

STATIC

The Newsletter of the Science Teachers Association of Tasmania.



March 2018, Volume 1



stat.
Science Teachers
Association of Tasmania Inc.



STAT on social media.

STAT Council Members

President & ASTA Council Representative Rosemary Anderson DOE Curriculum Services, Hobart	STAT PO BOX 1112 Sandy Bay TAS 7006 STATcouncil@gmail.com
Vice President & ASTA Council Representative Jenny Dudgeon Sustainability Learning Centre, Mt Nelson	Treasurer & Membership Officer Jill Reade Education Faculty, University of Tasmania, Launceston
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Operational Secretary & TSTS Co-ordinator Doug Grubert Launceston Church Grammar	Awards Officer & CONSTAT 2018 Convenor Ann Burke Hellyer College, Burnie
Digital Communications & National Science Week contact Denise Devitt Hobart	University of Tasmania Faculty of Science Engineering & Technology Representative Jeannie-Marie LeRoi University of Tasmania, Hobart
PL and TSTS Committee Chair John Bardenhagen East Launceston Primary	General Councillor Fiona Phillips Newstead College, Launceston
STATIC Editor Joe Kelk Riverside Primary School and University of Tasmania, Launceston	Volunteers needed to develop skills in: minute taking, email communications, website, social media, newsletter editing, assistants to other roles, and general councillors to keep STAT running.

STAT AGM NEEDS YOU!

All members of the Science Teachers Association Tasmania are invited to the Annual General Meeting. New members are particularly welcome and volunteers are needed for STAT council positions – please consider nominating to help keep the association running.

WHERE: Hellyer College, Burnie (same day and place as CONSTAT 2018)

WHEN: At 12:15 pm, Saturday 24 March 2018

WHO: All STAT members and friends are welcome

Are you interested in being more involved with STAT and its work? Consider nominating for STAT council. Fill out a nomination form (next page) and come along.

Come along, share your thoughts and be in a draw to win a bottle of Tasmanian wine.

STAT Council Nomination form 2018-2019

Return form to **Rosemary Anderson** by email:
rosemary.r.anderson@education.tas.gov.au by 23 March 2018.

Contact details for nominee:

Name

School:

Address:

Ph:

Fax:

Email:

The below section can be completed at the AGM on 24 March 2018:

I wish to nominate.....for the position
of..... on the 2018/19 STAT Council.

Please include signatures, and also print names in block letters.

Nominated by:

Seconded by:

I am willing to accept the above nomination.....
(signature of nominee)



STAT is a member of the Australian Science Teachers Association with benefits for our members.

Please NOMINATE – your association NEEDS YOU!

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President's Report - An exciting 2018!

By Rose Anderson, STAT President

We have all heard it before; the world needs more scientists and STEM occupations for the growth and sustainability of our economy! Science education has never been more important in order to equip our students with the practical skills and attitudes that will be valuable in these careers and to develop transferable skills such as team-work, resilience and analysis



Having seen such a busy 2017 we continue to maintain our commitment to providing support to the science education profession.

Just to mention a few of the developments we are excited to bring to you in 2018:

- **CONSTAT 2018 in Burnie (23-24 March):** an exciting and thrilling program has been lined up with engaging keynotes and a variety of workshops and excursions catering for K-12 teachers and laboratory technicians.
- **Tasmanian Science Talent Search:** In 2017 we had over 1100 entries involving over 1400 students from all sectors of education. 33 of these entries were invited to participate in BHP Billiton Science and Engineering Awards. Congratulations to Caitlin Roberts from Friends School who got second prize in the Research Investigation section of this national competition and is now going to represent Australia in the global competition in the United States! (There will be more on Caitlin and her research investigation in the next edition of STATIC).

The theme for 2018 is ***Game Changers as Change Makers***; some professional learning opportunities will be provided early in 2018, particularly in the areas of Video Presentation and Technology. Watch the [STAT website](#) for details of opportunities in your area.

- **STAT Science Teaching Mentoring Program:** we are excited to introduce this valuable program aimed at improving the quality of science education in the state. This came about in response to requests from our members. So, if you are an early career teacher or new to science teaching and would like a mentor; please fill out an application form. If you are an experienced teacher (currently teaching or retired) and would like to be a mentor, please fill out an expression of interest. Forms will be available on the [STAT website](#) soon.

These are only some of the exciting developments we have for 2018. Check the STAT website and social media frequently for new developments as they are updated

In order for us to continually try and provide appropriate services to our members, we need to hear from you. So, if there are any projects and/or topics you would like us to address, please contact us.

We hope you have a wonderful 2018 we are looking forward to working with you throughout the year.

From the Editor

By Joee, STATIC Editor

It's survey time! Last survey on STAT communications and STATIC was in 2015 as we moved to an electronic format. But we need to check in with our readers and members and find out how we can best communicate with you. Please take 5 minutes to complete the survey and you could win!

Fruit fly is the latest invasive species to be found on Tassie shores, and we've reprinted the biosecurity update for schools. And we're excited to have an article from Kristi, one of the founders of the great website *Insects of Tasmania* that should help you identify a lot of your minibeasts.

TSTS has a new face in 2018 – get to know Doug and give all your fond farewells to Marj as she retires from STAT. STAT also needs some new council members, so please consider nominating and help keep the organisation moving. As you can see from the contents, we have another bumper edition – keep those submissions coming!

Next Deadline: 10 April 2018, for publication in May. editorstatic@gmail.com

Survey Says Win \$50 Book Voucher

STAT wants to find out how we could communicate better with science teachers and members. Please help us find out more about how you receive our information and news. Complete the survey by 31 March 2018 and go into the draw to win a \$50 book voucher from the bookstore of your choice.

Only 10 questions and takes just 5 minutes.

Copy this link to your browser:

<https://www.surveymonkey.com/r/YH5CBFL>



Get Social with STAT

STAT has a number of social media accounts – jump on and connect with other science teachers, ask for help and find out the latest news and information on PL and more.



[STAT CHAT Group](#)



[Twitter](#)



[Facebook Page](#)



[Instagram](#)

Biosecurity Alert – Fruit Fly

Important biosecurity information for schools, parents and students

9 FEBRUARY 2018

Fruit fly has recently been detected at sites in Tasmania.

The Department of Primary Industries, Parks, Water and Environment (DPIPWE) has formally declared Control Areas to restrict movement, transport and supply of fruit and vegetables that host fruit fly to reduce the risk of transporting fruit fly to different areas.

These biosecurity measures also apply to schools within the declared control area.

Fruit fly can physically damage fruit and some vegetables, and significantly restrict trade of fresh fruit and vegetables into valuable markets in Australia and overseas.

If left unchecked, the presence of fruit fly in Tasmania could impact negatively on the state economy.

Tasmanians and visitors are encouraged to be fruit fly aware and to be vigilant about these pests.

I live in a Control Area and my children go to school just outside the Control Area, can they take fruit and vegetables to school?

Fruit cut up into fruit salad and sliced homegrown tomato in your sandwich is fine. However, you should not transport whole home grown host produce from your property. This is to reduce the risk of transporting fruit fly to different areas. Whole host produce are a greater risk of spreading fruit fly because they could be rotten inside due to the presence of fruit fly.

Which fruits and vegetables are ‘host fruit’?

Common host produce includes, apples, apricots, blackberries, capsicums, cherries, figs, grapefruit, mulberries, nashis, nectarines, oranges, peaches, pears, plums, raspberries, strawberries, tomatoes.

Whole host produce is a greater risk of spreading fruit fly because they could be rotten inside due to the presence of fruit fly.

Minor host produce includes lemons, limes, quinces, pumpkins and walnuts. For more information and a full list of host produce visit <http://dipwe.tas.gov.au/fruitfly>

Fruit Disposal

All host produce is required to be double bagged. Place produce inside a plastic bag, seal that bag then place inside another bag and seal, this can then be disposed of in general waste bins

Produce must not be composted or disposed of in greenwaste as fruit fly larvae can survive the composting process.

If disposed in large skip bins we ask that the lids be kept closed and it is arranged that they are emptied regularly.

School Kitchen Gardens in the Control Area

All fallen host produce must be picked up and double bagged as described under fruit disposal instructions.

No fruit can be sold or given away. It can only be used on site for cooking, be frozen or disposed of.

I live outside a Control Area and my children go to school within the Control Area. Can they take fruit and vegetables to school?

Host produce from outside the Control Area can be taken within the Control Area. This will not spread fruit fly as long as it is either consumed or properly disposed of in the Control Area. However, host produce cannot then be moved from school to outside of the Control Area.

Are there any penalties for disregarding the Control Area restrictions?

People are required by law to report promptly any signs of fruit fly. Penalties may apply under the *Plant Quarantine Act 1997*.

If you think you have produce infested with fruit fly, please call Biosecurity Tasmania on 6165 3774.

More information

For the latest fruit fly information visit <http://dipwe.tas.gov.au/fruitfly>

Map on following page.

Please check the website regularly for full information sheet and the most recent updates:
<http://dipwe.tas.gov.au/fruit-fly>

Development of the Insects of Tasmania website

By Kristi Ellingsen, Insects of Tasmania

Having taught science to high school students since 1992, mainly at [The Friends' School](#) in Hobart, I had been increasingly concerned about how students are becoming distanced from the wildlife under their noses. During 2007 we had our Year 7 students join in the [Millipede Mayhem](#) citizen science project as a homework task. One of the students commented that it was an interesting activity, as they had never explored their courtyard before! This sat in the back of my mind. The days of kids entertaining themselves with a bug catcher seemed to be long gone.



I started taking invertebrate macro photographs as a hobby. I was fascinated by the variety of insects I found. Unlike birds, reptiles, mammals and even marine invertebrates, Tasmania didn't have many user-friendly insect field guides to help identify my finds. I posted my photos to [Flickr](#) to try and lure identifications from the global community. Scientists and other enthusiasts, including Tasmanian fly guru Tony Daley, helped me and provided encouragement. I began to develop a strong folio of completely disorganized but identified insects.

After many years of this happy snapping I realized that I could use the photos to help with environmental education of my students and, maybe even the community. My logic was that if you give people a readily accessible resource, their eyes could be opened to what is around them. If people were aware, or even cared about the little things this would benefit the big things too!



Tony Daley and I agreed to put our photos together as a website which could be easily accessed by people completely new to identification, right through to entomologists. We had enough species organized to make the site public in late 2012. Since then [Insects of Tasmania](#) has grown larger and now has more than 1000 named species. It has attracted a solid audience from across Australia and to a lesser extent around the world. We hope that it gives the interested kids and adults a launching pad to nurture their interests, and makes the insect haters have second thoughts before they reach for the Mortein. Hopefully it will also be a good resource for your classrooms.

Thanks Marj! A Legend Retires from STAT

By Jill Reade, STAT Treasurer

2018 marks a watershed year for STAT. Dr Marj Colvill who has been our TSTS Director (2016-17) and PL Coordinator (2013-17) is retiring to branch out into other interests. While her work in the roles involving TSTS and PL has been amazing, Marj is also stepping down from STAT council and her contribution in that arena has been above and beyond.



Marj has been a part of STAT and council for much of her teaching and post-teaching career. Marj has been President of STAT and [President of ASTA](#). She has been part of the organising committee of at least three CONASTAs held in Tasmania and has been a convenor or helper at more CONSTATs than can be counted. Marj has worked in most roles of STAT council and where she has not actually done the role herself, she has provided support to the people in the role. [TSTS](#) flourished under her directorship, as she believed utterly in its core goals of involving students in worthwhile and enjoyable Science activities. She also built the STAT professional learning program from a single well-run conference to a well-rounded offering of PL opportunities over the year.

Along the way Marj won the PM's prize for excellence in Science teaching in Primary schools. This award encouraged her to redouble her efforts to improve Science teaching within the state and she chose to do this through STAT. Beyond a list of roles and positions (and awards!) that Marj has filled for STAT she has been so much more.

In a sense Marj has been the holder of STAT's history and its glue, which encouraged council to stay together as a group over the years. She has held a consistent vision for what STAT might achieve and where it might lead. This vision has contributed in no small part to many of the things which [STAT council, a small group of volunteers](#), has been able to accomplish in Science education in Tasmania.

In just one illustration of her vision, twelve years ago Marj proposed that STAT award a medal to celebrate the contribution made by a nominated teacher of Science within the state. The [Winifred Curtis medal](#), which, by name, celebrates an outstanding woman of Tasmanian and Australian Science, has been awarded each year to a teacher who is teaching Science within the state and has achieved excellence in this capacity. The presentation of this medal is supported by the [University of Tasmania SET Faculty](#), through sponsorship that Marj originally obtained.

Marj is already a life member of STAT and ASTA, so we cannot make her a life member twice but we wish to say: ***We know you want to move on to developing some of your other interests, but please know that you will be missed and we thank you as a community of Science Teachers for the outstanding work you have done for Science in Tasmania.***

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A New Era for TSTS – in Very Safe Hands

By Marj Colvill, TSTS Director 2003-2005 & 2016-2017

STAT is delighted to welcome our new [Tasmanian Science Talent Search](#) Director, Doug Grubert. Doug began his work in this new role in early January and is really enthusiastic about growing TSTS into the future, working with both students and teachers to encourage and support engagement in science education.

A little bit about Doug

He has 15 years of teaching experience, where he taught predominantly in Tasmania but also has a couple of years working in Rockhampton, Queensland. He has worked in both the public and independent education systems and although high school trained, has taken on regular science classes for each grade from Prep to Year 12.



Science is his main educational passion but he also loves working in gifted and talented educational programs, encouraging students to think outside the square and make the most of available opportunities. Currently Doug is working at [Launceston Church Grammar School](#) where he has been for the past 6 years.

He also has a passion for travel and the great outdoors, both of which he accommodates in an educational capacity. Indeed, he regularly takes senior secondary students from around [Tasmania to Nepal and is currently leading a yachting expedition to Ross Sea in Antarctica.](#)

Some changes already.

Doug's first task was to bring the management of TSTS processes into the 21st Century – you will have noticed in the [information booklet, already available on line](#), that the intention was to introduce an online registration of entries. This process is close to being finalised, and although there won't be much movement while Doug is on the high seas, it will be up and running in plenty of time for the registration of themed entries. This should make both the management of student entries and the harvesting of data more efficient for STAT and will have lasting implications into the future. Indeed, Doug is to be congratulated on his work on this aspect so far – I am sure you will all appreciate his efforts.

On a very personal note, I wish Doug all the best with the challenge of the Director's role. I trust he will have as much reward from it as I have and I look forward, very much, to seeing this major STAT initiative growing and supporting more and more students to have great educational experience with Science.



CONSTAT Scholarship - New Member Prize Draw

STAT is pleased to offer an opportunity to a new member of STAT to attend CONSTAT 2018.

Each [new member of STAT \(individual or school\)](#) will be entered into a random draw for this wonderful Professional Learning opportunity at [CONSTAT on Saturday 24 March in Burnie](#).

No application is necessary inclusion in the draw will be automatic on payment of membership and the new member will be advised soon after the closing date.



CLOSING DATE for new member registrations - March 14th.

Science and Engineering Challenge 2018

The [Science and Engineering Challenge](#) is a national outreach program aimed at changing student's perceptions of science and engineering, through team-based competitions that bring up to 256 students from 8 different schools together on each Challenge day. By participating in the Challenge students see that science and engineering involves creativity, innovation, problem solving and team work. The Challenge aims to inspire students to consider a future career in science and engineering by choosing to study subjects such as maths, physics and chemistry in Years 11 and 12.

Registrations for the 2018 Tasmanian series have already closed, due to the phenomenal response from the call for registrations. All positions have been filled, with schools on a waiting list. Without the support from Rotarians, Engineers, University students, local businesses and other willing people, the Challenge could not run. This year, well over 2000 hours will be given by volunteers to ensure the 2018 Tasmanian Challenge series is a success.

The 2018 Tasmanian Challenge Series will be held on the following dates in these regions:

Hobart: Wednesday 23, Thursday 24 and Friday 25 May 2018.

Burnie: Monday 28 May.

Launceston: Thursday 31st May and Friday 1 June.

Science and Engineering **Tasmanian Super Challenge**, Tuesday 5 June in **Launceston**

If your school missed out, and you are keen to ensure you are notified when registrations open later this year for 2019, please contact Susie.Haley@utas.edu.au, the Science and Engineering Challenge Tasmanian State Coordinator.

http://www.utas.edu.au/science-engineering-technology/community-outreach/schools/the-science-and-engineering-challenge/the-science-and-engineering-challenge/_nocache



CONASTA Scholarship – Apply Now

STAT is pleased to offer one Tasmanian Teacher of Science and STAT member a Scholarship to attend CONASTA 67, which is to be held at the University of Sydney from 8-11 July.

What is CONASTA? Hosted annually in the states and territories, CONASTA 67 is the national conference of the Australian Science Teachers' Association (ASTA).

The event includes:

- A broad program of professional learning workshops and presentations for primary and secondary teachers and school laboratory technicians.
- An opportunity to visit some of Sydney's premier science and research facilities.
- Time to enjoy the exciting, friendly atmosphere as hundreds of passionate educators from around Australia come together for an unparalleled professional development opportunity.

Target Audience for the scholarship: Teachers of Science who are individual or school members of STAT.

Further CONASTA Details: <http://asta.edu.au/conasta>

The scholarship: A financial bursary, worth \$1000, sufficient to cover early-bird registration and some associated costs.

Application details: Are you a teacher of science in primary, secondary or senior secondary classrooms? Are you a current (2018) member of STAT (individual or school member)? If so, you are invited to apply - include the following.

- A brief overview about you and your teaching (mention the school and level at which you teach). An outline of how you think attending CONASTA will aid your development as a teacher of Science.

The application need only be short; maximum length 1 x A4 page of normal print. Dot points may be included.

- Current curriculum vitae, including a school-based referee.
- Agreement to write a short article (2x A4 pages) for our on-line publication, **STATIC**, about your experiences at CONASTA 67 (within 3 months of your attendance).

Entries: Email entries to Ann Burke, STAT awards officer at: aburke@mrc.tas.edu.au



CONSTAT – Overview of Conference Program

STAT's annual conference for science teachers will be held at Hellyer College, Burnie, on Friday 23 and Saturday 24 March. The theme is *Game Changers and Change Makers*. The [Full CONSTAT Program is online](#) – but the following provides a short overview.

Note: registration is cheaper for STAT members. For 2018 membership: <http://stat.org.au/membership/>

Friday 23 March

Fieldtrips – (see below for more information)

Friday evening: Dinner

6 – 7pm: pre-dinner drinks at **The Point, Burnie**

7 – 10.30 pm: DINNER (provide details of special dietary needs in advance)

Dinner Speaker: Dr Gurion Ang, Entomologist and Science Lecturer, UQ

Saturday 24 March

8.30am – 9.00am: Conference Registration

9.00am – 9.15am: Official Opening and Welcome to Hellyer College.

9.15am – 10.00am: **Keynote 1: Address: Prof Deborah Corrigan**, Faculty of Science Education, Monash University.

10.00am – 10.30am: Morning tea and trades viewing

10.30am – 11.15am: **WORKSHOP 1**

11.30am – 12.15pm: **WORKSHOP 2**

12.15pm – 1.00pm: LUNCH, AGM and trades viewing

1.00pm – 1.45pm: **Keynote 2: Associate Professor Sharon Fraser** (UTAS), lecturer in science education / scientist.

2.00pm – 2.45pm: **WORKSHOP 3**

2.45pm – 3.30pm: Closing gathering, nametag return and trades gift distribution

Bookings are online – copy this link into your browser: <https://www.trybooking.com/UAYT>

CONSTAT Speakers



Professor Deborah Corrigan



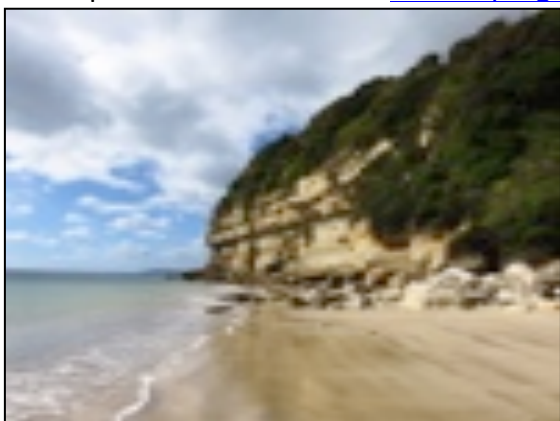
Associate Professor
Sharon Fraser



Doctor Gurion Ang

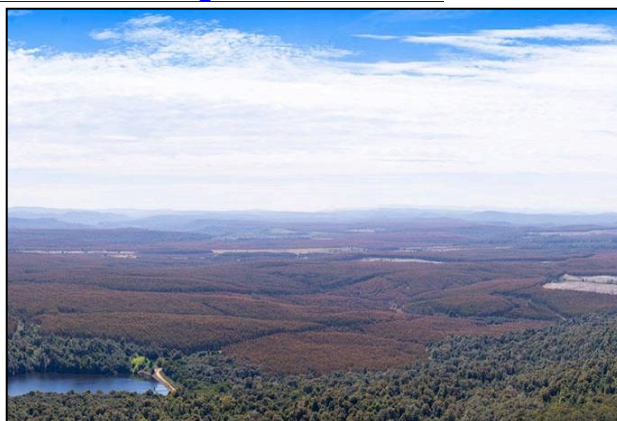
CONSTAT Field Trip Options

Field trips are suitable for all – [see full programme for booking details and costs.](#)



Excursion 1 - A walk through geological time on the NW Coast:

Philip Sanson, Teacher Science Education Programme (TESEP), Tasmanian Coordinator.



Excursion 2 - Trees in the landscape – from seed to writing paper:

Darcy Vickers: Forestry Education Foundation Inc.



Excursion 3 - Hellyer Road Distillery:

Cost includes tasting.



Excursion 4 - Elphinstone Group

Choose from one or all four locations.



Excursion 5 - Tasmanian Bush Food at Murnong Wild Food Garden

Rees Campbell will explain the historical culinary and medicinal uses of the plants.



National Science Week – Schools Theme & Dates



Schools theme - Game Changers and Change Makers

In 2018 we will be focusing on scientists, engineers, technologists, mathematicians, designers and innovators of the past and present (and not just the famous ones!) who have and are making great changes to the way we live. We are taking inspiration from three celebrations in 2018:

- 200th anniversary of the publication of Mary Shelley's *Frankenstein* (genetic engineering, biotechnologies, prosthetics, bionics, genetic modification, brain enhancement and ethics)
- 40th anniversary of the birth of the first test tube baby (genetic engineering, biotechnology, nanotechnology)
- International Year of the Reef (coral reefs and the scientists who study them)

Important dates:

26 Feb - Applications for National Science Week school grants open. NB - We have an addition \$24,000 to add to the grant pool!!!

March 2018 - School ePoster provided. Note: in 2018, there will not be a mail out to schools. The school poster will be a digital file that can be downloaded and printed.

April 2018 - Teacher resource eBook available.

Stay tuned to the ASTA website for more details: <http://asta.edu.au/programs/natscienceweek>

STEM X Academy – A Review

By Amanda Hughes, St Marys District School.

I feel incredibly fortunate to have attended the [STEM X Academy](#) during the January holidays. If I could say one thing about the academy - it is the best professional development I have attended. What made this PL unique is the fact that it was outside of the school year. This allowed me to focus solely on my own learning and how I can implement that in my planning. It has enthused me for the coming year and I am excited to use the assortment of activities and strategies in my classroom. I look forward to sharing my experiences with my fellow teachers, enriching the learning outcomes of the students at [St Marys District School](#).



STEM X was broken down into two different tasks at two locations, [Questacon](#) and [CSIRO](#). At Questacon, we spent our time in the Makerspace, which was hands-on and creative. We went through the process of prototyping, with the aim being to create as many objects as possible out of a diversity of materials. The idea is quantity over quality - that the more you create, the greater your outcomes. This set me in a mindset of creating without fear. So

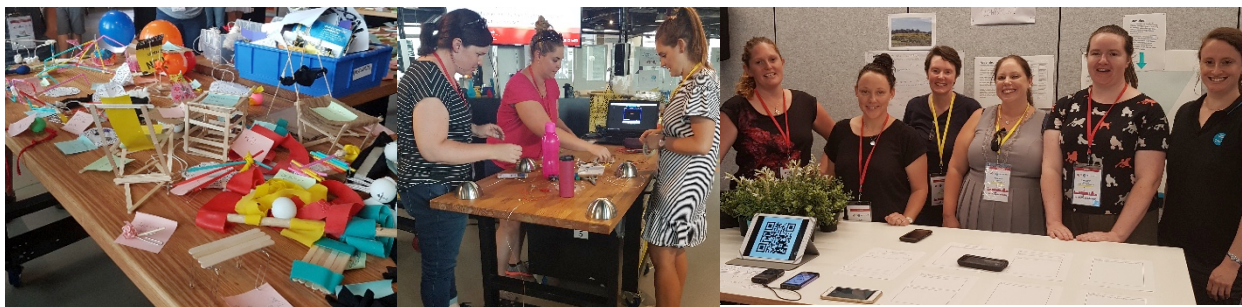
when we moved onto a marble run type project, we jumped head first into the task without inhibition.

We created game consoles using [MakeyMakeys](#), with our objective being groups working together to get through arcade games. We created moneyboxes to optimise the amount of money collected. There was also time to identify issues within our own school community and create solutions in small groups or individually. Our group sought to improve recycling of waste, creating interactive bins for recycling, upcycling, compost and chicken scraps.



At CSIRO, we focused on the issues that our students will be tackling when they leave school. In small groups, we went through the process of creating questions based on a passage of text. Our team's text covered a diversity of many issues ranging from climate change to antibiotic and herbicide resistance. Developing one single question was problematic, but after an hour or two, we decided on pest management and the impact weeds have on crop production. The process we used highlighted the challenges our students experience and the modifications required to ensure student success. As a team, we worked together to create a solution to our problem; cleaning the soil before crops are planted through a process called [soil solarisation](#). Our next challenge was to create resources that could be used in the classroom. On the final day, each group had a stall where they presented their questions, solutions and resources.

The trip also incorporated a range of science experiences, including the Graham Walker Show, Questacon, [Mount Stromlo Observatory](#) and for the secondary teachers, the Geocenter. These additional activities ignited our curiosity and gave us wonderful resources and lesson ideas. At the formal dinner, we were able to relax and socialize with other teachers and STEM X collaborators, the discussions being varied and exciting.



I encourage everyone to apply to the STEM X Academy in the future. I have been able to enrich the learning opportunities of my students, increasing my students' success in questioning and following their own inquiries. I have a number of fabulous resources I am prepared to share with staff. I am passionate about supporting the student centred and problem solving approach to learning that St Marys District School is striving to foster. Our collective goal? To ensure that we support students to actively participate in an ever changing world and work force.



Young Tassie Scientists - Free school incursions

*By Dr Adele Wilson, Schools Outreach
Project Officer*

Bring young, enthusiastic scientists into your classroom this August to celebrate National Science Week! Our team of engaging, enthusiastic early-career researchers bring you 20-minute interactive presentations suitable for various ages (K-12). In August 2017 we visited 83 schools and spoke with over 8,000 Tasmanian students!



No school is too remote – and visits are completely free thanks to support from National Science Week and the University of Tasmania. A typical visit takes 60-80 minutes and can cater for up to three classes (approx. 30 students per class). Each class will meet two or three Young Tassie Scientists, who will share their love for science with your students – whether it's chemistry, astrophysics, zoology, medical research, Antarctica, or even insects – their enthusiasm is infectious and their stories highlight research happening right here in Tasmania.

This long-standing National Science Week program was a finalist in the 2017 Tasmanian Volunteering Awards, and our Young Tassie Scientists have received recognition with Tall Poppy Awards, Southern Cross Young Achiever Awards, Tasmanian Young Australian of the Year Awards – and more!

Registrations for free YTS visits will open in Term 2
at www.youngtassiescientists.com



Have you done the survey yet?

Take a break now and go into the draw to win a \$50 book voucher! How easy is that!

Only 10 questions and takes just 5 minutes.

Copy this link to your browser:

<https://www.surveymonkey.com/r/YH5CBFL>



STEM X Academy - A personal account

By Kristy Tidey, Invermay Primary School

What a privilege it was to attend [STEM X Academy](#) 2018, a five-day residential program held in Canberra for primary and secondary teachers. This inspiring program connects teachers with expert researchers, scientists, innovators and educators, and was developed by ASTA (Australian Science Teachers Association), Questacon and CSIRO. I was incredibly lucky to receive a generous scholarship from [Stile Education](#); one of many highlights was the opportunity to meet Stile's founder Dr Alan Finkel, now [Australia's Chief Scientist](#).



STEM X will be a game changer for me as a teacher. In 2017 I started my own passion project to create a sustainable STEM program in our school and my STEM X experience is going to help to take it to the next level. It has given me the tools, the access to expert advice, a network of passionate teachers and the confidence to step up as a leader.

When your professional development is kicked off with liquid nitrogen, exploding teddies and marshmallow bazookas, you can be fairly certain that you're in for a ride. [Dr Graham Walker's](#) demonstration was highly entertaining and educational; I'm still trying to figure out what the risk management would look like to do this with my students!

At CSIRO, we looked at sustainable futures and teachers worked in small groups along with scientists and STEM education experts to create an inquiry based project on a real-world future scenario. In my group we all had different perspectives and ways of looking at the problem. It really pushed me out of my comfort zone and it was a valuable reminder that this is something we often ask of our students. Our group worked with [Dr Jacqui Watt](#), a business innovation facilitator with an impressive list of qualifications. I was really inspired by her career narrative and I can't wait to have my students connect with her. We also worked with [Raghvendra Sharma](#), a PhD student working in [CSIRO Agriculture and Food](#) on breeding for wheat rust resistance in Australia. Five of us were lucky enough to be shown around the laboratory to have a closer look at his amazing work. Our school will be participating in the Futurist's Fair this year, and I am looking forward to connecting my work from CSIRO with this event.



I was in my element during the two days of hands-on makerspace sessions at Questacon's [Ian Potter Foundation](#). We were guided through a process to plan STEM projects to take back to our schools, and also had the opportunity to be creative and to problem-solve. We warmed up with an engaging protostorming activity and worked in teams to complete challenges with a 'fun factor', including building trigger tracks using LED lights and a donation box that would encourage people to put more money in. A highlight for me was using MakeyMakeys to redesign a controller for arcade games, and judging by the noise level and laughter in the room, others felt the same. I am excited to take back these ideas and opportunities for my students and colleagues. We also had a fabulous evening after hours at Questacon, exploring and playing with the interactive exhibits before being treated to the coolest dessert, using liquid nitrogen to freeze gin and tonics.



Just when I thought the STEM X Academy experience couldn't possibly get any better, we spent an evening at Mt Stromlo Observatory handing tiny satellites worth about \$2 million dollars. [Dr Ben Greene's](#) work using lasers to deal with space junk was fascinating and I'm still finding it difficult to sleep after [Dr Brad Tucker's](#) thought-provoking presentation on "everything".

Weeks after my STEM X Academy experience I am still buzzing with excitement and enthusiasm. The Alumni group provides a constant hum of ideas and inspiration; I have found my tribe and it has quickly become my most constantly checked Facebook group! Being able to connect with passionate teachers and experts who are leaders in their STEM fields and STEM education is an amazing opportunity. I would recommend it to any teacher wanting to be challenged and enlightened that they [attend the STEM X Academy](#) next year.

Our kids deserve the very best that we can give; STEM X has given me a guide-map and helped me to clarify the bigger picture. I have a vision of where I aspire our school to be and I am excited about the learning journey my students are about to embark on this school year. I can't wait to see where this inspiration and experience takes us all; the best is yet to come.

2018 Festival of Bright Ideas – Date Saver

Schools Day Friday 17 August.
Public Saturday 18 August.

Princes Wharf
Hobart
10am-5pm.

Find out more:
<http://festivalofbrightideas.com.au>

FESTIVAL OF
BRIGHT IDEAS

Science for the curious and creative

Saturday 18 August 2018

Princes Wharf 1, Hobart
10am-5pm
Friday 17 for schools

> Volunteering at FoBI 2018



NAAE Conference in Launceston – A Review

by Madeleine Scott

From the 7-11 January 2018 the biennial [National Association of Agricultural Educators \(NAAE\) National Conference](#) was held in Launceston for the first time in 15 years. This conference was proudly hosted by the [Tasmanian Agricultural Educators Network \(TAEN\)](#), with the theme being 'Diversity and Innovation in Agriculture and Education'. 130 delegates from every state and territory of Australia, together with a couple from the USA, enjoyed a stimulating and exciting week of world class keynote speakers, interactive workshops, industry tours and networking events.



The conference dinner was a highlight with the speaker, [Michael McQueen](#), discussing intergenerational differences whilst being entertained by an 18 piece big band. The industry tours showcased the incredible diversity of Tasmanian agriculture with 15 different tour destinations, including cherries, wine, agroforestry, dairy, lavender, sheep, vegetables, just to mention a few!



Delegates were able to discover new resources and gained a better understanding of how to confidently use and implement them in the classroom. An example of this was the keynote address by [Tim Gentle](#) who explained how to incorporate immersive education through the use of virtual and augmented reality. Responses from delegates were very positive, with 72% of post-conference survey respondents saying the biennial NAAE conference plays a significant role in helping them deliver best-practice educational experiences.

The 2020 conference will be hosted by NSW and will be an excellent opportunity for teachers of agriculture to learn more about current and future educational directions.

For more information regarding the conference or membership of TAEN, visit www.taen.org.au



ConocoPhillips Science Experience – Burnie, Launceston, Hobart

By Dr Adele Wilson, Schools Outreach Project Officer

Hands-on science workshops for grade 9/10 students – November/December 2018. Grade 9 & 10 students keen on science and engineering spend a whirlwind three days at University of Tasmania campuses for the ConocoPhillips Science Experience programs at the end of the school year.



In December 2017, the Science Experience attracted 103 keen students from 30 different public, private and catholic schools (8 in the North West, 8 in the North, 13 in the South, one interstate, as well as home educated students).

The Science Experience is a three-day program of science activities for students who have an interest in STEM careers. Students participate in a range of hands-on science and engineering activities held on campus under the guidance of university researchers, taking part in laboratory sessions, fieldwork, tours of facilities, and team challenges.

Registration will open for the 2018 programs in Term 2 – see www.scienceexperience.com.au for details. Please note: Numbers are strictly limited, and programs will book out – please register no more than 4 students per school – extra students may be able to register closer to the date if places are available.

Upcoming Science Experience program dates for Tasmania:

- Burnie on 27-29 November 2018
- Launceston on 4-6 December 2018
- Hobart on 11-13 December 2018

“Highlights for me were meeting like-minded people and talking to scientists working in the fields I am interested in studying. Thank you for running this program, it was an incredible experience. Would definitely do it again” 2017 participant, Hobart

“We really enjoyed the past 3 days, we learned a lot about science and future careers. Our hosts were knowledgeable and entertaining! It was a lot of fun, I’d love to do it again next year!” 2017 participant, Burnie.



Tasmanian Youth Science Forum - 17-19 April 2018

3 days of hands-on STEM activities at the University of Tasmania (Sandy Bay campus) for Grade 11/12 students interested in STEM careers

The [Tasmanian Youth Science Forum](#) (TYSF) is held at the University of Tasmania's Sandy Bay campus for Year 11/12 students who are interested in finding out more about courses and careers in science, engineering, mathematics, technology, and health. It will be held in the first week of the school holidays (17-19 April 2018).



Students will spend three days getting an insider's perspective on university life and have the opportunity to discuss future course options with staff and students. Participants will be able to connect their study with future careers, experience real life research projects, meet and speak with young researchers from a variety of areas and visit leading research institutes and laboratories.

The program will include a variety of research areas; zoology, medical science, chemistry, earth sciences, physics, plant science, Antarctic studies, agricultural science, mathematics, marine science, robotics and computer sciences, depending on availability. Excursions will be included to two or more of the Menzies Institute for Medical Research & the Rodda Pathology Museum, the UTAS radio telescope & Grote Reber Museum, and the Institute for Marine and Antarctic Studies.

More details:

Tasmanian Youth Science Forum

Held at the University of Tasmania, Sandy Bay campus (Hobart)

Tuesday 17th – Thursday 19th April 2018 (approx. 10am-5pm each day)

Registration cost is \$95, and places are strictly limited!

You can [find more information and register online.](#)

Registrations will open in March and close on 10 April or when fully booked.

The registration cost covers program costs, catering, and off-campus excursions during the program (*please note that whilst accommodation is not provided, we may be able to help make suitable arrangements if required*).

WasteNot! STEM DESIGN Challenge

The City of Hobart is supporting [AAEE](#) to host a [design brief challenge](#) to encourage Tasmanian students to make a marketable product from non-hazardous waste (rubbish). Why? Tasmanians create 636,342 tonnes of waste each year, which is a huge amount!



This waste might come from constructing or pulling down buildings, factories or from peoples' homes, to name a few sources. About 35% of wastes are recycled or composted. That leaves 0.8 tonnes or 800 kgs per person that we put into landfill (tips), every year.

We believe we should try to reduce, re-use and then recycle our waste. If we did, we could probably reduce, re-use and recycle more wastes (and more types of wastes) than we do now. We need to 'rethink' the way we use resources especially since creating waste often contributes to global warming and climate change – think about all the things we use and how many resources went into making them.

See full entry details online: [WasteNot! STEM DESIGN Challenge Design Brief](#)

Who can enter?

Students in Tasmania between 10-21 years of age are encouraged to enter by creating a marketable prototype.

WasteNot! Design Challenge objectives:

- to divert waste from landfill;
- to encourage innovative thinking and design in young people – (10-21 year olds);
- to encourage young people and the wider community to think about waste as a possible resource, especially those wastes which are not currently being recycled;
- to encourage young people to imagine creating a marketable product using a previously unwanted material, running a business and learning a new range of useful, transferable skills.

The Prize

The winner will receive \$1000 worth of mentoring from a product developer and/or business person. The mentor will help the winner to develop and market their product.

Send entries to the Sustainability.Learning.Centre@education.tas.gov.au by **5pm on 30th April 2018**. Questions can also be sent to the Sustainability Learning Centre via email.

The winning prototype will be displayed in the *Art from Trash* exhibition at the Long Gallery, Hobart from May 20 to 1 June 2018.

The winner may be asked to attend functions associated with the prize, and speak briefly about their product.

Earthwatch – Daintree PL Expedition

Earthwatch Australia is offering discounted places for teacher professional development on the [upcoming Daintree's Hidden Coastline expedition](#).

On the expedition, you will have a unique opportunity to assist scientists as they assess and protect the mangroves fringing Daintree's rainforests and Australia's Great Barrier Reef – generating scientific data which will be used to develop a national strategy for more effective management of valuable coastal tidal wetlands faced with climate change and local human pressures.



You will also be able to share your experiences with your students, through blogs and forums on the [TeachLive website](#) and other online tools such as Skype.

Please note: You do not have to have a science background or science training to participate. Training in research techniques will be provided on the expedition, so you just need to be passionate about science – and about sharing this passion with your students, colleagues and education networks!

Participating teachers will:

- Spend a week researching tropical ecosystems with world-class scientist Dr Norman Duke from the [Centre for Tropical Water and Aquatic Ecosystem Research](#) at James Cook University
- Learn field research techniques, many of which you can use with your students when you return to your school.
- Receive training in the the TeachLive website, which you can then use to share the experience with your students.
- Be provided with information about other citizen science programs, and how you can use these to engage your students on an ongoing basis after the expedition

WHERE: Daintree River, North Queensland

WHEN: 6 – 12 May 2018 (Arriving Sunday 6th and departing Saturday 12th May)

DURATION: 7 days (5 school days)

WHO: Science and geography teachers from around Australia are encouraged to participate

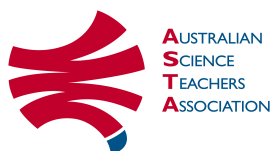
COST: \$995 (discounted from the standard price of \$1195)

Please call Earthwatch on (03) 9016 7590 or email earth@earthwatch.org.au if you have any questions or you would like book a place on the expedition!



School laboratory safety - a vital issue

The following media release has been [posted on the ASTA website](#):



23 November 2017

MEDIA RELEASE: School laboratory safety: a vital issue

A recent incident in a NSW High School, where six students were hospitalised for chemical exposure, highlights the fundamental importance of laboratory safety in all Australian schools.

The Australian Science Teachers Association (ASTA) and the Science Education Technicians Australia (SETA) strongly advocate for school laboratory safety. They recognise that supporting teachers and school laboratory technicians to safely manage hands-on activities will allow students to conduct real-life experiments. This will allow schools to deliver one of the key objectives of the National STEM School Education Strategy 2016-2026, endorsed by Australian Education Ministers as well as implementing the science inquiry component of the Australian Curriculum.

In 2014, ASTA developed an innovative, national advisory service called Science ASSIST. Science ASSIST was established to address a critical need—teachers of science and school laboratory technicians require good quality technical support to enable them to deliver opportunities for meaningful, practical activities for their students. The aim of the service is to improve the safety in the delivery of practical work conducted in school science lessons and to improve the general safety of school science laboratories.

“Educational research and teacher experience all affirm that practical experience in experimental work brings science alive for students. Laboratory learning environments encourage much sought after positive learning behaviours such as independence, critical thinking and problem solving. Laboratory experience is an essential element in increasing students’ enthusiasm for science, and in improving Australia’s performance in international benchmarking in science learning,” said Geoff Quinton, President, Australian Science Teachers Association.

Science ASSIST is the only service of its kind in Australia. It is a dynamic portal that provides school science educators with information, resources and consistent, well-researched, authoritative technical advice on school science laboratory safety and procedures in line with relevant state and territory requirements (<https://assist.asta.edu.au/>). The Q&A function is heavily subscribed with over 350 questions asked by educators in the school education sector.

This national initiative is currently supported by the Australian Government Department of Education and was developed to complement the service, technical advice and resources for school laboratory safety provided by each of the state and territory education jurisdictions.

It is currently freely available to ALL Australian schools from ALL education jurisdictions and sectors in EVERY state and territory.

A hallmark of Science ASSIST is the dynamic nature of the content and the capacity to respond to emerging national school science safety issues. For example, our response to Asbestos in mineral kits where the Science ASSIST team was instrumental in the issue of a national health and safety alert by the Heads of Workplace Safety Authorities.

Science ASSIST needs to be a part of every school STEM educators ‘tool kit’.

Geoff Quinton
President
Australian Science Teachers Association

Margaret Croucher
President
Science Education Technicians Australia

For further information contact:
Vic Dobos, ASTA Chief Executive Officer, 0434 611 155

Please visit Science Assist for your lab safety requirements: <https://assist.asta.edu.au>

Partial Scholarship – Early Years Bush Connections



Expression of Interest: 2018 Early Years Bush Connections Course Cert 3 Partial Scholarship

Partial scholarship for Early Years Bush Connections Course Cert 3 available for a STAT member Early Years educator- Kindergarten to Year 2 (Your school can be a STAT member).

Full Registration: \$570

STAT to contribute partial registration: \$285

Venue: Sustainability Learning Centre, Mt Nelson, Hobart

Dates: Thursday: April 5, Friday: April 6 and Saturday: April 7 inclusive

Required:

1a: Name:

STAT membership number:

(Contact the STAT membership officer to check if needed)

School name and year group taught:

1b: 250 words - how your learning and students learning would be enriched through participation in the Bush Connections.

1c: 250 words: how employing a Bush Connections pedagogy aligns with the science curriculum, early years learning framework and DoE's strategic goals for learners.

1d: Principal agrees to application.

Your Name:

Signature

Principal's agreement - School will cover any relief costs etc incurred.

Principal Name:

Signature

EOIs due by COB March 9th 2018

Email to stat@gmail.com

Early Years Bush Connections

Early Years Bush Connections

For the first time in Tasmania, join stand out Australian early years nature educators Sam Crosby and Fran Hughes for a three day Bush Connections course.

Sam is Lead Nature Educator from Sydney's Centennial Parklands and instigator of the internationally acclaimed Ian Potter Children's Wild Play Garden.

Fran is Head Teacher & Course Co-ordinator of Bachelor Early Childhood Education and Care, TAFE NSW – Randwick College.

An Australian first developed by Sam and Fran, Early Years Bush Connections is the only recognised qualification for educators who wish to use the Australian bush and beach as their learning spaces.

A course using European Forest Kindergarten's pedagogy, strongly aligned with the Early Years Learning Framework, influenced by Reggio Emilia thinking and using risk benefit analysis, all contextualised to the Australian bush.



3 Day Workshop

- Thursday 5 April
- Friday 6 April
- Saturday 7 April
8.30am, for 9am til 4pm

Venue

Sustainability Learning Centre
50 Olinda Grove
Mt Nelson

Registration

\$520* ECET Members
\$570 – Non-member
Inc morning tea and lunch
BYO coffee cup and water bottle

Register via ecetsouth@gmail.com

For further information, contact

Jenny Dudgeon

0438 283 872

sustainability.learning.centre@education.tas.gov.au

TAFE NSW

