

ASET • NSW INC



FOR LABBIES • BY LABBIES

ASET-NSW NEWSLETTER

APRIL 2022

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Links for Articles

- <https://assist.asta.edu.au/>
- <https://seaact.act.edu.au/conasta>
- <https://scienceweek.net.au>
- <https://envirostore.com.au>

Contact Us

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Editor

Linda Robertson
editorasetnsw@gmail.com

<https://membership.asetnsw.org.au/>

Chairperson's Report

Welcome to the 9th edition of the ASET-NSW newsletter.

I've retired from working in schools, & I must admit to not missing the job. Enjoyed my long service leave until March, then launched headlong into retirement. Here's me thinking that not working will give me more time to myself - how wrong was that? I look after my 18-month old grandson every Wednesday, and drive/pickup Ruby from school every day. Love my grandkids but it's lovely and quiet when they go home!

ScienceASSIST received another year of funding and this wonderful resource will continue to be on a subscription model. If enough schools register and pay for the subscription, then the website will continue.

CONSTANZ - 11-13 October 2022 -details found here
<https://constanz2021.wixsite.com/christchurch>

ASET's 2022 Conference will be on from 31 October to 1 November at the University of Technology which is close to Central Train Station. We would like to know what training you need, so please feel free to send us an email so we can check out the providers of said services.

#STARweek 2022 - 7-11 November.

PD Day Booragul - Rescheduled to 20 June in Term 2.

Stay safe.
Margaret Croucher

Secretary's Report

We sent out a survey to see if you were interested in attending this year's ASET-NSW conference. Just over 50 members replied. Any suggestions regarding the conference are welcome.

Current Elected Committee Members

Margaret Croucher

Chairperson, Public Officer

Linda Stanford

Secretary

Elizabeth Brown

Vice-Chairperson

Linda Robertson

Editor

Loretta Fincato

Membership, Treasurer

Jonathon Blair

Committee Member

We are also asking you to look up ASET-NSW's Facebook account and join that.

Looking forward to schools going back to normal and no more segregating the cohorts.

Linda Stanford

Treasurer's Report

Don't know about you, but I have just had the busiest term ever. I was given extra hours to work last semester, but that time has been used up by all the extra cleaning & preparation involved due to bigger cohorts, & extra lessons in Food Technology. I have also been training a new laboratory technician who has never worked in education before, so I have had to mentor her as well, & overcome the differences between her overseas education & her experiences versus mine in the current curriculum. Throw in teachers absences due to COVID related illnesses & having to train substitute teachers, then it has made work very time consuming.

We've had new sponsors join us, so please see what they have on offer.

Annual Membership fees are due for 2022. If a colleague has not renewed since 2020, then they have not used the new membership software at: <https://membership.asetnsw.org.au/>

Please advise them to re-join ASET.

If you have an existing account, log in, click under your name, and go through User Detail to Member Area button. Click "Edit Contract" and hit the green "Renew Membership" button. If you cannot access the system as you have been deactivated, or do not know your password, please email me at: asetnswtreasurer@gmail.com

I have manually been tapping member's renew buttons and there may be an email sitting in your Spam folder that is notifying you to pay now. If you need your school to pay the membership, then email me for an invoice, or issue me with a purchase order. Sorry, credit card payments cannot be accepted on-line. We are only set up for direct debits into our AMB bank account.

We are looking for more help with newsletter content. If you are interested, please contact us via email. Linda has taken over as Editor and she would appreciate any contributions.

Loretta Fincato

Calendar of Events

| | |
|----------------------|--|
| 12 April 2022 | International Day of Human Space Flight |
| 2 May 2022 | Australian Science Olympiads - Big Science Competition |
| 20 June 2022 | Booragul Professional Development Day |
| 28 July 2022 | International Chemistry Quiz ICQ |
| 13-21 August 22 | National Science Week – Glass: More than meets the eye |
| 31st Oct -1 November | ASET-NSW Annual Conference University of Technology Sydney |
| September 2022 | ASET-NSW AGM |
| 26-29 September | CONASTA69 – Kingston, Canberra - early bird registration is open |
| 11-13 October 2022 | CONSTANZ – Christchurch, NZ |
| 12 October | HSC Exams begin |
| 17-23 October | Aussie Backyard Bird Count |
| 7-11 November 2022 | #STARweek |
| 7-11 November | National Recycling Week |
| 11 February 2023 | International Day of Women & Girls in Science |
| 06 March 2023 | Clean Up Australia Day |
| 25 March 2023 | Earth Hour |
| 2023 | CONASTA70 - Adelaide |

Alpha Chemicals offers Australia wide distribution of our range of laboratory reagent grade products.

Alpha Chemicals is a 100% Australian owned chemical distribution company with a strong background in inorganic chemicals.

We are committed to providing laboratory chemicals to Australian secondary schools with high quality, at the lowest possible prices and with the best service. We also supply laboratory chemicals to all industrial, research and scientific laboratories at very affordable prices.

Alpha Chemicals has taken on the role of providing quality products at affordable prices combined with unbeatable professional and personal service.

Our warehouse, in Sydney, stocks a wide range of chemicals that are used in many industries and applications, ranging from ceramics raw materials, paint raw materials, electroplating raw materials, concrete stain raw materials, laboratory chemicals, water and wastewater treatment chemicals, and animal health product raw materials through to a range of powder coating equipment and chemical additives and the complete range of anodising plant equipment and chemical additives.

Our staff would welcome the opportunity to provide further information on or assistance with your specific requirements. These may not be included on our website, but our experience, facilities and resources enable us to source a wider range of products.

Shane Longmore

(Managing Director)

Alpha Chemicals Pty Ltd

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If you have any interesting science stories, photos, hints, tips or freebie suggestions, and they haven't been published on other forums, please send us an email so we can publish in the next edition of the newsletter. Please put NEWSLETTER in the subject line.

editorasetnsw@gmail.com

SUPPLIER SUGGESTION

Check the sales menu whilst purchasing on-line. They always contain bargains and end of line stock. Modern Teaching Aids has heavily discounted items under their Science menu and spotted the other day was cheap back tied lab coats on Westlab.

End of Financial Year BUNDLE OFFER

We're excited to announce the launch of our popular bundle offer campaign.

- Massive savings (up to 25%) on Quotes of \$5K or over
- Over 2,500 product lines in stock – same day despatch guarantee
- Bundle your Equipment and Consumable needs for a great deal!

Send your list of requirements to william.crick@westlab.com.au (state 'Bundle offer' in the heading) to receive a personalised proposal.



Call for abstracts

To submit your abstract: seaact.act.edu.au



New Date
25-28 September 2022



Resources – Welcome to the Wonderful World of Waste and the School Laboratory

Part VIII

By Michael Pola
Envirostore Chemical Consulting
mike@envirostore.com.au

This article looks at spills and mishaps in the school laboratory. I was prompted due to a recent small collection from a school which had experienced a chemical spill (formalin solution) and they had called the Fire Brigade. There was no fire involved. Apparently there were a number of their large vehicles and associated crew in the street for a spill comprising about 5 litres. A similar incident years ago from the same suburb involved a dropped vial of bromine. Again the lab technician panicked when confronted by the brown swirling fumes of bromine and called the MFB in. We came in to collect the result of their clean up which consisted of a 5 mL broken glass vial wrapped nicely in a large plastic bag contained within a 240 litre orange recovery drum. Some may say overkill, some may not say this at all. In both incidents the MFB did not remove the spilled items, they only attempted to make it safe by containing the chemical involved.

There are lessons to be learnt from these two incidents. The fire brigade are not really geared for small chemical spills especially in a school lab. All their emergency vehicles are large fully equipped Hazmat trucks and they are ready for anything. There is a cost involved and it will be brutal. In both incidents the lab technician preferred to call in an outside body to deal with the spill when good laboratory management and practice would strongly suggest that a spill kit in the lab would have dealt with both spills in a jiffy.

Bromine is an evil looking brown fuming liquid and would look menacing if a vial was dropped at your feet and brown fumes started coming towards you. Five minutes after the spill no trace would exist as bromine turns from liquid to vapour very quickly and soon dissipates. Formalin is a solution of formaldehyde in water and has a fairly obnoxious aroma to my sensitive nose anyway. Its reputation as a potential human carcinogen lead to alternatives to be sought. Gluteraldehyde (C₅H₈O₂) was for a while suggested as an alternative solution for disinfection, preserving and fixing, but apparently it is much more toxic than formaldehyde and is also a probable human carcinogen.

In the school lab, formalin is what is probably used as the preservative for the sealed zoological specimens. (Ethanol also, sometimes both.) One of your risk controls when using any dangerous good (both bromine and formaldehyde are class 8) is to have an effective spill control in place. This would come under administrative controls. Remember when going through your risk controls to start at the top with Elimination, and proceed down the controls list in order, finishing up with Personal Protection Equipment (PPE) when doing your risk assessment (which leads to the Risk Controls).

We strongly suggest you make yourself familiar with all the chemicals you will be handling. The properties of both bromine (i.e. a brown corrosive volatile liquid) and formaldehyde would or should have prompted some extra thought given to the spill controls. Bromine spills are effectively treated using lime, (calcium hydroxide not calcium oxide) to both neutralise and absorb. Formaldehyde is effectively soaked up with our good friend vermiculite or any other mineral based absorbent; you could also use it on the bromine.

On the Envirostore web site in the “For Schools” section, you will find an information sheet on spill kits which has some more information on spill kit ingredients. Assembling a spill kit for the school laboratory is as simple as using vermiculite or similar, having it in a labelled container such as a 20 litre plastic pail and having a few at convenient locations in the prep room, store and lab. For corrosive spill kits throw in some soda ash for acid spills or sodium acid sulphate for alkaline spills in with the vermiculite.

The best neutraliser for ammonia solutions is citric acid either as is or with the vermiculite. Solid spills are best swept up and put into a heavy duty plastic bag, contained in a pail and labelled. This is prescribed chemical waste, as a liquid spill that has been soaked up, you therefore need to have spill kit wastes disposed of by your waste disposal company. Do not use sand, soil or sawdust as an absorbent. None of these are effective and in some cases you can get a chemical reaction when using on certain nasty chemicals like nitric acid for example.

If you consult a Safety Data Sheet for information and advice on dealing with a chemical spill prepare to be disappointed. It is the rare SDS that actually has any information of a useful nature regarding a chemical spill. The suggestion to ring your local authority (I suppose the EPA) is of little use when you have a room filling with fumes and smoke or some pool of liquid is fizzing in a corner of the lab and eating its way through the floor to China while you frantically flip over pages of the SDS seeking some guidance. Get in first and get the spill kit organised before you start.

If you have any questions dealing with chemical spills or splashes, we at Envirostore are happy to help so feel free to contact us. (We won't tell you to ring the EPA!)

These articles were previously published in Lablines and have been included with permission from the author. Editor.



The advertisement is enclosed in a green rounded rectangle. On the left is a 3D wireframe cube with vertices labeled with letters. To its right is the main title 'Science Shows & Workshops' in a large green font, with the subtitle 'across NSW & ACT!' in a smaller green font below it. A list of four bullet points, each with a green checkmark, follows: 'Curriculum-linked', 'Full risk assessments', 'Easy to arrange', and 'Small groups or whole school'. At the bottom left, the website 'fizzics.com.au' and phone number '1300 856 828' are listed. At the bottom right is the 'Fizzics Education' logo, which features a stylized globe and the text 'Fizzics Education' in a white, bubbly font on a dark blue background.

Useful Science News Websites

- Sciencedaily.com
 - Sciencenews.org
 - abc.net.au/news/science/
 - sciencenewsforstudents.org
 - sci-news.com
-

You know you have worked too long in a lab when: -

1. Warning labels invoke curiosity rather than caution.
 2. You want to have Parafilm at home too.
 3. You open the toothpaste with one hand.
 4. You no longer get amusement from freezing things with liquid nitrogen.
 5. Your collection of freebies from lab suppliers will no longer fit on your desk.
 6. When a non-scientist asks you what you do for a living, and you talk science at them until they have lost the will to live.
 7. No matter what the timings in the experiment protocol, there is always time for lunch.
 8. You're slightly fond of the smell of xylene/agar/ethanol/hand sanitizer/high school students.
 9. You've bought everything in concentrated form because you are very good at diluting solutions.
 10. No one in your family has any idea what you do for a living.
-

A word from our sponsor...

My name is Chris Simm, and I'm the Service Manager for Conditionaire Manufacturing Pty Ltd. We are a Melbourne based company that specialises in fume cupboard testing & manufacturing, ductless fume hood testing, chemical storage cabinets, ventilation units & fans for chemical cabinets/chemical storage rooms in your school.

The company is well established and has been operating for 70 years. This gives us a very distinct advantage over our competitors when it comes to knowledge and problem solving. We currently repair/trouble shoot all makes and models on the market today. We are also NATA Accredited and adhere to the current standard AS/NZS 2243.8 and AS/NZS 2243.9. Our testing equipment is calibrated to NATA standards.

We have experience in all models of fume cupboards currently on the market, and most past makes & models. We can either offer you original parts or retro-fit ours when replacement parts become unavailable. This is a huge advantage over our competitors, when they cannot offer the same service.

All our reports come with a photo/sketch as per the standards requirements. It seems there are a lot of companies out there not adhering to this, and we now have access through a portal on the internet for all our clients to see or gather their test reports and have a full asset history on their fume cupboards etc including comments/repairs. We normally just email out as a PDF and there will be even more capabilities coming in the future!

What we can offer the regional NSW schools and Sydney Metro is this...we currently do a number of schools in the following areas: Albury, Cowra, Dubbo, Bathurst, Orange, Mudgee, Lithgow. This has come about due to the expensive pricing schools are being quoted from companies based in Sydney. For us to come to your region, I would suggest you contact all the lab assistants and facilities managers in the surrounding region, and discuss what you are currently paying for this type of service, and email me back with how many fume cupboards/fume hoods/ductless fume hoods (portable units on wheels) to get a no obligation quote for your school/s.

We would like to offer your school the following pricing...\$60 plus GST per NATA Test (airflow/smoke test with full report) and if you are 50klms or more out of Sydney, a travel cost of \$300 plus GST to anywhere else in NSW.

Remember also, double sided fume cupboards get tested both sides as per the standards and have to have certification labels on both sides.

I hope to hear from you soon.



Chris Simm - Service Manager/Business Development

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50 Glenbarry Road, Campbellfield, VIC 3061

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Email: chris.conairmfg@bigpond.com

BOB'S INSTRUMENT SERVICE

Bob's Instrument Service specialises in the service and repair of school science lab equipment including microscopes, balances, power supplies, panel meters and other equipment throughout NSW and ACT.

Please feel free to contact Bob Death on 0416 721 011 or bobsinstruments@gmail.com to discuss your school's needs.

Freebies

To record or find out where feral animals like foxes have been seen, check out Feralscan.org.au

https://www.scienceweek.net.au/wp-content/uploads/2022/03/science-week_glass_teacher_resource_book-2022.pdf