

## Science Teachers' Association of Victoria Inc

### STAV Annual Report

1st July 2017 – 30th June 2018

#### President's Overview

##### Vision

Our vision for professional learning in science for all Victorian schools:

*"Is to develop a science community growing together through collaboration, professional learning supported by conferences, workshops and events, partnerships with industry and the wider community through STEM and other innovations."*

##### Mission

Our Mission is:

*"To represent and advance the collective voice of science educators that will shape and influence policy in all aspects relating to science education. We are committed to offering a range of resources and services that will promote quality science teaching and learning. We provide opportunities for all students to become inspired, engaged and excel in activities that promote scientific literacy including: science talent search, science drama and BHP Billiton national science and engineering awards."*

STAV is a non-profit organisation with its core business being membership and supporting Science Victoria, an entity established for the purpose of promoting science and science education. Science Victoria manages the following STAV activities: Conferences/Professional Learning, Science Talent Search and Science Drama, publications and other resources from STAV Publishing.

STAV is governed by a voluntary council which includes the following office bearers; President (Soula Bennett), Vice President and Treasurer (Joanna Alexander), Vice President (Alexandra Abela) and Secretary (Michael Rosenbrock). Council meets at least 4 times throughout the year as well as conducting electronic communication and is supported by a paid Secretariat

STAV is a member of the Australian Science Teachers Association (ASTA), a federation of national science teacher associations. All activities conducted throughout the financial year are aligned with the 2016 – 2020 STAV Strategic Plan.

STAV draws its membership from educators across the Primary and Secondary sectors, Pre-Service teachers, researchers, retired teachers and individuals with an interest in science education.

The 2017 STAV Councillors have worked as a cohesive team representing the collective voice of science educators across the state and nationally at ASTA Council, round table discussions, steering committees, council meetings and conferences. STAV Council membership is as follows: Soula Bennett (Quantum Victoria), Joanna Alexander (Blackburn High School), Alexandra Abela (Penleigh and Essendon Grammar School), Michael Rosenbrock (Reginal Network Leader Wodonga Senior Secondary College) Yuvadee Patchon (Lab Tech Quantum Victoria), Jacinta Greer (Psychology Network Leader Ryton Girl's School) and Fiona Trapani (Lab talk Editor Mercy College).

I would like to acknowledge the work and effort undertaken by STAV Council throughout the reported period and send my sincere thanks to Jacinta Huntsman (Greer) who will not be renominating as she will be on family leave. Jacinta was instrumental in initiating the VCE Psychology

workshops, which have been added to STAV's extensive suite of professional learning activities. I would also like to thank the STAV Secretariat led by Annette McKenna and Suzanne O'Shannessy, Science Victoria.

### **STAV Publications**

Quarterly publications of the STAV journals Lab talk and Let's Find Out (LFO) occurred during the reported period. I would like to acknowledge the Editing team comprising of Fiona Trapani (Lab talk) and Peter Hope (LFO).

Contact was published monthly and informed STAV members of professional learning opportunities and updates on conferences, workshops, events and resources.

The Trial Exams continue to be a valuable resource for VCE Science students. Trial Exams were issued on time to all schools purchasing the resource. We have continued to offer both a mid-year and end of year exam.

The Science Coordinator's and Beginning Teacher's Handbooks is currently under review.

### **Conferences and Workshops**

STAV members continue to have access to the largest number of professional learning opportunities offered by any Science Teachers' Association in the country. The following conferences were hosted during the reported period:

**STEM conference** at Quantum Victoria, Friday 30<sup>th</sup> August 2017 attracting 133 delegates, presenters and exhibitors. Feedback continues to be positive.

**STAVCON 2017** Friday 1<sup>st</sup> December La Trobe University, attracting 351 delegates, presenters and exhibitors.

**VCE Chemistry** Conference Tuesday 14th February 2018 La Trobe University attracting 460 delegates, presenters and exhibitors.

**VCE Biology** Conference Wednesday 13th February, La Trobe University attracting 393 delegates, presenters and exhibitors to the conference.

**VCE Physics** Conference Friday 16th February La Trobe University, attracting 340 delegates, presenters and exhibitors to the conference.

**VCE Psychology** Workshop 7th June Melbourne Museum attracted 54 delegates and presenters receiving once again overwhelmingly positive feedback.

**Lab Tech** Conference Friday 8th June Quantum Victoria, attracted 102 delegates, presenters and exhibitors.

**CONASTA 66** was hosted in Hobart at the University of Tasmania and attracted delegates from across Australia. The robust program provide a diverse group of workshops and keynote speakers.

### **Physics Workshops**

Dr Christina Hart delivered one Physics workshops for Primary and Secondary teachers at STAV House and has continued to receive positive feedback.

### **Primary Workshops**

Helen Silvester delivered a Primary Science/STEM Workshop at STAV House which was fully subscribed and received very positive feedback.

### **STAV STEM Study Tour**

The inaugural STAV Study Tour in partnership with WorldStrides was self-funded and brought together 22 science teachers, pre-service teachers, scientists and science enthusiasts from across Victoria. The group departed Melbourne on the 29th December 2017, arriving in London and ended the tour on the 15th January 2018 in Prague. The purpose of the study tour was three-fold: to celebrate the human endeavour of Science and STEM, to establish a collegiate network and to celebrate the establishment of the Science Teachers' Association of Victoria 75 years ago on the 17<sup>th</sup> July 1943. Planning is underway for the next Study tour.

The itinerary included:

#### **London**

The Royal Society, The Science Gallery, The Royal Observatory Greenwich, Faraday's Lighthouse, The Natural History and Science Museums.

#### **Cambridge**

A guided tour of the campus provided an overview of the university, the Scientific 'Giants' who studied and taught there and also visits to the Cavendish Laboratory, Pembroke College, King's College and The Eagle Bar.

#### **Bletchley Park**

Tour of facility including Alan Turings' room and work and the machine which deciphered the German Enigma machine.

#### **Paris**

Guided tour of the Pasteur Institute which were the preserved living quarters and laboratory of Louis Pasteur, giving us an insight into the scientific research of one of science's great contributors, a visit to the Marie Curie Exhibition and mausoleum, a guided tour of the Science & Industry Museum, a visit to the Eiffel Tower and to Versailles.

#### **Geneva**

A guided tour of the CERN facility gave us access to the core of the Large Hadron Collider some 92 metres below the Earth's surface and also an insight into the exciting research and global collaborations.

#### **Prague**

We were greeted by a delegation from Mendel University taking us to two of the university's campuses and looking at the early work by Gregor Mendel and also the current research undertaken by the university. There was a guided tour of the Medieval City with a visit to the Astronomical Clock.

I would like to thank and acknowledge the professionalism of Jason Johnson and the other WorldStrides staff who supported us during the planning, organisation and on the tour.

## **VCAA**

Updates on the new VCE Study Designs along with the new Victorian Curriculum were provided to all delegates attending STAVCON and the VCE Conferences and workshops. Teachers had access to information via online sessions, face-to-face sessions and at the STAV Conferences.

## **Pre-Service Teachers**

We continue to engage with Pre-Service teachers and inform them of the benefits of joining STAV as a graduate teacher, including having access to a community and a collective voice that supports and influences the teaching and learning of science education both at a state and national level.

## **ASTA**

STAV has representation on ASTA Council with the representatives being the President and one of the Vice Presidents. The STAV representatives have raised the importance of ASTA having a prominent national presence to ensure representation in important initiatives such as the Australian Curriculum, STEM in schools and other projects funded by the Federal Government in which Victorian teachers can access. STAV representatives participated in two face-to-face Council Meetings (October and July) and 4 teleconferences throughout the year. ASTA is moving towards a new governance structure which was presented at the July Council meeting in Hobart. The ASTA Capitation fee constitutes approximately half of the STAV membership fee.

## **Social Media**

STAV Facebook and Twitter accounts have continued to promote events and share information to STAV Members and the wider community. I would like to thank the excellent voluntary support provided by Carlie Alexander and this role is now undertaken by the STAV staff. Our Social Media Liaison Officer, Carlie Alexander who has facilitated this communication with members.

## **DET**

STAV has secured a grant of \$250,000 across 2018 – 2021, and will deliver professional learning activities that address 'Challenging stereotypes in STEM – professional learning for Victorian science, STEM and careers teachers'. This is a significant grant that positions STAV well financially and places STAV at the forefront of addressing an issue that has received state and national attention. Planning has begun to develop a suite of professional learning activities aligned with current STAV activities and will include new initiatives that will be delivered to teachers throughout Victoria. The Grant was signed off in June 2018 with the first of the activities, the 2018 STAV Science Leaders' Conference was delivered on the 27<sup>th</sup> July and focused on challenging stereotypes, conscious and unconscious biases in Science and STEM.

## **Science Talent Search (STS)**

The STS Management and Committee and the STS Coordinator Janice Teng have continued to support the STAV Science Talent Search (STS), attracting interest in all categories. Below is a table summarising the student participation.

Experimental Research	Entries received 365
	Total Student Participation 445 ( 312 Female and 133 Male)
Inventions/Engineering	Entries received 71
	Total Student Participation 91 (27 Female and 64 Male)

The theme was 'Future Earth' and there was a total of 3,391 (9% increase from previous year) student participants from 169 (an increase of 9.5% from the previous year). The students, their teachers and families celebrated their achievements during Exhibition Day on 23<sup>rd</sup> October at La Trobe University. Victorian students entering the Investigations and Inventions categories had access to the National BHP Billiton Science and Engineering Awards. Congratulations to our Victorian Finalists: **Investigation** Cassandra Dods, **Engineering** Ashley Cain and Jack Chapman, 3<sup>rd</sup> place winner **Primary Engineering Winners** Lachlan Ray, Rebecca Paratz and Skye Sriratana and **Primary Investigation Winner** Amelia Bartoli.

The STAV nominated teacher finalist for the BHP Billiton Teacher Awards was Adele Hudson from Aitken College who was awarded the National Winner. We congratulate Adele for this excellent achievement.

### **National Science Week**

A total of 38 schools across Australia received National Science Week grants with 6 schools coming from Victoria. The theme was 'Future Earth'.

### **Cyber Games Challenge**

STAV partnered with La Trobe University, Optus, Cisco and Quantum Victoria to deliver the inaugural Cyber Games Challenge for senior students. Students participated in a training day on Friday 18<sup>th</sup> August during National Science Week, with the Final held at La Trobe University on Saturday November 18<sup>th</sup>. The completion attracted students from across Victoria and the winning team was from Northcote High School.

### **Science Drama**

The STAV Science Drama Awards is currently under review.

### **Financial Management**

STAV has registered a modest deficit of \$10,846.00 during the last financial year. The DET grant of \$250,000. This grant has injected much needed revenue and STAV Council is confident that this and our continued strategies to increase membership will place STAV in a viable financial position.

### **Partnerships and Collaborations**

STAV continues to contribute to state and national initiatives and collaborates with the following partners:

Australian Science Teachers' Association (ASTA)

Australian Academy of Science

Australia's Chief Scientist

Australian Catholic University

Australian Institute for Teaching and School Leadership (AITSL)

Australian Technological Sciences and Engineering

Cisco

CSIRO/BHP Billiton (Student and Teacher Awards)

Deakin University

Engineering Australia

La Trobe University

LifeJourney (STEM Pathways)

Optus

Quantum Victoria

Rowe Scientific (BHP Billiton/CSIRO Student sponsorship)

RMIT

Victorian Curriculum Assessment Authority (VCAA)

Victorian Department of Education and Training

University of Melbourne



Soula Bennett

STAV President