

# LAB LINES

OFFICIAL PUBLICATION OF THE LABORATORY TECHNICIANS' ASSOCIATION OF VICTORIA

Editor: Jenny Emery

Volume 43 | Issue 1 | June 2023

- Challenge and Engage  
*on a Budget*
- Measuring pH
- Intestine Model
- Chemical Management  
*for New Labbies*

Science Week  
2022 Horsham College

Microbiology PD

Wimmera Region PD

## Citizen Science: Beautiful Invaders



# *“Don't worry, we've seen worse!”*



The [envirostore.com.au](http://envirostore.com.au) website has a special “For Schools” section where you will find some handy downloadable materials addressing spills, banned chemicals, the GHS and more and you can enter details of your chemical waste online for a disposal quote. Michael Pola’s LABCON and STAV presentations from 2019 are also available.

Don't forget, we can supply compliant containers for consolidating your liquid chemical wastes, and we pack all the chemicals for disposal ourselves and we will take everything. We are happy to have a look at your lab, prep room and store and offer suggestions on compliance and good lab practices – this is a free service for our customers.

We also supply economical and effective spill kits and free chemical advice.

Contact us on (03) 9308 6636

Mike: 0419 566 129

Email: [sales@envirostore.com.au](mailto:sales@envirostore.com.au)

43B Nathan Drive

Campbellfield VIC 3061

[www.envirostore.com.au](http://www.envirostore.com.au)

**envirostore chemical  
consulting** pty ltd



Contact us for a disposal quote, download the manifest form or complete online on our website. We do collections anywhere in Victoria.

# Contents...

- 4. Presidents Report  
From the Editor**
- 6. Fungal Invader**
- 9. How to Challenge**
- 11. Measuring pH**
- 13. Make a Model Intestine**
- 14. Word Search**
- 15. Chemical Management**
- 17. Wimmera Region PD**
- 18. Microbiology PD**
- 19. Science Week 2022 @ Horsham**
- 20. Trivia**

## PRESIDENT'S REPORT

Geoff Gleadall



You may have noticed that we have a new LABLINES editor. We are confident that the problems we had last year have now been resolved and please understand that they were due to factors that are beyond anyone's control.

I am mindful that this year marks 40 years of operation of LTAV (formerly known as LTB-STAV) and your association has been constantly improving through that time.

Give some thought about the numerous ways that conditions have improved for our profession in that time, much of this has been the result of much hard work by LTAV and the three trade unions that cover our members.

This does however remind us that while LTAV and its members have worked hard all this time to support and help both our members and the profession, as a whole, many in the profession are not yet members.

Now if you are reading this you are a member, but if you know of colleagues who are not members it might be appropriate to have a conversation suggesting that they join and perhaps pointing out the many advantages membership has.

A lot of what we do benefits all technicians, the list server is an example that comes to mind, but membership also gives you regional PD opportunities and a substantial discount to attend LABCON.

I recently had a chat with Jean Stokes, who was our inaugural president, and is also a friend and past coworker, and I am pleased to tell you that Jean will be attending this year's LABCON and with me presenting a session on the history of our association.

What we do is often challenging but remember that your association is always here to help, all you need do, is ask.

## FROM THE EDITOR

Jenny Emery



Hello! I'm Jen Emery, the new Lablines Editor, and I hope to do justice to our wonderful publication.

As a child, I had various career dreams - hairdresser, vet, journalist, documentary filmmaker, zookeeper, and park ranger.

Yet, shortly after finishing school in 1988, I had an opportunity to be a "Girl Friday" at BHP Research, supporting the Electronics Laboratory and Building Services. That role provided me with valuable skills that became an asset in future roles.

In short, the universe kept plonking me into laboratory environments, and I discovered that I found this work fulfilling, interesting, and something I was good at. When I landed my first school lab tech role in 2000, I knew I had found my career home.

Amusingly, thanks to this profession, I have been able to perform tasks associated to those dreamed of careers - working with wildlife, making videos, writing articles, assisting with veterinary procedures, mixing chemicals, and participating in conservation work.

Now, here I sit, wearing an Editors hat for a profession-targeted publication without much knowledge of what that entails, but confident in my ability to adapt as a "Jack of All Trades and Master of None", honed thanks to having had such a diversity of experiences stemming from this very wonderful profession that is a School Lab Technician.

I am incredibly grateful to all those who have contributed to this issue, and I trust our readers will enjoy the content.

If you wish to submit articles, hints, tips, tricks, or anything else you would like to see in future issues of YOUR Lablines, please forward your text (word, email, or pdf) and photos (png) via email to: [jennifer.emery@education.vic.gov.au](mailto:jennifer.emery@education.vic.gov.au)

# PRINCIPLES and PRACTICE

Stuff  
Fixed

My Tetris based spares inventory  
and storage system is rather full!



Please give me a call, or send an email, so I may be able to  
reduce my spares holding by repairing something for you.

Email: [harvey@principlespractice.com.au](mailto:harvey@principlespractice.com.au), Phone: 0459 768 392

## Submissions deadline for next edition of Lablines: 1st September 2023

### COPYRIGHT REMINDER

Articles for publishing in “Lablines” should not have been published elsewhere, except that all articles submitted for republication, and any published material quoted in any article, must be accompanied by a signed release from the COPYRIGHT HOLDER. The LTAV retains the COPYRIGHT on articles published in “Lablines”. Written applications for non-commercial release should be addressed to The Editor, Jenny Emery: [jennifer.emery@education.vic.gov.au](mailto:jennifer.emery@education.vic.gov.au)

### DISCLAIMER

The views expressed in “Lablines” are not necessarily the opinions of the committee. No responsibility is taken for the results of any experiments published in “Lablines” or that may be replicated elsewhere. Risk assessments should always be carried out before attempting the same.

# The Beautiful Fungal Invader

Article and photos by Anita. M. Poupa, Lab Technician, Yarra Valley Grammar.

At first glance this fungus either triggers trypophobes (my apologies) or fills people with awe and fascination. The bright orange colour, adorable ping pong bat shape and porous under-surface are captivating; however there is a dark reality behind all of it. This fungus is known as *Favolaschia claudopus* (previously *F. calocera*) and is commonly referred to as orange pore fungus, orange ping pong bat or orange porecap. It originated in Madagascar and parts of southern Asia but in recent decades has spread to Australia, New Zealand, Europe, Kenya, Hawaii and many other areas around the globe. Recently, molecular analyses showed that the specimens in Australia have become genetically distinct enough to be classified as their own species, hence why Australian observations are now referred to as *F. claudopus* instead of *F. calocera* despite the morphological features looking the same – quite a common situation in fungal taxonomy.



Fig 1. *Favolaschia claudopus* pore surface in the Dandenong ranges, June 2019.

So why is this a problem? This introduced fungus fruits on decaying wood and isn't fussy about which species of wood it inhabits. In doing so, it competes with and displaces our native fungal species that also fruit from decaying wood, leaving even less habitat for the natives especially in areas that have already been struggling with habitat loss or destruction. Once this fungus has been introduced to a new location it can cover all the dead wood in a vast area. Here in Australia we are blessed with high biodiversity, especially when it comes to the kingdom of fungi but when a highly adaptable and prolific introduced species shows up it is difficult for natives to compete for space and resources.

Spores from *F. claudopus* are easily spread, hitching a ride on the wind, on animals, on transported timber and on the shoes, equipment or clothes of humans that go bushwalking. Over the last 6 years as a nature photography enthusiast I have personally encountered this species

in the Dandenong Ranges, the Great Otway National Park, Toolangi and MacLeod but it has been reported from many additional areas around Victoria, NSW, Queensland, Tasmania and Western Australia. Most recently I stayed at a camping ground along the Great Ocean Road and unsurprisingly, as it was a highly disturbed area, a large log right next to my tent was covered in *F. claudopus* fruiting bodies.

What can we do to help? Firstly we can try to minimise the spread by sticking to walking trails and wearing freshly washed/disinfected clothes and shoes when walking to different locations (spraying with 70% methylated spirits will work). Secondly, we can try and not disturb any fruiting areas we find, or if visiting multiple sites in a day you can try to visit the 'weedier' more disturbed ones last (these methods will inadvertently help slow the spread of fungi that cause dieback/rot disease in plants too, like cinnamon fungus *Phytophthora cinnamomi*). Thirdly, we can easily record any observations of this species with the use of citizen science apps.



Fig 2. *Favolaschia claudopus* top surface, Dandenong ranges, June 2019.

I am a big fan of using iNaturalist rather than specific fungi ID apps, as it doesn't just rely on algorithms for ID, real people with plentiful knowledge and experience will see your observations and offer ID suggestions - not just for fungi but any type of organism you encounter - and it's free to download and use. Via iNaturalist many introduced (and native) species can be tracked and any observation with two or more people in ID agreement will become research grade which can then be used for research purposes.

For fungi observations, be sure to take photos of the entire thing (including entire stem, cap top and underside) and include them in the 'Fungimap Australia' project which endeavours to map all the fungi around Australia, to educate people in the essential roles of fungi and advocate for the conservation and research of fungi. Due to the high biodiversity in Australia and slow progress in mycology we still have so many fungal species that are yet to be described. I often come across mushrooms that are nowhere to be found in guide books and that confuse even the most seasoned of mycophiles.

Through my use of the iNaturalist app I have greatly increased my knowledge of Australian

flora, fauna and funga (yes, it's funga with an 'a') and I became the first person to publicly document the presence of Invertebrate Iridescent Virus 31 (IIV-31) in Australia which is a virus that infects terrestrial isopods, turns them a bright blue/purple hue and results in their early death. This topic deserves its own article in good time!

Quite famously, a woman in Sydney (Amanda De George) discovered a new species of jumping spider on her recycling bin. After sharing her unusual observation with an identification group she captured it then sent it (live) to a spider expert for examination and description. You just never know what weird and wonderful organisms might be lurking near your home or workplace.

Citizen science is also a fun learning tool to get kids involved with – kind of like real Pokémon! To date I have made observations of 615 different species across multiple kingdoms and phyla from Victoria and a few other Australian states. I even kept myself busy in lockdown making observations within my 5 km radius of home. Using a smartphone for taking the photos is perfect as the exact coordinates are automatically recorded. Just be sure not to pick or remove anything from protected areas like national parks. A tip to see the underside of a mushroom without picking it is to carry around a small portable mirror, like one you might have in a cosmetics bag.

So next time you're out for a walk please be mindful of protecting areas that are not yet touched by the invasive orange ping pong bats and do take photos of whatever fungi and other organisms you find because they might just turn out to be something of great importance!



Fig 3. *Favolaschia claudopus* in Gresswell Forest Nature Conservation Reserve, May 2020.



## How to challenge, engage and carry out some experiments with a limited budget by Mary L. Jones

A lot of things are going up in prices and our already tight budgets are feeling the pinch. There are many activities across various year levels that you can run that will not break the budget.

With the same items and maybe a couple of additional bits and pieces, you can do a variety of activities, which include Rube Goldberg machines, iron teddy bear challenge, water filtration challenge, egg drop and inertia tower challenges.

Some of the following materials can be used in several of these activities: Flat cardboard, cardboard boxes (varying sizes), strings, paper towel rolls, plastic bottles, tape, strings, playing cards, dominoes, marbles, bubble wrap, newspaper (or if you can't source this easily use regular recyclable paper), old scraps of cloth, garbage or freezer bags, toothpicks.



[Rube Goldberg machines](#) for further information please use the QR code. The students can opt to make a machine that does a simple task using a complex contraption. This activity is kind of a free for all, utilize all materials that you have excess of, can incorporate tubing, newspapers and so much more along with the tools to help them shape their machines.



[Materials specific for iron teddy bear challenge](#): Read the actual experiment to see the complete list, but the Teddy bear must survive three tasks intact to be declared an Iron Teddy bear. A link will be placed at the end of the article where you can access this experiment.

[Water Filtration Challenge](#) is a free session offered to schools by [Engineers without borders \(EWB\)](#)



On the years that my school has not been able to have them out because they were booked out or COVID happened we did our own version, which I will describe in the supplement document on the google drive. [Materials for water filtration challenge](#) should be limited and have a cost value per item. The class splits into teams representing different companies. Each company gets an amount of money based on their size. Rules are simple. Trading with other companies is allowed, each team must design their water filtration service. Additional materials to the ones above that might be required include fine grave, sand, soil, cotton wool, rocks, paper cups,

environmentally friendly Chux (biodegradable – side note these can be washed and reused if desired), bucket of dirty water, and paper towel. More information about this will be included in supplement document that is accessible from the google drive link near the end of this article.

# How to challenge, engage and carry out some experiments with a limited budget by Mary L. Jones

**Materials specific for egg drop:** eggs, you can decide if you give them a parachute template to help them out. Outdoor area with raised portion to drop the eggs from to below (This can be a balcony on the first floor if your school is multiple floors, external stairwell on multifloored building. For those with no elevated spot, you can use a table and bench to stand on top to release the eggs. Just ensure that the person getting on or off the table is safe.



**Materials specifically for inertia tower challenge:** Cards with hole punched in on corner with string attached. These cards must be wider and longer than the item they are supporting refer to picture on the side. This can be done with the paper cups mentioned above to be more environmentally friendly or with wooden blocks if you have them available.



## Image references:

*Parachute icon* was made by Swifticons from [www.flaticon.com](http://www.flaticon.com).

*Helpful Tips Image* designed by freepik (Image by [https://www.freepik.com/free-vector/helpful-tips\\_4481336.htm](https://www.freepik.com/free-vector/helpful-tips_4481336.htm))>Freepik</a>)

*Raw Water Tap Water image* designed by freepik (Image by [https://www.freepik.com/free-vector/raw-water-disinfected-with-chlorine\\_10882131.htm#query=water%20filtration%20simple&position=4&from\\_view=search&track=ais](https://www.freepik.com/free-vector/raw-water-disinfected-with-chlorine_10882131.htm#query=water%20filtration%20simple&position=4&from_view=search&track=ais))>Freepik</a>)

*Inertia Tower Challenge image* is a photo taken from <https://www.perkins.org/resource/inertia-tower/>

*Teddy Bear image* is from <https://australianfoodtimeline.com.au/arnotts-teddy-bear-biscuits/>

QR Code for link to Rube Goldberg Machine was made by me using <https://www.vistaprint.com.au/>

QR Code for link to Inertia Challenge was made by me using <https://www.vistaprint.com.au/>

## Link to obtain further information:

[https://drive.google.com/drive/folders/1dMJQPvedJfZyi1KN9UMQgJERXgOSwgBs?usp=share\\_link](https://drive.google.com/drive/folders/1dMJQPvedJfZyi1KN9UMQgJERXgOSwgBs?usp=share_link)

Above is a link to the google drive, where I have uploaded the experiment version for the iron teddy bear challenge that Angela Lane and I wrote. Including a score sheet to help the teachers out too. In addition, for anyone that may not like to use QR codes or rather not have to read and try to type the web addresses in on computer, there is a word document with all the links to give you easier access. I have only touched on a few of the many things you can do to show how to try to save and have materials for multiple activities. You are all clued on and have some wonderful imaginations and can think of many more activities.

**If you have some great ideas, please feel free to write up an article and send to our lovely Lablines editor, Jenny Emery. Her email address is: [jennifer.emery@education.vic.gov.au](mailto:jennifer.emery@education.vic.gov.au)**

# HINTS & HACKS LAB

## MEASURING pH IN THE HIGH SCHOOL LABORATORY

by WILLIAM HARDMAN, Newstead College, TAS

### THE SCENE: A GRADE 8 SCIENCE LABORATORY SOMEWHERE IN AUSTRALIA....

There's a 15mm test tube containing 2mL (depth about 20mm) of a solution.

Teacher asks Dumper and Tschinta to measure its pH before going to the next step of the procedure.

Now, Dumper and Tschinta could be given one of several things to enable them to do this task:

1. A pH meter - rich schools have class sets of these. Dumper and Tschinta's school is not rich.
2. A dropper bottle of indicator solution - in all probability Dumper will squirt some of this onto Tschinta's tightly white clad sticky-out bits and a fight will break out.
3. A piece of indicator paper. Dumper can't do much harm here, but it won't reach the liquid, so he'll drop it into the test tube.
4. An indicator strip: Tschinta might just start another fight by ramming this up Dumper's left nostril. Anyway, it won't reach the liquid either.

### THE SERIOUS STUFF

Indicator paper is economical and safe. If only it can be brought into contact with the test solution. Plastic strips cost a bit more, but the challenge of using either is effectively the same. It's a matter of devising a student-friendly way of getting at the liquid.

Several solutions (pun alert!) to this problem can be considered. Each has its pros and cons. Imagine doing them, or even try for yourself. Evaluate.

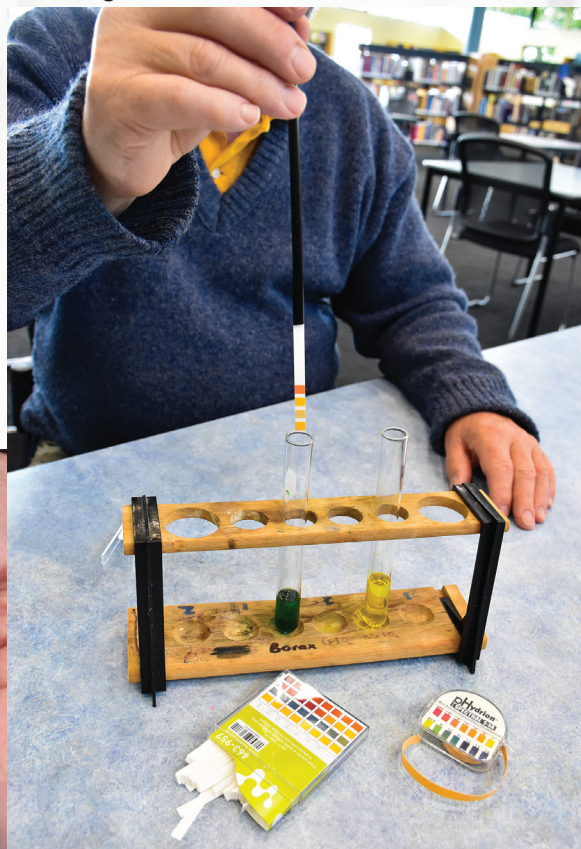
- Use bigger volumes to bring the level of liquid further up the test tube.
- Use a smaller test tube.
- Use a wide mouthed beaker instead of a test tube.
- Use forceps to hold the strip whilst inserting it into the liquid and withdrawing to read.
- Tape the test strip onto the end of a skewer.

### THE GREAT BREAKTHROUGH

A solution of elegant simplicity recently came to mind and is now described. Take an ordinary plastic straw (destruction of entire planet alert!) and squeeze one end into an oval wide enough for the test paper or strip to slide inside.

Release of pressure closes the straw firmly onto the strip which is now locked into a handle for sufficient length to reach the bottom of any test tube. Your strip is easily withdrawn to clean for re-use. One set of straws will last a long time and can be used many times over (the planet is saved!).

I give you this sophisticated touch for school practical science at any level (plastic straws rock!).

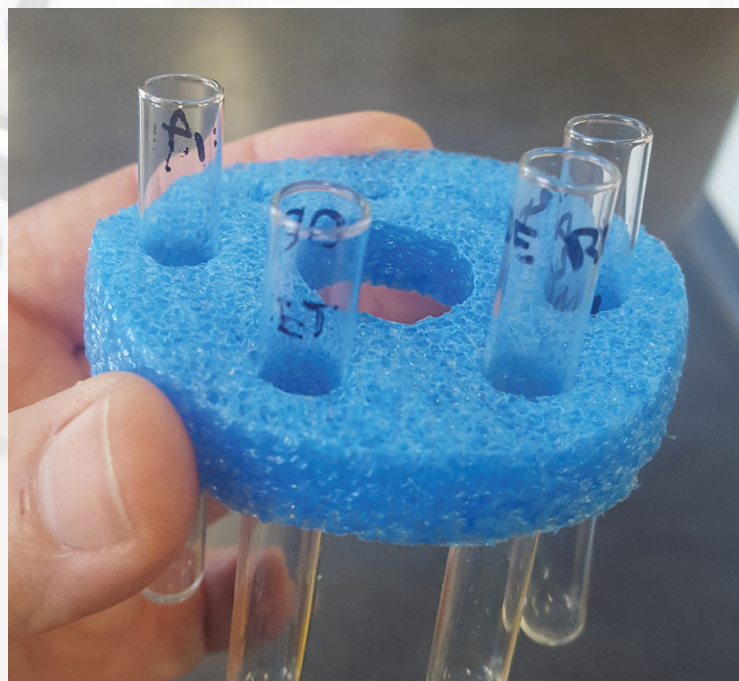


# HINTS & HACKS LAB



Have you ever wished that you could afford the thousands of dollars needed to buy a freezing microtome when trying to thinly slice those samples. Samples need to be snap frozen to prevent large ice crystals growing and destroying structures. SO...when a teacher and I started wishing we could get some liquid nitrogen to snap freeze some carrots that were placed in coloured water, I started to wonder whether we could use a cryogenic spray. On further investigation I found a wart remover with a cavity that you placed an applicator in to freeze, I was thinking a piece of carrot would be just as good as an applicator! After explaining to the accounts department why I needed wart remover, with purchase order in hand I went to the local pharmacy and bought Warteze. I totally confused the assistant who asked if I needed help as I checked to see how large the cavity was, getting a "I'll leave you to it then". It worked beautifully, but make sure you supply the teacher with protective gloves when they handle the frozen sample, Warteze can reach temperatures of -50 degrees C. It is possible to get other freeze sprays (Jaycar) but they don't have that little compartment where you can place your sample.

- Gayle Spicer, Maryborough Education Centre



Here is a photo of a micro test tube holder I made for floating in a waterbath. I used a hollow pool noodle, sliced thinly for how many you need, and stabbed a pencil/pen/stirring rod through to hold them. They float around perfectly.

- Kerrie Davies, Healesville SC

If you need an alternative for weight rings to hold down 125mL flasks in a WB5 water bath, then a good budget option is a rubber band threaded through 2 x large nuts from the hardware.

Our prac has 80mL of liquid in the 125mL flask to further add some weight.

As always, handle the glassware and weights with care Our Year 12 students were careful and there were no mishaps.

- Claire Stock, Myrtleford P12 College



# HINTS & HACKS LAB

## LIFE SIZE MODEL - SMALL & LARGE INTESTINE

by Patrick Hull, Traralgon College, VIC

### Ingredients:

*Approx Cost \$30*

You will need 10m of 12mm Grunt Natural Sisal Rope \$18.48 (Bunnings Item# 0231453)

1 pool noodle \$1.98 (Bunnings Item# 0149006)

Red Electrical tape \$9.78 for 5x 20m rolls - you will use about 50m (Bunnings Item# 0381149)

About a dozen large cable ties

### Method:

1. Cut off 1.5m pool noodle
2. Thread the rope through the pool noodle and knot at bum end, measure off 7m from other end and cut.
3. Wrap a couple of layers of tape around noodle and tighten a large cable tie around it as tight as possible to create bulges in intestine. The tape stops the tie from cutting the noodle. (See photos above.)
4. Cut off end of tie and wrap with tape, repeat every 10ish cm.
5. Seal off bum end (knotted end) with tape.
6. Taper other end of noodle to rope.
7. Wrap tape around and around and around and around and around and around and around and around and around and around and around and around.....
8. Until you collapse from carpal tunnel or the thing is finished.
9. Wrap tape around the gaps and bits you missed

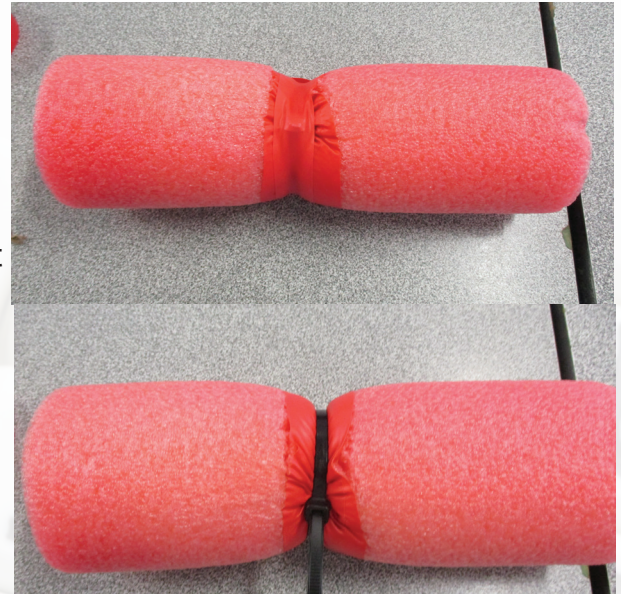
### Comments:

Always provokes the response "Nahh that can't be right, you would never fit all that in".

This is also a good resource for visually impaired students.

Have fun and take care.

Patrick



# LABLINES WORDSEARCH

Find all 24 biology related words!

*Words can be horizontal, vertical, or diagonal (left to right).*



1. AGAR

2. CELL

3. CELL WALL

4. DNA

5. ENZYME

6. HEART

7. INCUBATE

8. MEIOSIS

9. MEMBRANE

10. MICROSCOPE

11. MITOCHONDRIA

12. MITOSIS

13. NUCLEUS

14. PROTEIN

15. RESPIRATION

16. RIBOSOME

17. SKULL

18. SLIDE

19. STAIN

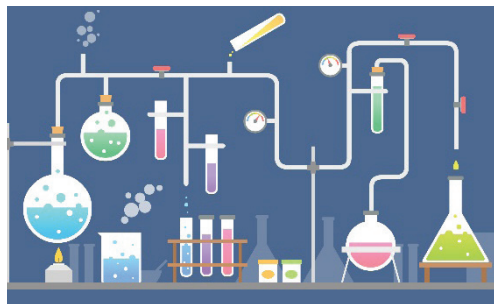
20. STOMATA

21. TISSUE

22. VACUOLE

23. WET MOUNT

24. YEAST



# CHEMICAL MANAGEMENT FOR NEW LABBIES

by Mary Jones, Keilor Downs College

>> For references and links to resources mentioned in this article, please refer to the supplementary document found at: [https://docs.google.com/document/d/1yBfY0IrpwdHIF\\_Pbw-sCYJ\\_YUQb-b\\_K2/edit](https://docs.google.com/document/d/1yBfY0IrpwdHIF_Pbw-sCYJ_YUQb-b_K2/edit)

**Chemical management** is crucial for ensuring the well-being of workers, as it's the employer's responsibility under the Occupational Health and Safety Act 2017. Specifically, we need to adhere to the Global Harmonised System for Chemicals and Dangerous Goods Act, and Work Safe Victoria provides information on these regulations.

We've noticed a concerning trend of schools hiring individuals without proper training in chemical handling and management. As a Government school employee, I'm sharing my perspective, but I encourage those from Catholic or Independent schools to contribute by addressing the situation within those systems for the benefit of our aspiring technicians.

Laboratory Technicians are expected to have chemical knowledge, but the gap between someone with VCE science and someone with a degree is substantial, as is a notable disparity among individuals with a Cert III or Cert IV. Even different degrees have varying levels of chemical education - degrees in biology or physics may not cover chemical handling extensively unless, for instance, the individual is pursuing a chemical engineering career. Different countries also have different standards for degrees.

In my case I was fortunate to receive training in chemical transport, storage and handling during my university days. Working at the campus store, where we supplied various departments with goods ranging from stationery to chemicals, gave me practical experience, while my supplementary chemistry courses improved my understanding of chemical handling. All of this gave me a head-start when I began working as a laboratory technician, especially in knowing how and where substances should be stored and in taking necessary precautions with other dangerous goods.

**For those who are new to a school, or for those seeking a refresher**, the Department of Education offers valuable guidance sheets through its Policy and Advisory Library (PAL), which covers storage, dangerous goods classification, restricted and prohibited substances, spills, and waste disposal. To find these documents, visit the PAL website (link provided in supplementary document!) and simply type "chemical management" in the search bar. This will bring up the result as seen in the image to the left.

Schools home Policy ar

## Search results

Displaying 10 of 1192 results

- Chemical Management | Policy**  
Department policy on managing risks associated with the storage, handling, use and disposal of chemicals in schools  
Feb 22, 2023...
- Volunteer OHS Management | Policy**  
Department policy on health and safety requirements in schools for managing volunteers  
Dec 22, 2022...
- OHS Risk Management | Policy**

Click the first option "Chemical Management | Policy" (circled in yellow) and this will take you to a page with tab links for Policy, Procedure, and Resources. Under the Resources tab you will find the guidance sheets. For novice technicians, it's essential to be aware that certain chemicals are deemed too hazardous for use in Department workplaces, so refer to "Guidance Sheet 3: Prohibited and Restricted Chemicals" to help identify any such chemicals in your store so you can arrange for their disposal through a certified chemical removal company. It is worth noting that this process has become more complex compared to earlier times, and I will address this topic in a future article.

**Another valuable resource** available to both government and private schools is the Australian Science Teachers Association's "ASSIST" - Australian School Science Information Support for Teachers and Technicians - website. Of particular relevance to this article, take note of their Chemical Management Handbook, which provides a comprehensive list of chemicals commonly found in schools, as well as the formulas, CAS numbers,

user groups, descriptions, solubility information, physical data, and guidance on spill response, storage, disposal and first-aid measures. Science Assist also provides resources on chemical registers, manifests, safety data sheets, and risk assessments. An annual subscription is required to access most information, but the wealth of knowledge provided makes it well worth the investment. Moreover, users have the opportunity to seek guidance from experts by submitting questions for answering.

**An additional expert you can consult**, known for his exceptional assistance with all things chemical waste, and with extensive industry experience, is Michael Pola from Envirostore. He is well-versed in all aspects of chemicals and takes a particular interest in serving schools. Michael frequently conducts sessions at LABCON and is available for regional LTAV meetings on request, providing training and advice on various chemical-related topics. Furthermore, Envirostore's website contains a wealth of helpful information with a section written especially for schools. You can call Michael direct on his mobile 0419 566 129.

**For those desiring further education and training** opportunities, I would like to highlight some options available:

Firstly, the Laboratory Technicians Association of Victoria (LTAV) offers a mentoring program for new laboratory technicians, led by our esteemed President, Geoff Gleadall. For more information on this program, please contact Geoff via email: [president@ltav.org.au](mailto:president@ltav.org.au)

Additionally, various certificate and diploma courses related to laboratory techniques can be pursued at TAFES, universities, and through private RTO's.

The Gordon Institute offers the MSL40118 Certificate IV in Laboratory Techniques that includes elective units covering topics such as preparing practical science classes and demonstrations, standardising and using solutions, and performing aseptic techniques.

LTT (Laboratory Technician Training Victoria) offers Certificate IV and Diploma courses with Science Technician (Schools) specialisation available to workplaces.

Lastly, in regards to training, here are some **short courses** available:

Chemwatch offers a course known as 10895NAT – Chemical Management Course (along with several other organisations providing similar training.) The cost for the Chemwatch course is around \$450, but is often advertised at a special rate.

Australian Training Solutions offers a certified Chemical Handling Course for approx. \$49 that can be completed online with an average duration of 40 minutes.

Lisa J Stevens & Associates offers several short courses, including a 1 day course on Chemical Safety in School Laboratories.

Workplace Chemistry offers Chemical Awareness and Spill Training with WHS Regulations, at a cost of approx. \$88.00. This comprehensive course spans 2 to 3 hours and covers a wide range of topics concerning chemicals.

Although I cannot personally guarantee the quality of the mentioned providers, it is worth noting that these courses are certified.

Undoubtedly, there are numerous other training providers to choose from, and by conducting a little bit of research, you can find one that best meets your needs.

More to come in a future article.....!



# LABCON 2023

**Dates**



Thursday 23 November – Registration, Exhibition, Conference sessions/workshops, Dinner.

Friday 24 November – Registration, Exhibition, Conference sessions/workshops.



# Wimmera Region Lab Tech PD

Report by Jodie Pignataro, Country Liaison Officer

The Wimmera Lab Tech PD was held at Ararat College on 13th September 2022.

Our host for the day was Donna Lavery. The day started with morning tea and a general catch-up chat. We hadn't seen each other since last year's PD so lots to catch up on.

Daniela and Phillip, from SSA, started with a presentation on the Merge cube. They brought several with them for us to play with. Donna and I already had a merge cube each but neither of us knew how to use them properly, so this was very useful.

We then moved on to Science Origami. Everyone got the chance to have a go at making a model from the anatomy group of models. As you can see below, we were all having a terrific time cutting and folding.



Everyone moved on to lunch, of course. A lot more chatting occurred during and after lunch. Discussions were had about LTAV, LABCON, OHS, and the issues with being a lone lab tech and isolated both within the school as well as in the country.

This discussion segued nicely into our next presenter. This was Mary Jones, and she did a presentation that covered having a positive mindset, well-being, and some useful tips and tricks.

I would like to thank Donna, Ararat College, Daniela and Phillip, SSA, Mary, LTAV, and Pat (my son) for the brownies (we can't have a Wimmera PD without Pat's brownies- yes, they are that good!), and LTAV for a successful regional PD.

- Jodie

WEEK 6-10 November 2023

#STARweek

Science Technician Appreciation & Recognition Week



# Microbiology PD - 2 May 2023

Report by Marcia Rogerson, St Mary's College

Mitchell Moore from Casey Tech School in Berwick emailed invitations for laboratory technicians to attend a Microbiology Technique session.

The afternoon was facilitated by Peter Ball, former proprietor of Southern Biological Services.

The session was aimed at beginners and those that needed a refresher in their microbiology techniques. I enjoyed the hands-on experience, working with like-minded people and revising my aseptic techniques. Casey Tech teaching laboratories are new, architecturally designed spaces, with modern décor, and the latest scientific equipment.

Thank you to Mitchell Moore for organising this invaluable learning opportunity.

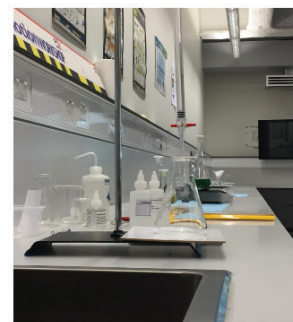


## TRAINING COURSES

- Chemical Safety in School Laboratories (1 Day Course)
- Safety in Laboratories and Laboratory Design and Construction Standards Explained. (3 day course)
- Risk Management and Risk Assessment Explained
- Ergonomics and Manual Handling (1/2 day)
- OHS Leadership for Managers & Supervisors

## TECHNICAL SERVICES

- Inspections and Investigations
- Review of Management Systems
- Advice on Personal protective equipment
- Risk Assessments
- Safety Policies and procedures



# SCIENCE WEEK 2022 @HORSHAM COLLEGE

Report by Jodie Pignataro

The theme for science week was 'Glass, more than meets the eye'. Although Horsham College usually does a Science Extravaganza (last one was in 2019), due to the uncertainty of restrictions we decided to stay in 'school'.

We had a long list of ideas as we had already started brainstorming for the extravaganza. We threw heaps of ideas around and settled on some ideas that were not going to be extra work for me, YAY!! Teachers did the disappearing glass demo and encouraged students to participate in the scavenger hunt.

The scavenger hunt was glass facts and Horsham College Science information. Do you know how fast a crack in glass travels or what frequency is needed to shatter a wine glass? Something I didn't expect you to know is that the Horsham College's Bearded Dragon's name is Newton! We had winners from every year level and they won a variety of prizes.

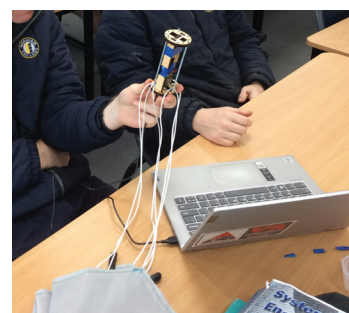
The Year 8 students were lucky enough to have visiting artist Zlatko Balazic and teacher John McKee to set up an interactive STEM light show. This light show incorporated Science, Maths, Engineering, and Art. The machine was engineered so that when the students interacted with the sculpture, it produced a sound and that was translated into a computer image. The students were able to interact with the sculpture using their hands, percussion brushes, steel wool and many more props! This was open at lunch for all to see! It was a big hit, with overheard quotes, 'this is so cool', 'it's magical' and more statements of awe.

Zlatko is a qualified engineer and built the sculptures from everyday materials in his lounge room. I have attached some photos so see if you can see the salad bowls, the plastic stool from Kmart, candle holders and picnicware.



The Year 11 physics students had Victorian Space Science Education Centre (VSSEC) visit to complete the CanSat program. The CanSat program is a canned satellite initiative they developed with the Australian Space Agency, which has so far seen 2000 participants nationwide. This hands-on experience is where students were introduced in the Engineering Design Process that incorporates electronics, computer programming, remote sensing, and data analysis to make a simulation of a real satellite.

The students were guided by Mark, from VSSEC, to create the CanSat out of a laser cut chassis made from plywood, sensors and a parachute. They then used their devices to program their model using coding. They tested the satellites by dropping them from a great height, delivered by a drone Mark bought along with him. They could then analyse the data collected by their models.



Some of our year 7's classes had the opportunity to create water rockets with Emma, also from VSSEC, to look at the forces and engineering involved. They build the rockets using everyday materials, water bottles and an air pump. They got to see them fly in between the rain! We were also lucky as Emma left us 3 rocket launchers that we can use with other classes.



I realise that the VSSEC activities weren't really related to the Science Week theme of 'Glass', but the students were engaged and we celebrated science in general. It was a good compromise on having an Extravaganza and as already stated a lot less extra work for me.

Jodie Pignataro  
Horsham College

## LABLINES TRIVIA

1. How many teeth does an adult human have?
2. What are the 3 layers of the Earth called?
3. True or False: Mass and Weight are the same.
4. What is the rarest Blood Type?
5. On what part of the body would you find the Pinna?
6. True or False: Sound travels faster through water than through wood.
7. Which has a longer Small Intestine - a Herbivore or a Carnivore?
8. True or False: Trees produce more Oxygen than the Oceans.
9. Which planet completes one whole rotation in just 10 hours?
10. True or False: Bamboo is the fastest growing plant in the world.
11. True or False: A hard-boiled egg will easily spin, while a raw egg will only wobble.
12. This measurement - approximately 6 feet - is used to measure the depth of water. What is it called?



[Answers page 23]




# RECOGNITION FOR SCHOOL SCIENCE TECHNICIANS


## Take your career to the next level

Our comprehensive programs are tailored specifically for the education sector and delivered by a team of dedicated training staff, committed to nurturing your skills and expanding your knowledge.

- Employer-supported training pathways
- Workplace-based delivery
- Industry-experienced trainers
- Two nationally recognised qualification options:



**MSL40122 Certificate IV in Laboratory Techniques**  
Designed for laboratory technicians and assistants working full or part-time in a variety of education settings.



**MSL50122 Diploma of Laboratory Technology**  
Suitable for senior technicians who already hold a Certificate IV in Laboratory Techniques or equivalent.

**\$0 enrolment fees**  
for citizens and permanent residents of Australia or New Zealand\*

\*This training is delivered with Victorian and Commonwealth Government funding. We encourage individuals with disabilities to access training subsidised through the Skills First program. Enrolment under Skills First will impact access to further government supported training. The student tuition fees as published are subject to change given individual circumstances at enrolment.

Contact our friendly team to enquire about your eligibility for fully subsidised training!

**Marie Tabone, Industry Engagement Manager**  
**0437 956 058**  
[marie.tabone@ltd.edu.au](mailto:marie.tabone@ltd.edu.au)

LabTech Training Victoria Pty Ltd | RTO 22545  
Level 1/85 Buckhurst St, South Melbourne VIC 3205  
[ltd.edu.au](http://ltd.edu.au) • 1300 588 588 • [info@ltd.edu.au](mailto:info@ltd.edu.au)



# LTAV

Laboratory Technicians' Association  
of Victoria

By Lab Technicians for Lab Technicians

89 Burwood Road  
Suite 150  
Hawthorn VIC 3122  
www.ltav.org.au

## LTAV PUBLICATIONS 2023

The following laboratory reference manuals are available from LTAV:

**BIOLOGY REFERENCE MANUAL, 2013:** \$35.00 for digital [USB] and black & white hard copy combination. This REVISED handbook contains information on biological techniques, reagents, stains and culture media commonly used in secondary schools. Dale Carroll, Ritva Fazio, Sarah Daniele and Wendy Hurlle have updated the earlier version by Dale Carroll, Ritva Fazio, Jeannene Bradbury and Marg Rubans of the original authors of: Jenny Kopsidas, Rita Poole, Jean Stokes and Maya Wagner.

**PHYSICS REFERENCE MANUAL, 2013:** \$35.00 for digital [USB] and black & 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 by Geoff Gleadall (Dip.App.Sci.):** \$35.00 for digital [CD] and black & white hard copy combination. A comprehensive guide for the beginning and experienced Laboratory Technician in all aspects of the chemistry laboratory.

**LABORATORY MANAGEMENT DATABASES by Geoff Gleadall Dip.App.Sci. [Digital – CD], Version 2, 2009:** \$35.00

### LTAV PUBLICATIONS TAX INVOICE & ORDER FORM

ABN 96 439 156 002

Name: \_\_\_\_\_  
School: \_\_\_\_\_  
Address: \_\_\_\_\_ Postcode: \_\_\_\_\_  
Phone / Fax: \_\_\_\_\_ Email: \_\_\_\_\_

Publication	Price (each)	Quantity	Subtotal
Biology Ref Manual 2013 Digital [USB] + Hard copy	\$35.00		
Physics Ref Manual 2013 Digital [USB] + Hard copy	\$35.00		
Chemistry: a Ref Manual for Lab Technicians 2008 Digital [USB] + Hard copy	\$35.00		
Laboratory Management Databases 2009 Digital [CD]	\$35.00		
Postage (per item ordered)	\$4.00 per unit		
<b>Goods will not be posted until payment has been processed.</b>			
Prices are inclusive of GST		<b>TOTAL</b>	

### Payment

#### Payment By Direct Deposit

#### Payment By Cheque

<b>Account name:</b> Laboratory Technicians' Association of Victoria <b>BSB:</b> 063 532 <b>Account No:</b> 1040 1068 <b>Bank:</b> Commonwealth Bank of Australia <b>REF: Reference payment with Surname or School Name</b> <b>Email remittance to Andy Baful or post with this form.</b> publications@ltav.org.au	<b>Payable to:</b> Laboratory Technicians' Association of Victoria  <b>Post with order form to:</b> LTAV Inc 89 Burwood Road Suite 150 Hawthorn, Victoria 3122
---	---

# Your LTAV Regional Representatives 2023

## Ballarat Region

Vacant

## Dandenong Region

**Leonie Leishman**

Cranbourne East Secondary College

Tel: 03 5990 0200

E: leonie.leishman@education.vic.gov.au

## Eastern/Maroondah Region

**Simone Martyn**

Bayswater Secondary College

Tel: 03 8720 7555

E: simone.martyn@education.vic.gov.au

## Geelong Region

**Dale Carroll**

Geelong College

Tel: 03 5226 3136

E: dale.carroll@geelongcollege.vic.gov.au

## Gippsland Region

**Debra (Debby) Butler**

Lavalla Catholic College (Kildare Campus)

E: butldeb1@lavalla.vic.edu.au

## Hume Region

**Claire Stock**

Myrtleford P-12 College

Tel: 03 5752 1174

E: claire.stock@education.vic.gov.au

## Kew Region

**Marcia Rogerson**

St Mary's College

Tel: 03 9529 6611

E: mrogerson@stmaryscollege.vic.edu.au

## Loddon/Campaspe/Malleee Region

**Jenny Cain**

Moama Anglican Grammar School

Tel: 03 5480 5900

E: jcain@moamagrammar.nsw.edu.au

## Mornington Region

**Ilya Glinin**

Monterey SC

Tel: 03 9781 7700

E: ilya.glinin@education.vic.gov.au

## Nilumbik/Banyule Region

Vacant

## North & North-West Region (2 reps)

**Mary L Jones**

Keilor Downs College

Tel: 03 9365 8000

E: mary.jones@education.vic.gov.au

**Andy Baful**

Copperfield College

Tel: 03 9307 5558

E: andy.baful@education.vic.gov.au

## Otway Region

Vacant

## South Yarra/Moorabbin Region

**Christine Nolan**

Kilvington Grammar

Tel: 03 9578 6231

E: nolanc@kilvington.vic.edu.au

## Sunraysia Region

Vacant

## Warnambool Region

**Leanne Baxter**

(retired)

Tel: 0437 746 986

E: austybaxta62@gmail.com

## Wimmera/Horsham Region

**Jodie Pignataro**

Horsham College

Tel: 03 5381 7148

Mob: 0423 819 539

E: jodie.pignataro@education.vic.gov.au

### Trivia Answers:

1. 32 2. Crust, mantle, core 3. False 4. AB negative 5. Ear 6. False 7. Herbivore 8. False 9. Jupiter 10. True 11. True 12. Fathom

# Laboratory Technicians' Association of Victoria 2023 Committee



## **PRESIDENT & POLICY OFFICER**

**Geoff Gleadall**  
(retired)  
Mob: 0438 638 589  
E: president@ltav.org.au



## **VICE PRESIDENT / RELIEF LIST**

**Mary Jones**  
Keilor Downs College  
Tel: 03 9365 8000  
Mob: 0412 950 330  
E: mary.jones@education.vic.gov.au



## **SECRETARY**

**Sheree Baker**  
William Ruthven SC  
Tel: 03 9462 2177  
Mob: 0424 908 796  
E: sheree.baker@education.vic.gov.au



## **TREASURER**

**Lynette Baker**  
Assumption College  
Tel: 03 5783 5170  
Mob: 0418 373 412  
E: lynette.baker@assumption.vic.edu.au



## **PUBLICATIONS OFFICER**

**Andy Baful**  
Copperfield College  
Tel: 03 9307 5558  
Mob: 0421 788 109  
E: andy.baful@education.vic.gov.au



## **LTAV WEBSITE ADMINISTRATOR**

**Maeve Wild**  
Mount Lilydale Mercy College  
Tel: 03 9375 4022  
E: mwild@mlmc.vic.edu.au



## **SAFETY INFORMATION OFFICER / LABLINES DISTRIBUTION OFFICER**

**Dr. Radhika Iyer**  
Mallauna SC  
Tel: 03 9784 3422  
E: iyerrad@gmail.com



## **METRO LIAISON OFFICER**

**Deborah Sun**  
Waverley Christian College  
Tel: 03 8765 7762  
E: sun.d@wcc.vic.edu.au



## **LABLINES EDITOR / ANIMAL ETHICS LIAISON**

**Jenny Emery**  
Koo Wee Rup SC  
Tel: 03 5977 1444  
Mob: 0413 276 737  
E: jennifer.emery@education.vic.gov.au



## **NATIONAL NETWORKS COORDINATOR**

**Dale Carroll**  
Geelong College  
Tel: 03 5226 3136  
Mob: 0415 283 742  
E: dale.carroll@geelongcollege.vic.edu.au



## **COUNTRY LIASON OFFICER**

**Jodie Pignataro**  
Horsham College  
Tel: 03 5381 7148  
Mob: 0423 819 539  
E: jodie.pignataro@education.vic.gov.au



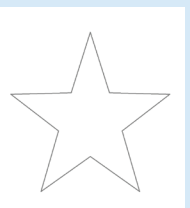
## **LIST-SERVE ADMINISTRATION**

**Kellee Ballard**  
Emerald SC  
Tel: 03 5968 5388  
E: kellee.ballard@education.vic.gov.au



## **MEMBERSHIP OFFICER**

**Simone Martyn**  
Bayswater SC  
Tel: 03 8720 7555  
Mob: 0400 802 259  
E: membership@ltav.org.au



## **SETA REPRESENTATIVE**

**Marcia Rogerson**  
St Mary's College  
Tel: 03 9529 6611  
E: mrogerson@stmaryscollege.vic.edu.au



## **GENERAL COMMITTEE**

**Glenn Condon**  
Westbourne Grammar School  
Tel: 03 9731 9444  
Mob: 0410 574 968  
E: condog@westbourne.vic.edu.au



## **GENERAL COMMITTEE**

**Rosy Mullapudi**  
Mazenod College  
Tel: 03 9560 0911  
Mob: 0420 809 292  
E: mullapudi@mazenod.vic.edu.au

Please feel free to contact any member of your committee with any queries or concerns. Members are always welcome at committee meetings. Please contact the Secretary to confirm time and location of next meeting if you wish to attend. 2023 MEETING DATES: 11 July, 5 Sept, 24 Oct, 23 Nov (AGM), 1 Dec.