Anne Edwards receiving the Susannah Larratt Award at 2013 Labcon
At the end of last year, Helen Malitz (our fabulous lablines editor) proposed that we award prizes for articles published in Lablines. So, it is with great pleasure that the committee announces the following awards for 2013.

For best article: Gina Upward "A cautionary tale" (Dec 2013)

For best experiment: Ian Burrows "LED communicators" (Dec 2013)

For best tip: Judy Hasse "Limewater still" (Aug 2013)

Congratulations to everyone and a big thank you to Helen for organizing the awards & winners. Now you have an even bigger incentive to write fantastic articles for our magazine!!

PS Only LTAV members receive Lablines. Not a member? Go to www.ltav.org.au<http://www.ltav.org.au> and download the application forms or see page 17 of this magazine!

Thank you

Suzanne Thornley
Secretary LTAV

Congratulations to all these winners!
President’s Report

Here we are again, happy as can be …..

What a start to the year with our golden resource out of action for a couple of days. I am sure there were a few of us that felt very insecure. Let’s hope that it never happens again, but it emphasises the fact that we all need to have small networks that we can contact, be it a neighbouring technician, or a list of your region.

Thanks to Anne for the work that she did – thank goodness that there was no real work for her to do now that she is retired! Said tongue in cheek of course.

Another year has started & welcome to our new members & thank you to the die hards that are still around after many years of dedication & service.

Please think of sending your membership payments in now. Make sure all the paperwork is in order & that your account people have our correct address – Cromer not Warragul. The address is **PO Box 6101, CROMER Vic 3193**.

I hope that you enjoyed LABCON 2013; I know that I did. We need venue suggestions from you please. Our beloved Hemisphere has a very short life & may not even totally be available this year. By that we may not have the labs, the accommodation, the lecture rooms all as we have in the past. Just think of what we have had at Hemisphere & see how many spaces you can tick. Please just forward accurate information to the committee. The more details you send us the better.

Congratulations to our award winners; Leonie Leishman & Anne Yarwood for the Distinguished Service awards & Anne Edwards with the Susannah Larratt Award. Our scholarship were awarded to Jodie Pignataro & Jenny Moore for attendance to LABCON. The applications were very good of all those who put forward their case, but alas only 2 spaces.

Please remember that we need a site for LABCON for next year
All the best for the coming year,
Wendy Hurle
President LTAV

**Vale Julie Hall**

Longer-serving members may remember Julie Hall. Julie commenced working as a School Laboratory Technician in 1978 at Waterdale High School, then moved to Greenwood Secondary College (re-named Bundoora Secondary College) in 1979 where she stayed until her retirement in 2003.

Julie enthusiastically participated in regional activities and ran First Aid sessions at a number of conferences.

She retired to take on further activities including acting, travel, bowls and bridge.

Julie died from a stroke on January 15th 2014.
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TO FIND OUT HOW RIDICULOUS THE PRICES ARE!
Bentleigh Secondary College Tour

A lucky group of lab techs attending the 2013 Labcon program were fortunate enough to tour the Bentleigh Secondary College. The tour was taken by Bill Thomas who took us around the entire school, showing us all the achievements of their Sustainability projects. These projects have been ongoing for many years and have not been without some heartbreak, setbacks, lack of funding, red tape and other obstacles. With the determination of the college, its staff, volunteers, grants and donations the Bentleigh Secondary College has transformed from a ‘typical’ school to a unique and outstanding learning environment, with exciting renewable projects, which will be ongoing for many years to come.

One of the first projects the Bentleigh Secondary College undertook involved major construction works in the school ground to excavate and landscape the yard to form a unique wet land. The bonus to the school they now have an outdoor class room of diverse flora and fauna to study and enjoy. Around the other side of the school a 2500m² grassed area has been transformed to an urban forest in just two years. With the increase in plant diversity, habitat restoration, reduction in the carbon foot print, this project is ongoing with more plantings taking place, that the school also has a vision of not being able to see a neighbouring building outside the fence line.

Some of the other sustainable projects Bentleigh Secondary College has undertaken is the instillation of water tanks, one as large as 125 000 litres, a 5.2kW photovoltaic solar system, a wind turbine, aimed at generating more electricity for the school. The school has added a Mediation and Indigenous Cultural Centre, built from recycled building materials. This is a fantastic spot for the staff and students to use, where they can enjoy the tranquillity inside the building, or the views of the trees and a deep water billabong outside the window.

Although it rained heavily for most of the tour, none of us were dampened by the continuous rain as we all toured around the school grounds, walking through wet grass and puddles. The day was well worth it. Thanks for the opportunity to visit Bentleigh College - Sue Treloar

Just a quick note about my trip to LABCON 2013.

After the TomTom got lost several times, (I really need to update the maps), I made it to the Hemisphere Conference Centre in one piece. I attended several lectures over 2 days and have taken some really interesting ideas back to school. I saw and got to use, some really interesting software which will be great for senior physics as there is quite a bit of video conferencing in 2014. Some hands on experiments will be great for the annual science extravaganza, as long as I can source the materials needed and I now have a contact for servicing all our science equipment. (I have promised him a homemade cake for coming to Horsham.)

The tour to the Royal Botanical Gardens on Wednesday was very informative. The weather wasn’t terrific, but it was very interesting to see the plant collections and the glasshouses.

I met lots of Lab Techs and can now put faces to names of the many people who help out over the email with many and varied science queries.

Overall a very successful conference and well worth the trip. It was a credit to the organisers and presenters and I would like to thank The Laboratory Technician Association of Victoria for supplying the scholarship which gave me the opportunity to attend. I have brought away with me some ideas for PDs for the Lab Techs in the region that I hope to implement throughout the year. Again a big thank you to the organisers and LTAV.

Jodie Pignataro
Lab Technician
Horsham College

2014 LTAV Conference Scholarships - CONASTA 63

This year the Laboratory Technician's Association of Victoria will support two members in furthering their knowledge and expertise in science education by offering scholarships to attend CONASTA 63, the science teachers’ conference hosted by ASTA. CONASTA always has a number of workshops and forums relevant to lab technicians and is a valuable way to learn more of what is happening in today's science world.

CONASTA 63 will be held in Adelaide between 6th-9th July 2014. For an overview of the conference, go to http://asta.edu.au/conasta

All school-based Victorian science laboratory staff are invited to apply for the scholarship, which will cover travel, registration and accommodation costs.

Any other costs and charges associated with acceptance of this scholarship must be met by the winner(s). Two scholarships only will be offered. Awards are not transferable.

Applicants should provide a brief CV and details of the anticipated benefits for both the applicant and the Association. The successful applicants will be expected to write a small article for Lablines outlining their experiences at the conference.

Written applications addressed to the LTAV Secretary can be posted to:
PO Box 6101, CROMER VIC 3193
or emailed to: admin@ltav.org.au
and must be received no later than Wednesday 30 April 2014.
LTAV Regional activity Report 2013

A plea for the importance of refreshing or assisting the Regional Representatives in creating a strong Victoria-wide network and links with other States – there are currently (3) vacancies and a number of people needing assistance or relief from the role that helps us keep our profession fresh and relevant to the students and teachers we support each day we work in the education sector. Let's support and assist each other.

IMPORTANT INFORMATION REGARDING FINANCIAL SUPPORT for Regional Activities:

Regions are considered “active” if at least one Regional meeting per year is conducted. Please be aware that funding for Regional activities can be made available from LTAV committee and is determined on a case by case basis, which requires timely submission to Committee regarding the particular activity for a decision to be made prior to the event. Expenses such as:

- Cost of postage, stationery, photocopying, and phone costs
- Basic catering (coffee/tea/sugar/milk)
- Bus hire, relevant entry fees, and appropriate presenter fees

Costs generally not covered would be additional catering, gifts to members and travel costs.

RR should give adequate notice to members within their region of a planned meeting. The notification must include a reply slip with a section for their school Principal/Science co-ordinator to sign.

RR should submit a written (email) ‘Regional Activity Report’ detailing activities and meetings held in the Region during the year to be presented at the Annual Regional Reps meeting generally held during LABCON. Attendance records need to be recorded for this purpose.

REGIONAL ROUND-UP~

Melbourne Metropolitan areas:

Dandenong – Wendy Hurle (Narre Warren South P – 12)

2013 had 2 major events for the Dandenong Region this year. The events were during term 2 & term 3.

Hill Crest Christian College in Clyde – thanks to Liz Beech our Tech there. Our first meeting we had as a guest speaker/presenter Mr Harvey Edwards from Principles & Practice who gave a myriad of helpful hints as well as practical hands on on to the testing of multimeter fuses in different types of meters, servicing of basic things on microscopes, a very interesting discussion about repairs & care of Van De Graff generators. We then had a tour about the college & look at the new labs. Looking at any lab, be it old or new always gives something different to the ones that you call home.

Brentwood Secondary College where Wendy Oh hosted the group. At this event there was a discussion about CONASTA which Wendy Hurle led. She has attended several CONASTA events & bought along a variety of materials that she had gathered & shared with the group, many of whom knew very little about the actual event & what went on. The beauty of the event is that a different capital city is host each year & it is during the second week of the term 2 holidays. There are specific sessions for Lab Techs. But you are not limited to going to those. Any event, off site outing or forum is open to you as it is to all the other delegates.

Planning is going on for 2014 & we shall see what next year brings.

Eastern /Maroondah – VACANT
Mornington -Val Bookless (Woodleigh School, Baxter)
Annual Report for 2012

As Regional Representative I am finding it harder to stay enthused for planning meetings and having very limited attendance. Also personal time management with in my position has changed and become more demanding with less assistance from Jenny Emery 0.5 Lab Tech, and the introduction of native quolls to the Reserve at Woodleigh.
I wasn’t able to manage to conduct any inter-school meetings. I would like to have lunch with the more familiar faces to catch up and ask for a new representative to step up. Mention of this may be of value at the beginning of LABCON.
There are many new technicians within the region. Many of whom aren’t on the List-serv or do not know whom to contact.
I had long service leave for July-Oct and travelled around the world! Leonie Leishman at Cranbourne East SC was asked to communicate with any incoming mail or matters concerning Lab Techs.
I personally wish to thank all the work the committee do on behalf of the Mornington Peninsula Laboratory Technicians.
Val Bookless

Nillumbik/Banyule – Lisa Hazelwood (Viewbank College, Viewbank)
(unable to attend LABCON)

On 20th March, (13) Laboratory Technicians attended Viewbank College for a workshop/meeting with Harvey Edwards from Principles and Practices. Topics covered included; tips for testing multimeters and the services available to Laboratory Technicians such as building new equipment and equipment repair. Laboratory Technicians were also invited to bring equipment that needed to be repaired and/or had been built by Harvey.

North Metro – Robyn Lyons (Copperfield College, Kings Park Junior Campus, Kings Park)

Robyn now only works 2 days a week and has been unable to organise and to take time off for R.R. functions.
She put out a general SOS for someone to take over but to no avail, she says she will attempt to continue next year if no-one is interested as this area had good numbers attending events in previous years and considers that it is important for us to network. A list of schools in the region would help greatly as things change so much over the year and part of the workload is sorting all the returned emails when emails go out. There are also so many new schools that we are not aware of so a list would be a real help.
She is actually in the Western Region which has also not very been active recently so we attended many Northern meetings/events over the years. When Robin Marceau passed away she took over temporarily(!) and has been R.R. since. The member list forwarded to her was very helpful but she realised how many people from other regions also came along all hungry for some interaction. She felt guilty for not organizing more activities! A list of all schools (non-govt. also) would be a good start to contact to build interest/numbers for LTAV and Regions which was discussed at Labcon.

North/West Metro – Glenn Condon (Westbourne Grammar School, Truganina)
Kew – Karen McCoy (Genazzano FJC) – new RR!!

South Yarra/Moorabin – Margaret Wood (Sacre Coeur, Glen Iris)

Two gatherings for this group took place during the year.
Friday May 3rd 10 am – 12 noon at Sacre Coeur

Ray Harvey from Scientrific ~ focussed on iPads and Science classes, then a walkthrough of the new prep room and Laboratories at Sacre Coeur, with 14 participants.

Some of the apps the group explored; Theodolite ; Voice Record Pro ; Recorder + HD ; Lapse It Pro ; Lumosity Brain Trainer ; Folds & Faults ; FlightRadar 24 ; Vernier Physics ; Vernier Graphical Analysis ; Wolfram General Chemistry Course Assistant.

Wednesday, August 28th from 2:00pm at St. Michaels
- Christine Nolan offered to host a meeting for the group

Dr. Peter Ball from Southern Biological was the presenter, focussing on Enzymes for this session, with the meeting being well attended.

Experiments were carried out using pectinase, lipase, urease, trypsin & junket. We learnt a lot from Peter and each other, why the results aren’t as the textbook states, the nature and source of the enzyme, which substrate gives the “best” results, and, Lab Techs love “doing”!

~ **** ~

Country Victorian areas:

Geelong – Sarah Daniele (Kardinia International College)
(unable to attend LABCON)

1. Meeting for Term 2 – was held on Wednesday 22nd May 2013 at Kardinia International College from 3.50 pm – 5.00 pm
   **Agenda**

3.50pm: Registration and meet new members.

4.20pm: Information session Presentation by Gavin Grace and Anthony Crick, Westlab.

Welcoming of laboratory technicians and new technicians to the district.
Information email to be to circulate to laboratory technicians from Bridget Collier from Geelong College.

TESEP PD training website address [http://www.tesep.org.au/default.htm](http://www.tesep.org.au/default.htm) and contact person Patricia van der Werff  [tesep.vic@gmail.com](mailto:tesep.vic@gmail.com).
Melanie West from North Geelong Secondary College email in regards to having a lot of Quickfit Glassware donated to her school, and if anyone is interested in some please email or arrange a visit.

Southern Biological PD - contacted Southern Biological to arrange conducting a PD in Geelong at a mutually convenient time and minimum cost of catering only.

Relief laboratory technicians – list has been updated, with 4 technicians available.

Investigate if PD Budget from LTAV for laboratory technicians.

Some interest in visiting Earth Ed at Mt. Clear as an excursion/PD.

Courses for laboratory technicians wishing to learn more in Geelong - The Gordon (Geelong’s TAFE) is a good institute to consult with and talk to Janelle Grass about subjects and courses availability and suitability.

GHS meeting/training being held on 19th June 2013 at 1.30pm-4.30pm at the Mercure Hotel in Geelong. People are interested in finding out more about the GHS and a speaker at a meeting would be greatly appreciated.

HSIS website allows you to find out what chemicals are hazardous and not hazardous at what concentration/s.  [http://hsis.safeworkaustralia.gov.au/](http://hsis.safeworkaustralia.gov.au/)

What sort of hinges are in the cupboards which chemicals are stored in.  E.g. stainless steel.

Labcon 2013 is on at the end of the year with a system for car-pooling through can be organized if interested.  Website link to Labon 2013: [http://www.ltav.org.au/labcon/](http://www.ltav.org.au/labcon/)


Chemical waste disposal/pickup Sweeny Todd located in Lara - finding out if there is a company or companies who will carry out a collection for a group of schools in the area at a reasonable price.  Sweeny Todd website [http://sweeneytodd.com.au/](http://sweeneytodd.com.au/).

Survey conducted to see what people would like to get out of coming to meetings

Meeting survey results:

What would you like to get out of coming to Laboratory Technician Meetings?

Find out what other schools are doing, new ideas, visiting different exhibits, guest speakers and OHS information.

What would you like to do at meetings?

Would like to see what other schools science department setups are like, visit other schools and PD.  Any further questions, information etc.

Information session presented by Westlab – new data logging equipment, trolleys, etc.

2. Meeting for Term 3 – was held on Monday 9th September 2013 at Kardinia International College from 3.45 pm – 5.00 pm

**Agenda**

3.45pm:  Registration and general meeting.

4.15pm:  Information Session Presentation by Paul Fletcher, Protector Alsafe, North Geelong.  Phone: (03) 5278 7772, Fax: (03) 5272 1537, Address: 283-285 Thompson Road, North Geelong VIC 3215, Website: [www.protectoralsafe.com.au](http://www.protectoralsafe.com.au) .
Minutes
Welcoming of laboratory technicians and review of information researched from previous meeting. There is a PD Budget LTAV and can be applied for - a PD session delivered by Southern Biological being organized (December 2013) covering two of their training sessions they offer in Melbourne, ‘Working With Enzymes’ and ‘The Human Evolution – A Tour Of The Fossils’.

Chemical waste disposal/pickup

~ Sweeny Todd (Sweeny Todd website http://sweeneytodd.com.au/ ) located in Lara, found out that the company can only do Biological Waste Collection and Disposal. They don’t currently have a licence for Chemical Waste Transporting etc., suggesting their customers deal with Toxfree (Phone: (03) 93570424 and Fax: (03) 93570391).

~ Mike Pola from Cleanway Environmental Services Melbourne Pty Ltd

(Phone: 1300 785 003, Mobile: 0419 566 129, Fax: 02-9820-5899,
Email: michael@cleanway.com.au , Website: www.cleanway.com.au
Cleanaway can provide a discount on collection costs for multiple school collections in the one area, e.g. Geelong. The normal cost for a one off collection from Geelong would be $150, but if three schools in the area were collected in one location the charge to each school would be $50.00 plus whatever disposals. If there were more schools collected together a single charge cover could be shared amongst each. With a co-ordinated approach the company can organize a firm quote for this service. Mike has delivered sessions at Labcon on Chemical Handling etc.

The Greater City of Geelong Transfer Station located on Duro Street North Geelong takes small amounts of biological wastes to dispose of, but this needs to be confirmed.

Some of the old style Rock/Mineral Sample Kits may contain Asbestos recommendation if you are unsure of your sample kits to have them checked, by an organisation/company which inspects Asbestos. They can check the samples and if need be dispose of them for you. This way you can have them disposed of straight away by the correct person and meet the OHS requirements of disposing of Asbestos.

A document which maybe handy if you are unaware of the prohibited and restricted chemicals listed by the Department Of Education And Early Childhood Development. The list is named “Guide Sheet 3: Prohibited and Restricted Chemicals” and can be found at the following website address.


Labcon 2013 is on at the end of the year – discussions about organizing a bus for transport to this – not viable – carpooling best option.

Free Laboratory Equipment:

The Gordon TAFE had some excess equipment to get rid of:-

Karen from Christian College, brought along a large box filled with glass 10mL Graduated Pipettes to donate to anyone who would like them; some are still left, if anyone would like some/all contact Sarah Daniele so pickup can be arranged.

The use of Mercury thermometers in schools was discussed – some dispose of the thermometers with chemical waste pickups, and some keep a couple of the Mercury thermometers for certain experiments/demonstrations. Safety precautions need to be remembered, chemical spill clean-up and waste disposal for Mercury.
Information Session Presentation by Paul Fletcher and Scott, Protector Alsafe, North Geelong. Covered the following topics:

Safety glasses, adjustable arms, difference sizes to suit all sized faces, and some that allow you to wear prescription glasses underneath them.

Safety goggles some can be provided so you can also wear prescription glasses underneath them and they fit comfortably to your face.

Face shields that can be worn as well as safety glasses/goggles for extra protection of your face and some shields which also protect your neck.

You can purchase throw away and re-useable PVC aprons which can be worn over your lab coat when making chemicals, for extra protection or to be worn in art classes which some schools do.

Alsafe supply Corrosive, Flammable cabinets etc.

The main supplies which Alsafe supply are personal and site safe safety equipment.

**Term 4 meeting replaced with a Geelong Regional Branch PD Workshop - held on Wednesday 11th December 2013 at Kardinia International College from 9.30 am – 3.00 pm with cost of $20 per person (which included morning tea and lunch)**

Science laboratory staff and science teachers were invited to attend the PD Workshop with the focus being “Working with Enzymes” and the “Human Evolution – A Tour of the Fossils.” It was thought that these two sessions would be great for people to learn some of the new content for the VCE Biology curriculum.

**Program**

9.30 am: Registration for PD Session and a brief Geelong Regional LTAV meeting.

10.15 am: Morning Tea.

10.30 am: PD Session (1) - Working With Enzymes - Presented by Peter Ball, Southern Biological.

Enzymes are nature’s catalysis. They act to speed up biochemical reactions to make them useful for metabolism in living organisms. However, since they are complex polypeptides, enzymes can be denatured by shifts in temperature and pH, and this in turn can affect the way they work. Many texts refer to enzyme experiments and give the impression they can be easily set up and reliably carried out. However, this is not always the case. Some background knowledge is useful when the time comes to do enzyme experiments.

Participants in the workshop looked at a range of enzymes including amylase, pectinase, rennin, lipase, urease and trypsin to compare their reactions and discuss their suitability for student experiments. We will also look into troubleshooting enzyme reactions and using a datalogger to measure reaction rates where possible.
12.00 pm: Lunch.
1.00 pm: PD Session (2) - The Human Evolution – A Tour Of The Fossils - Presented by Peter Ball, Southern Biological.
Human evolution is a fascinating subject, and one that is subject to constant revision as new discoveries are made. Consider, for example, the debate that has been going on since Homo floresiensis (The Hobbit) was revealed to the world. Is it really a new species or simply an afflicted example of Homo sapiens? This workshop will present a selection of high precision reproductions of the fossil hominids from Bone Clones® and discuss their place in current thinking in light of the personalities, controversy and intrigue that has been an integral part of this branch of science.
3.00 pm: Close

Gippsland – now VACANT –
Thu 19/12/2013 12:15 PM
Please except my resignation as Regional Rep for Gippsland.
I have been unsuccessful in trying to find a replacement for the past few years but feel that if I resign someone may step up to the plate. I think 20 years is long enough and now that I am part-time and the number of science classes continues to increase, I find I cannot dedicate the time necessary to do the job.
Yours Sincerely
Sue Webb

On behalf of LTAV Committee and Gippsland members grateful thanks to Sue Webb (Kurnai College, Churchill), who is stepping down after many years in this role.

Hume – VACANT –

Loddon/Campaspe/Mallee – Karen Egan (East Loddon P - 12 College) (unable to attend LABCON)
~ report of this activity previously published in Lablines Dec 2013
This regional activity to place on Friday 6th September at National Hotel Conference Room, Bendigo
~ Gavin & Russel Grace (Westlab)
  Square form silicon Bunsen burner tubing
  Nano-heat hotplates with temperature probes
  Individual water-baths
  Neulog data-loggers
  Gratnells & other useful equipment
~ Wendy Hurle (President LTAV)
  Presentation on the importance of LTAV and up and coming LABCON scholarships available
~ Aileen Little - GHS (Globally Harmonized System) information and labelling of chemicals
~ Michael Pola (originally Envirochem now Cleanaway Environmental Services)
  Importance of labelling chemicals stored for disposal to tell ‘full’ story- Chemical waste guidance
~ Peter Ellis—timeless top 10 tips

Ballarat – Helen Whatman (Mount Clear College, Ballarat)

Sunraysia – Narelle Divola (Irymple Secondary College, Irymple)

Warrnambool – Leanne Baxter (Hamilton and Alexandra College, Hamilton)
The annual Regional meeting took place in June. We had (11) members attend and (4) apologies. The day started at Warrnambool Cheese and Butter factory where we were shown through their labs. We then travelled to Ralph Illidge Sanctuary for lunch and meeting. We have (3) new members this year, 2 of which came on the day.
After lunch and walk around the sanctuary we ventured onto Cobden Tech School where Jackie Nowell showed us around her domain. It was a beautiful day.
We would like to thank Jackie for organizing and hosting the day. Much appreciated.
A chemical safety course run by Noel Arnold was organized to take place in Horsham, on November 14th, between 9.00 am - 4.00pm, at the Wimmera Trade Training Centre, Baillie St, Horsham. The cost for participants was $250 which covered the presenters’ costs and the catering throughout the day.

Course outline:
9.00 – 9.30 Welcome, Regulation of Chemicals in Victoria, Classification Systems
9.30 – 10.30 Dangerous Goods and Hazardous Substances
10.30 – 10.45 Morning Tea
10.45 – 11.30 Introduction to the GHS – Hazard Classification and Labelling
11.30 – 12.30 Classifying Hazardous Substances and Hazardous Chemicals (GHS)
12.30 – 1.00 Lunch
1.00 – 1.45 Working safely with Chemicals – Risk Management
1.45 – 2.30 Risk Assessment
2.30 – 2.45 Afternoon tea
2.45 – 3.30 Risk Controls – Storage, Segregation and the Australian Standard for Laboratories
3.30 – 4.00 Emergency planning – First Aid, Fire and Spills

Thanks
Jodie Pignataro

CONTACTS LINKS & IDEAS

~ Southern Biological – workshop programs – check their website for details

~ Harvey Edwards is available for Regional meetings

~ Zart Art – school art departments use them as suppliers

The hope is to build up a bank of contacts and ideas that could be used state wide for meeting days and Professional development tools for everyone.

Regional Representatives are encouraged to contact LTAV Regional Liaison Officer who in a position to act as a conduit between their regions and the LTAV Committee.

Best wishes for an engaging and constructive year for 2014 for you all in your various Laboratory establishments.
On a personal note I am in the process of re-locating back to the rural environs of NE Victoria, after three enlightening years in Melbourne at Geelong Grammar School – Toorak (ELC-6), and have gained a newly opened position at Cathedral College (P-12), Wangaratta. If anyone out there has the burning desire to take on this role, I would be more than happy to assist handing over the reins. At the same time, though, I am prepared to see how it goes administering the RLO position from there.

Yours in Lab’ Teching

Therese Graham

LTAV Regional Liaison Officer
**This and That**

<table>
<thead>
<tr>
<th>Psyllium Slime</th>
<th>Half fill a clear drinking glass with water.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psyllium Husks</td>
<td>Shine your flashlight on the glass directly above it.</td>
</tr>
<tr>
<td>resealable plastic bag</td>
<td>The water will look white.</td>
</tr>
<tr>
<td>plastic disposable spoon</td>
<td>Now pour 1/2 cup of milk into the glass and mix well.</td>
</tr>
<tr>
<td>Hot water from tap</td>
<td>Take the glass somewhere dark and shine the flashlight from the side of glass through the milk.</td>
</tr>
<tr>
<td>Food colouring</td>
<td>The milk will look yellow, orange or red.</td>
</tr>
<tr>
<td>Method</td>
<td>Why? Just like a sunset or sunrise, the light is shining through particles.</td>
</tr>
<tr>
<td>Pour approximately 100mL hot water from the tap into bag. Then add food colouring and glitter.</td>
<td>The atmosphere is full of billions of particles.</td>
</tr>
<tr>
<td>Add the husks a little at a time while stirring with spoon or hands with bag sealed until you get the right consistency. Usually you will need about 1-2 tablespoons. If it is too stiff then you can add a little more water to soften it, but not too much.</td>
<td>When the sun is low in the morning or early evening, it's rays must travel through a thicker layer of atmosphere than at other times of the day.</td>
</tr>
<tr>
<td>It behaves almost the same as the PVA slime without a lot of the safety risks and if the kids accidently ingested this it could only benefit bowel health, well perhaps not the glitter :) Costs under $10.</td>
<td>When sunlight hits these particles, the light bounces off of them and scatters.</td>
</tr>
<tr>
<td>Fiona Parkin</td>
<td>Orange and red lights scatter the least, which is why you see these colours in a sunrise or sunset.</td>
</tr>
</tbody>
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**Daphnia**  From: *Culture Methods for Invertebrate Animals*, (1937); Frank E. Lutz, Paul S. Welch, Paul S. Galtsoff, and James G. Needham

To cultivate Daphnia, bring lettuce leaves, preferably of a green, leafy type of lettuce to a boil. Do not continue boiling. Place the boiled lettuce leaves in containers having 6 to 8 inches of water in the proportions of 1 good sized lettuce leaf to each 6 square inches of bottom. After 2 or 3 days add Daphnia. These may be obtained from almost any somewhat stagnant pond by means of a plankton net. After the lettuce leaves have disintegrated additional leaves should be added from time to time and also pieces of raw liver or the entrails or corpses of small animals such as tadpoles, mice, rats, etc. In adding such material it is essential that only a moderate quantity be used. The water must not become foul or cloudy as this will kill the Daphnias. In general, the Daphnia culture should be kept supplied with fresh food, either lettuce leaves or raw flesh (preferably both) up to the limit possible without making the water cloudy. This limit must be learned by experience and depends upon the size of the container. Whenever it is seen that the Daphnias are not flourishing as rapidly as before, new food should be added.

Daphnias may not be grown indefinitely in the same culture water. From time to time it is necessary to strain out the Daphnias and place them in freshly made cultures. When it is evident that the Daphnias are no longer multiplying well despite addition of fresh food, they should be transferred to an entirely new culture."

Fran La Fontaine
Don’t tell me it’s a .......

Last issues answer: Model hydraulic pump
Answer next issue.

Deadline for next LabLines for 2014
16th May 2014

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Making esters

Use combinations of alcohols and carboxylic acids. To a semi-micro test tube add 10 drops of your alcohol, add 10 drops of the relevant acid (or a small spatula of acid if it's a solid), then add 2 drops of concentrated sulphuric acid, cap loosely with cotton wool and then place in a water bath for 10 minutes or gently warm above bunsen flame for ten seconds. Pour test tube contents into 100ml of 0.1M sodium carbonate in a 250ml beaker. Waft gently to determine the odour.

1- Ethyl ethanoate (fruit/glue/PVA/nail polish remover) meant to smell like apples
10 drops of Ethanol, 10 drops of ethanoic acid (glacial acetic acid), 2 drops of conc sulfuric acid

2- Methyl salicylate (wintergreen, Dencorub)
10 drops of Methanol, small spatula full of salicylic acid, 2 drops of conc sulfuric acid

3- Pentyl salicylate (pineapples)
10 drops of Pentan-1-ol, small spatula full of salicylic acid, 2 drops of conc sulfuric acid

4- Pentyl ethanoate (banana)
10 drops of Pentan-1-ol, 10 drops of ethanoic acid (glacial acetic acid), 2 drops of conc sulfuric acid

5- Butyl ethanoate (raspberries/strawberries)
10 drops of 1 or 2 butanol, 10 drops of ethanoic acid (glacial acetic acid) 2 drops conc sulfuric acid

6- Ethyl methanoate (Raspberry/Rum)
5 drops Ethanol , 10 drops Methanoic acid (Formic acid), 2 drops conc sulfuric acid

7- Methyl benzoate (Marzipan/feijoas)
10 drops of Methanol and a small spatula full of benzoic acid, 2 drops of sulfuric acid

Cocaine hydrochloride hydrolyzes in moist air to give methyl benzoate; drug-sniffing dogs are thus trained to detect the smell of methyl benzoate!

octanol + ethanoic acid produces octyl ethanoate + H2O (Orange)
Propyl ethanoate - pears
Ethyl propanoate - rum?

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- OUR STAFF!

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DID YOU KNOW?

The extreme rainfall experienced in parts of Australia in 2011 was associated with one of the strongest La Niña events on record. Flooding in NSW and Qld in 2012 is again associated with strong La Niña conditions.

La Niña events are features of climate variability and reflect year-to-year variations in sea surface temperatures and weather patterns across the Pacific Ocean, commonly referred to as the El Niño – Southern Oscillation or ENSO. The flooding events of 1974 also occurred in a strong La Niña period.

Why is it so?

Q What is the function of gas in a balloon?

A It is not to lift a balloon The gas in the balloon has weight and this force is always down. So we blow up the balloon merely to distend it. It is the air around it which lifts the balloon.
CONSERVE THAT MASS!

YOU WILL NEED

Safety glasses
100mL Conical flask
2 Antacid tablets
1 Balloon
Matches
Electronic balance
100mL Measuring cylinder

CAUTION: Wear safety glasses

* Place the conical flask on the bench and carefully pour in approximately 100mL of water.
* Place the flask on the balance, place one tablet alongside the flask and record the total mass.
* Remove the flask from the balance and drop the tablet into the water. When the reaction is complete, weigh the flask and record the total mass.
* Rinse out the flask thoroughly and add approximately 100mL of water.
* Place the flask on the balance, place one tablet and a balloon alongside and record the total mass.
* Remove the flask from the balance and drop the tablet into the water. Quickly place the balloon on the flask.
* When the reaction is complete weigh the flask and record the mass. Do not remove the balloon.
* After you have recorded the mass, remove the balloon. Light a match and test the gas. Record your observations.

1. Describe what happened during the reaction.

2. Which gas do you think filled the balloon?

3. Comment on your results of the total mass before and after each reaction. Explain your answer.

4. Why do you think it took a long time for the law of Conservation of Mass to be developed?

Kind regards,
Yvonne Jenkins.
In 1978 I arrived Mt Beauty as a PE teacher but there was already one there, so when a position came up for Lab assistant, as it was then known, I applied. The only qualification required was a year 11 science subject. Biology at yr 11 and 12 in 1959 was my only qualification (and DNA had only been discovered a few years earlier) – absolutely no knowledge of physics or chemistry, and certainly no technical knowledge. Consequently a steep learning curve.

Some things of interest over the years

*First day – walk around science rooms, 2 only, with chemistry preparation room in between them. Look in cupboards to see if I could recognise any equipment - all the physics equipment was a total mystery. (Thank goodness physics teachers were fairly self sufficient); label all equipment.

‘My’ room was the chemical storage as well as the preparation. I lived in with the chemicals for many years – no OHS in those days! Huge amounts of chemicals eg 6 *2.5L Winchesters of conc. Sulphuric acid (I think I have probably used 2or 3 in 30 years!) Thus, first chemical collection was organised and am still reducing.

*Fortunately the NE Goulburn regional meetings and workshops had started. Workshops were organised in rotation by different schools ranging from Shepparton, Mansfield, Corryong and Mt Beauty and schools in between. Meeting with other Lab Techs. and Lablines was our only means of learning about the job in those days. (I still use my book of hints cut out of Lablines)

*Innovative Shareteks were developed by teachers in these schools. The kits moved between schools each term and a Lab Tech was employed to organise the timetable for this – funding finally ceased and the demise of Shareteks occurred. Since then we have developed our own which are still well used eg. Kits for Small motors, Lego Technic robotics, solar cars, electricity, electronics and alternative energy (guess who keeps track of it all?)

*Finally the chemical prep. area was demolished and re-modelled to include fume cupboard, chemical storage room, a desk, a computer and good storage area for trays of equipment.

*I attended over 3 years (1pm-9pm, one day per week) a “Diploma of Applied Science – Laboratory Technician” course at Wodonga TAFE and that was the first mention of OHS, and Risk Assessments. Some other LabTechs in region did the same course. Sadly, this course is no longer running.

*Then came the first of Melbourne Lab tech conferences at which the organising committee even did all the catering – someone’s mum actually did it.
I have attended almost every one and have gained so many great ideas to pass on to teachers.
*Then the advent of our wonderful List Serve which supplies answers to questions immediately – the collective wisdom of you all is amazing.

*Introduction of MSDS – first done in 1995 and took 2 large folders with most chemicals having 3 or 4 pages of information – recently re-done with same chemical having 9-10 pages and filling 4 folders!! Chemwatch has been wonderful.
*Things I will miss – great staff and kids, attending annual conference, learning new technology.
*Things I won’t miss – learning new technology and re-inventing the wheel in schools.

It has been a wonderful 30+ years and the many questions asked of me at Labcon, which I attended with Sharon, my replacement “What are you going to do” were a bit of a shock. I have only ever worked part-time so will do all those things I have never had time to do, and continue doing all the other things I love – eg skiing, golf, community band, seeing more of Australia, trip overseas, community activities.

Thanks to you all. It’s been a great journey.
Cobden Tech School Science Department presents:
Romeo and Juliet – Act 2

**Short History:** Our 2 Green-tree frogs are of the species *Litoria Caerulea*. Romeo is approximately 10 years old and we’ve had him for about 9 approximately. Juliet is roughly 22 months old and she’s been with us for nearly 4 months. I think there may have been a previous ‘Juliet’ but suffice it to say he/she passed away several years ago. For several years Romeo was a bachelor-frog housed in an old fish tank; this was quite rudimentary and inadequate and wasn’t particularly warm on colder days/ nights. Although it had a ‘heater’, Romeo used to frequently escape out the top through a tiny little gap in the roof; presumably in search of somewhere warmer, which on most occasions turned out to be a black plastic pot plant. One fine day early in 2012 we decided this had to stop so we invested in a brand new proper sealed tank complete with filter and heater from Reptilife in Warrnambool, and he has since managed to escape only once. Needless to say, this has been a far better system for all concerned.

**Getting to know your frogs:**

Apparently, frogs are notoriously difficult to sex [according to the pet shop owner] so while we believe? Romeo is a male; we have no idea what Juliet is. We do know Romeo is a lot bigger, and likes to ‘push his weight’ around at times. I have witnessed him ‘swipe’ Juliet off the glass wall of the tank for no apparent reason - that was clear to me anyway. They also tend to engage in quite competitive contests for crickets at feeding times, in which I think Juliet tends to hold its own; perhaps just being smaller, lighter and quicker. As far as I can tell, they don’t seem to mind too much if you carefully remove them from the tank for a short ‘pat’ etc, but your hands must always be wet and free of any chemical residues before touching them. This is because a frog’s skin is very absorbent, and so is
Feeding – they generally are provided with approximately 3 crickets a week, although this depends on availability and size of the crickets, and availability of the LabTech as I’m usually the feeder. Sometimes I might give Romeo 2 a day if I’ve missed a day or so, and because he tends to be a glutton. We source our ‘large’ crickets from Reptilife, Warrnambool, in a bucket of [I’m not sure of the number] – I would guess about 50 [very hard to count when they’re all jumping around]. They seem to live much longer in the bucket than in the smaller rectangular ‘take-away food’ container; possibly this is because after a few days the egg cartons that they love to hide in can get a bit ‘yucky’ i.e. mouldy, smelly, etc so I think the more space they have the better. $15 for a bucket compared to $7-8 for a rectangular container, of roughly 20. I used to feed Romeo by hand, but I became a bit tired of him always trying to ‘eat’ my finger. Now I let the crickets loose in the tank, which is much better as they cannot escape and this gives R + J some exercise by chasing them. Sometimes, if we have lots of blow-flies, moths or the larger black crickets around I’ll catch 1-2 in a cup and let them loose in the tank. They will also eat mealworms, or garden worms [as a last resort!].

General Environment:
R + J’s tank cost about $350 to buy [in 2012], which included the water filter, reticulating pump and heater. When the heater is switched on it must always be submerged in water or it will burn-out. In the summer we generally turn it off, but it definitely needs to be on during a Cobden winter. I clean the tank about once a term, although I have noticed lately the glass walls in particular tend to need cleaning a lot more often; which is probably because Juliet seems to like climbing the glass a lot and in doing so leaves behind slimy residue. Cleaning the tank without the frogs escaping can be problematic, as the filter, pump, rocks and plastic ‘vegetation’ need thorough cleaning; about once a term though I soak the pebbles in a very dilute solution of bleach to remove algae etc, and then rinse them several times before drying them in the sun, and replace them with other pebbles on a rotational basis. I also use a toothbrush to scrub the painted foam ‘rock’-wall as it gets very slimy and grimy, and then rinse it off by turning the pump back on. At first I hated the thought of plastic plants, but have since come to accept them as the best practical management for frogs in a school.

Overall, I thoroughly love R + J, and sometimes interacting with them can be the highlight of my day. If anyone has any questions, I’d be only too happy to oblige [details below]. Of course, there is plenty of information on the internet, and I’ve found the pet shop owner where we bought Juliet from to be helpful as well.

CobdenTech, Labtech, Jackie Nowell  Ph- 55951202, email – nowell.jacqueline.j@edumail.vic.gov.au and I’m on the LTAV list-serve.
Reminiscences of Ruyton  “As school technicians we could all write a book! This is just a snapshot of my experience at Ruyton.”

It seems that the most vivid memory many people have of their school science education relates to the dissection of rats. To quote some reactions when I divulged my profession – ‘Do you still cut up rats’?  Me– ‘No, but we do dissect them with respect as an educational example of the body system in situ’.

I joined the Staff of Ruyton Girls’ School, Kew as Laboratory Manager in September 1985 and retired in April 2013. Ruyton is an independent girls’ school of approximately 750 students from Pre-prep to Year 12 and has been in existence since 1878. From humble beginnings it has developed into a vibrant, successful academic educational institution with its graduates participating in a wide range of professions and sports including Olympic silver and bronze medals in London 2012.

As the longer serving lab techs will remember the late 1980’s and early 1990’s were times of enormous change in government regulations regarding storage and handling of chemicals and procedures within the educational workplace. The regulations were one thing – the implementation was another. We experienced difficulties complying with new chemical storage requirements and safety factors in our outdated laboratories. Fortunately we moved into what was then a state of the art science building only a few years after starting at the school. Until then, however, I had to deal with a “Goodbye Mr. Chips’ situation with the Science labs scattered in three separate buildings over three different levels.

Ruyton gave me the opportunity to grow both professionally and personally. Professional development requests were always approved. As a member of the then Victorian Independent Education Union, I was asked to stand for a position on the committee as a representative for ancillary staff and encouraged to do so by the School management. My five years with the committee saw steady, positive changes to terms and conditions for all ancillary and teaching staff in Independent and Catholic schools in Victoria, due to the tireless work of VIEU. Today the IEU Victoria Tasmania is an even stronger organisation due to their amalgamation.

As the School representative for VIEU for many years and, with a team of teachers we formed our first Certified Agreement (now EBA) with the School. It was the first of several agreements, involving many after-school meetings with the School Board and our VIEU representative and with much negotiation we steadily achieved improvements to our salaries and conditions.

When mandatory reporting was introduced by the Federal Government for Women in the Workplace I worked with the Principal in preparing the annual report. It seemed a bit unnecessary to have to report on a girl’s school with the majority of teaching staff being female and never having had a male principal in its long history but rules are rules and we dutifully fulfilled the requirements.

Apart from my duties in the laboratory, which, as the only technician covered all the disciplines, I accompanied various excursions undertaken by the Science classes and some extra curricula ones. The two day camp to Queenscliff Marine Studies Centre for Year 11 Biology, including boat trips to Mud Island, Pope’s Eye and Chinamen’s Hat was the highlight of the year for the students and a great learning experience. Luna Park for Year 12 Physics was a fun experience for us all. Engineering and Chemistry at Latrobe and Swinburne University provided valuable off-campus education for the students and accompanying staff.
Also on the list were Alcoa, (HSC bauxite to aluminium), including one year, a tour of the bulk bauxite carrier ship at Point Henry, The Syncrotron, Werribee (sewerage and Zoo). Melbourne. Uni., the Melbourne Zoo, Carlton and United Brewery and Geebung Hotel (HSC chemical of local importance – beer!) and Healesville Sanctuary. We sailed around the Bay with the Duke of Edinburgh group. They were just some of the experiences I had as a member of a school group and, of course, as mini-bus driver extraordinaire!

All able bodied staff with nothing better to do were “invited” to accompany Year 9 students on their annual camp. So, leaving the comforts of home for a week we trotted off to ski, horse-ride, sail, bike-ride and hike to mention a few. It was a real bonding experience for the girls and accompanying staff.

In 1999/2000 the School approved a lab-tech exchange for three months to Collingwood School in Vancouver, Canada, a private co-ed school in West Vancouver. What a fabulous experience!!! In retrospect, a longer period of time would have been better as I had grand plans which I was unable to implement. At least their chemicals were arranged in zones, when the time came to leave – a concept unknown to them at that time. Safety was not as advanced as in Australia.

Vancouver is a beautiful city and at that stage tied with Melbourne for the top two world’s most liveable cities. We managed to see a bit of Canada even though it was winter – really WINTER. We actually walked on a frozen Lake Louise – very carefully and with trepidation. The Canadians are wonderful people, we were sad to leave, but 5 days in Hawaii on the way home to warm up helped ease our sorrow.

During my time at Ruyton I was asked by a group of riders if I would be interested to form a School equestrian team which we proceeded to do with much encouragement from our then Principal. This required lots of pre-preparation of pracs to have the day off to accompany the team to far flung venues many miles from Kew. These were special days with the girls and their parents and, many years and many enthusiastic and dedicated parents and riders later I passed the mantle to another keen equestrian member of staff and the team continues to this day.

It seems from this account that all I did was swan around the country-side and I acknowledge that I was fortunate to work at Ruyton. The wide variety of experiences both within the curriculum and extra curricula and the professional approach and support of staff made a sometimes stressful and demanding workplace rewarding. I felt appreciated. To all ‘techies’ still hard at it - good luck, may your pracs go without a hitch, your agar set and your job satisfaction know no bounds.

Averil Toyne

Science Laboratory Manager (1985-2013)
Ruyton Girls School, KEW
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LTAV PUBLICATIONS 2014

The following laboratory reference manuals and/or CD are available from LTAV:

- **BIOLOGY REFERENCE MANUAL, 2014:** $25.00 for CD and black and white hard copy combination. This REVISED handbook contains information on biological techniques, reagents, stains and culture media commonly used in secondary schools. Dale Carroll, Riva Fazio, Sarah Daniele and Wendy Hurle have updated the earlier version by Dale Carroll, Riva Fazio, Jennemee Bradbury and Marg Rubans of the original authors of Jenny Kopsidas, Rita Poole, Jean Stokes and Maya Wagner.

- **PHYSICS REFERENCE MANUAL, 2014:** $25 for CD and black and white hard copy combination. Svetlana Machouba has made many updates to the earlier version by Sabino Del Balso and Valerie Clements.

- **CHEMISTRY: A REFERENCE MANUAL FOR LABORATORY TECHNICIANS, 2008:** $27.50 by Geoff Gledall, Dip.App.Sci. A comprehensive guide for the beginning and experienced Laboratory Technician in all aspects of the chemistry laboratory.


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Please contact Wendy Hurle on 9704 3374 if you are interested.
Laboratory Technicians’ Association of Victoria
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Contact any committee member for more information.

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The committee will meet at CBC St. Kilda, Westbury Street, St. Kilda
The meetings usually go from 6:00– 9:30 p.m.

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