awareness and lifting the level of debate on critical issues arising from science and technology. The RiAus strives to highlight the importance of science in everyday life.

Free Range Science ([www.riaus.org.au/freerangescience](http://www.riaus.org.au/freerangescience)) is funded by the Victorian Government to bring science and scientists out of the lab and into the towns of regional Victoria. Designed specifically for adults without a science background, Free Range

Science puts locals directly in touch with the people who research, design, create and use the sciences and technologies which power our lives.

For more details contact:

Lisa Bailey

[lbailey@riaus.org.au](mailto:lbailey@riaus.org.au)

[www.freerangescience.org.au](http://www.freerangescience.org.au)



**\$0**  
establishment fee\*

Basic Home Loan

**6.99%** p.a.

Comparison Rate

**6.99%** p.a.<sup>1</sup>

**\$500 cash incentive<sup>^</sup>**

## home loan sale - save \$1,100

Refinance your home loan to us between 1 March and 30 April 2011.

You can **save up to \$1,100 instantly!**

- We'll waive the establishment fee, **saving you \$600.\***
- You'll receive **an additional \$500 cash** if you're one of the first 50 applications received to the value of \$250,000 or more and your loan is funded by 31 July 2011.<sup>^</sup>

To find out more, call a friendly Home Loan Consultant on **1300 654 822** or visit **www.victeach.com.au**.



\*Offer valid for Refinance Home Loan applications received from 1 March to 30 April 2011 and loan must be funded by 31 July 2011. Minimum loan amount is \$50,000. This offer is only available to new Refinance Home Loans; it does not apply to switching existing Victoria Teachers Credit Union Home Loans. Applicants who decide not to proceed with the loan may incur establishment fees. ^Offer valid for the first 50 Refinance Home Loan applications received from 1 March to 30 April 2011 that go on to be funded by 31 July 2011. Minimum loan amount is \$250,000. \$500 will be credited to the Members' Victoria Teachers Credit Union Home Loan account. This offer is only available to new Refinance Home Loans; it does not apply to switching existing Victoria Teachers Credit Union Home Loans. Loans in excess of 80% Loan to Value Ratio (LVR) will incur Lenders Mortgage Insurance charges. 1. Comparison rate calculated on a secured loan amount of \$150,000 for a term of 25 years. WARNING: This comparison rate is true only for the example given and may not include all fees and charges. Different terms, fees and other loan amounts might result in a different comparison rate. Fees and charges apply. Terms and Conditions are available on request.

# Free ENGINEERING CAREERS EXPO 2011

31st March 2011 Etihad Stadium, Melbourne, 2 - 7pm

Event Sponsors:



**RioTinto**



Media Partner:

**MyCareer**

This event will provide you access to;

- 80+ Exhibitors
- FREE Seminars
- Recruitment Opportunities
- Engineering Industry Insight
- Career and Professional Development Advice
- Updates on Engineering Projects
- Leadership Information
- Knowledge on Engineering Capability

For more information...

Noël Dos Santos, Manager - Membership Marketing,  
Engineers Australia, Victoria Division  
Level 2 / 21 Bedford Street, North Melbourne  
Victoria, Australia 3051  
Tel +61 3 9321 1726



Register online at [www.engineeringexpo.org.au](http://www.engineeringexpo.org.au)

## STAV Physics Workshops 2011

These workshops are intended for teachers of years 5-10 science who wish to develop their own conceptual understanding; the concepts are presented at the level of year 9 – 11 students.

Registration information: Go to <http://www.sciencevictoria.com.au/otherPD.html>

### Workshop 1

#### Interactions: Making sense of Newton's laws of motion

Newton's Laws of Motion epitomise the essence of physics: three simple axioms that together account for all the mechanical interactions in our experiential world, and yield elegant mathematical predictions. Yet for many people they also represent everything that is most impenetrable and abstract in physics. In this workshop we will look for the meaning behind the archaic expressions of these laws, and explore their ramifications for understanding everyday experiences such as skateboard riding and trampoline jumps.

#### What previous participants have said:

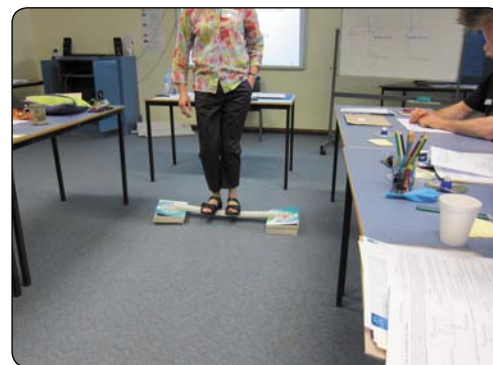
- Gave a great opportunity to get answers to questions to ensure clarity on the topic.
- Very interactive.
- Very useful session – great activities to use with students. Christine really helped us to understand the major concepts in forces and how to pass this on to our students.
- Great forum for discussion of queries/concepts.
- My understanding of forces has improved considerably.
- It helped 'smooth out' my understanding of Newton's Laws.  
Also will use some ideas more often in the future and not confuse students with the jargon.

**This workshop will be offered twice in 2011:** Friday 1 April and Friday 14 October.

**Time:** 9.00am – 4.00pm

**Venue:** STAV House, 5 Munro Street, Coburg

**Presenter:** Christina Hart



### Workshop 2

#### Modelling electricity: from batteries to power stations

Students enjoy setting up electric circuits, but even simple circuits can raise curly conceptual questions. If teachers are apprehensive about such questions, they may resort to teaching equations that obscure the fascination and relevance of electricity in students' lives. In this workshop we will explore some models that allow us to interpret what is happening and make simple predictions without using equations. The journey takes us from batteries to the state power-supply system.

#### What previous participants have said:

- Greatly increased my knowledge of this topic
- Well explained; willing to stop and explain when people couldn't understand. Hands-on activities to break up discussion.
- Excellent, a thoroughly enjoyable day. I feel that I learnt a lot from the day.
- Christina was fabulous!
- Excellent, small group questions and interactions.
- It was excellent. Lots of activities to explain concepts – I particularly liked the smartie activities.

**This workshop will be offered twice in 2011:** Friday 11 March and Friday 11 November

**Time:** 9.00am – 4.00pm

**Venue:** STAV House, 5 Munro Street, Coburg

**Presenter:** Christina Hart



# Coming soon to Scienceworks

## Amazing Backyard Adventures

Opens 26 March 2011

Students will be amazed at the science they can find in their own backyards. They will be able to observe science in a relatable context as they are encouraged to appreciate such things as the biodiversity of their gardens, the mechanics of play equipment and the physics of the tool shed. The exhibition focuses on seeing the unseen and taking a closer look at the world around you.

The exhibition draws the student into the garden, making them more aware of their local world and how things interact, operate or live in that environment.

Developed by Scitech, Perth, Western Australia.



Book 8.30am to 4.30pm weekdays  
on 9392 4819

2 Booker Street Spotswood  
[museumvictoria.com.au/education](http://museumvictoria.com.au/education)

## Explore-a-saurus

Opens 1 June 2011

Explore the work of a Palaeontologist and find out how we know what we know about dinosaurs. Can you escape being eaten by a T-Rex? Pit your strength against a T-Rex jaw and find out. See how dinosaurs can hide from their prey using camouflage. How does a carnivore see differently from a herbivore? Compare the fields of vision of dinosaurs with your own.

Do you have the patience to uncover dinosaur fossils and bones? Explore these and other interesting questions about dinosaurs at Explore-a-saurus at Scienceworks.

This exhibition includes animatronic dinosaurs and educational interactives that let your students explore the world of the dinosaurs.



SCIENCEWORKS



# ImmuKNOW

## Teaching resource for Unit 3 Biology immunology concepts

Are your students confusing APCs, B-cells and T-cells?

**ImmuKNOW is your solution!**

ImmuKNOW is an easy to use visual teaching resource with movable immune cell representations for use on whiteboards. Each component has a magnetic strip which allows it to be attached to magnetic whiteboards or any other flat steel surface.

ImmuKNOW is colourful, engaging and clearly visible. It allows easy visualization of receptor/cell interactions such as T-cell receptors and MHCs. It can be used by both teachers and students.

ImmuKNOW consists of 3 separate kits:

- Kit 1 Immunity to infection
- Kit 2 Allergy and allergic reactions
- Kit 3 Humoral immunity

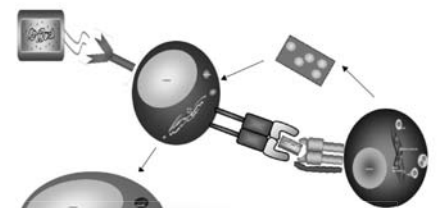
Each kit is accompanied by an instruction booklet.

**Price**

Member \$90 (includes GST); postage & handling \$8  
Non member \$95 (includes GST); postage & handling \$8

**How to order**

Fax, post or email purchase order to: STAV Publishing  
Fax: 9386 6722 PO Box 109, Coburg VIC 3058  
Email: [projects@stav.vic.edu.au](mailto:projects@stav.vic.edu.au)  
Enquiries: 03 9385 3999



**ImmuKNOW  
images available  
on CD**

All of the images used for the three ImmuKNOW kits are now available for purchase on CD. Go to [www.sciencevictoria.com.au/stavpublishing/immuknow.html](http://www.sciencevictoria.com.au/stavpublishing/immuknow.html)

**20% off during  
February and March**



*ImmuKNOW kits were developed and previously distributed by SYNERGYA Young Achievement Australia program.*



## Battle of Los Angeles

For years, there have been documented cases of UFO sightings around the world – Buenos Aires, Seoul, France, Germany, China. But in 2011, what were once just sightings will become a terrifying reality when Earth is attacked by unknown forces. As people everywhere watch the world's great cities fall, Los Angeles becomes the last stand for mankind in a battle no one expected. It's up to a Marine staff sergeant (Aaron Eckhart) and his new platoon to draw a line in the sand as they take on an enemy unlike any they've ever encountered before. Only at the Movies! March 17

Website: [www.BattleLA.com.au](http://www.BattleLA.com.au)

### FREE double passes

A limited number of FREE double passes are available for STAV Individual Members – first in, first served. Contact [Ellen.projects@stav.vic.edu.au](mailto:Ellen.projects@stav.vic.edu.au) if you would like to take advantage of this offer. The passes will be valid from opening day at all participating cinemas screening the film (condition apply but are clearly stated on the passes).

## Do you want to sell a science related product or promote a science event?

Advertising is available in STAV Publications which are distributed to science teachers throughout Victoria.

STAV has 3 publications:

- **CONTACT** - monthly newsletter (x11 per year)
- **Let's Find Out** - primary science journal (x4 per year)
- **LabTalk** - secondary science journal (x4 per year)

You can book an ad or provide inserts. Inserts can be fliers, brochures or forms and we will insert these with the mailout of the publication you choose.

**For further information** regarding advertising bookings, rates and timelines for 2010 please contact the STAV Publications Officer on (03) 9385 3903 or email: [publications@stav.vic.edu.au](mailto:publications@stav.vic.edu.au) website: [www.stav.org.au](http://www.stav.org.au)

## Science Coordinators' Handbook

This handbook contains ideas, strategies and information relevant to leading and managing your science faculty. Suitable for inexperienced, experienced and aspiring coordinators. Includes a CD-Rom containing useful templates, samples and other tools.



### Cost

- \$33 Members
- \$44 Subscribers/non-members

### For further information contact

STAV Publishing  
Ph: (03) 9385 3999 or  
Email: [projects@stav.vic.edu.au](mailto:projects@stav.vic.edu.au)



## STAV Council meeting dates

Meetings will be held at STAV House commencing at 5.00pm

15 March	9 August
12 April	13 September
17 May	18 October
26 July	22 November Dinner

## Science Teachers' Association of Victoria Inc.

'Advancing Science Education'

## STAV Goals

- ◆ Establish and maintain both financial and intellectual independence
- ◆ Represent the collective voice of science educators in Victoria
- ◆ Influence policy formulation in matters relating to Science Education
- ◆ Support and maintain regional special interest groups within STAV
- ◆ Provide a range of resources and services to support science educators
- ◆ Provide for and encourage student participation in a range of challenging science activities
- ◆ Promote the importance of Science Education to the community
- ◆ Recognise significant contributions by STAV members to Science Education.

## Contact Deadlines

### Contact deadlines 2011

April	17 March 2011
May	15 April 2011
June	16 May 2011
July	17 June 2011
August	15 July 2011
September	16 August 2011
October	14 September 2011
November	14 October 2011
December	15 November 2011

## Contact Newsletter

Registered by Australia Post • Print Post publication No. PP 342676/0050

**Printed by:** Allanby Press Printers, 1 Crescent Rd, Camberwell VIC 3124

**Mailhouse:** Mercury Mailing, 13 Antibes Street, Parkdale VIC 3195

## Contact STAV

Phone: (03) 9385 3999 • Fax: (03) 9386 6722

Email: [stav@stav.vic.edu.au](mailto:stav@stav.vic.edu.au) • Website: [www.stav.org.au](http://www.stav.org.au)

Address: PO Box 109, Coburg VIC 3058 • 5 Munro Street Coburg, VIC 3058