



SCIENCE TALENT SEARCH

69

# Bursary Book 2020

Deep Blue:  
innovations for  
the future of  
our oceans



Science Victoria  
Science Teachers' Association of Victoria Inc.





# About the Science Talent Search

The first Science Talent Search was conducted and sponsored by the Science Teachers' Association of Victoria Inc., in 1952. The then Secretary, Mr Hugh McKnight, invited students from all secondary schools to submit a 1000 word report titled 'My Science Project'.

A special judging panel of prominent Scientists interviewed the entrants and awarded 17 bursaries, totalling £380.00 (\$760.00). There were two major bursaries of £100.00 (\$200.00) and £60.00 (\$120.00) respectively, five intermediate bursaries of £25.00 (\$50.00) each with ten other awards, seven worth £10.00 (\$20.00) and three worth £5.00 (\$10.00).

Over the past 69 years, the Science Talent Search has undergone much change. Currently, there are ten Sections in which students can enter: Computer Programs, Games, Science Photography, Posters - Scientific Wall Charts, Working Models, Inventions, Experimental Research, Creative Writing, Video Productions and Class Experimental Research Project for primary students.

The Search is open to all students enrolled in Years Foundation to 12 in both Government and non-Government Schools.

## The Science Talent Search has three broad aims:

1. To stimulate an ongoing interest in the serious study of Sciences by:
  - a) encouraging independent self-motivated project work amongst students of science;
  - b) giving students the opportunity to communicate their achievements to a wider audience;
  - c) according recognition of effort and achievement for their scientific enterprise.
2. To promote the direct involvement of the students in the process of science and its communication.
3. To give the public at large an opportunity to see the quality of work being achieved in Science, by both primary and secondary students.

## Some interesting statistics about Science Talent Search

	2015	2016	2017	2018	2019	2020
Total number of entries	2054	2154	2468	2347	2327	1606
Total number of students entered	2854	3089	3369	3429	3271	1940
Total number of class entries	14	17	14	26	17	3
Total number of bursaries awarded	592	614	704	651	667	443
Total sponsorship for bursary awards	\$29,932	\$42,924	\$36,105	\$36,425	\$35,670	\$36,560
Number of schools entered	153	153	169	173	165	127

## Distribution of Student Awards by Division

	2015	2016	2017	2018	2019	2020
Lower Primary (F-2)	118	142	117	146	95	54
Middle Primary (3-4)	229	293	279	254	222	156
Upper Primary (5-6)	301	457	330	391	266	262
Junior (7-8)	502	629	536	436	417	295
Intermediate (9-10)	185	259	191	153	121	130
Open (11-12)	17	18	25	15	15	12
<b>Totals</b>	<b>1352</b>	<b>1798</b>	<b>1478</b>	<b>1395</b>	<b>1136</b>	<b>909</b>

Awards included in this summary are Major, Minor and Distinction. Distinction Awards are not a Financial Bursary. A more comprehensive report of this year's Science Talent Search will be published in *LabTalk* and *Let's Find Out* - the journals of the Science Teachers' Association of Victoria Inc. If you are interested in entering next year's Science Talent Search, ask your Science Teacher for a copy of the 2021 STS Handbook (available Term 1, 2021) or go to our website: [www.sciencevictoria.com.au/sts/](http://www.sciencevictoria.com.au/sts/)

Edited by: Janice Teng and Mary Donaghy - STS Committee.

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## **STS Exhibition and Presentation Day**

### **Monday 16 November 2020**

**9.00am – 4.00pm**

**Primary Presenter**

**Ms Melanie Mackenzie, Museum Victoria**

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**Secondary Presenter**

**Ms Amy Lezala, Engineers Australia Young Professional Engineer of the Year – Victoria**

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**The Presentation of Awards will be completed by 4.00pm.**

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**A selection of winning entries will be exhibited on a special STS web page for 2020.**

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The above presenters have volunteered to be part of the Science Talent Search Exhibition and Presentation Day and contribute to the success of this day. The students, teachers and the Science Talent Search Committee would like to acknowledge their commitment and involvement in science education.

The Science Talent Search would like to acknowledge the diverse traditional lands on which we are each located, and the traditional owners of these lands.

We pay our respects to all Aboriginal and Torres Strait Islander Peoples, recognising the Elders – past, present and emerging.

*Please note: The Presenters listed were correct at the time of publication. Changes may be necessary due to unforeseen circumstances.*

## **Bursary Book sponsored by**



**BHP Foundation**  
**Science and**  
**Engineering**  
**Awards**

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The Science Teachers' Association of Victoria Inc. and the STS Management of the 69th Science Talent Search are grateful to the organisations who have given generous support to this year's competition, to the STS Committee for their enthusiastic, positive approach, for their co-operation and organisation of the Science Talent Search.

## A very special thank you



Special thanks to Bradley Hogan and Xceed for their work in developing and supporting the STS online presence.

Finally, thank you to all the teachers who volunteered to judge the many projects received. The judges are listed at the back of this Bursary Book.

### The STS Committee

The STS Management extend their thanks and appreciation to the STS Committee members who worked diligently throughout the year to ensure the competition ran smoothly. Committee members are listed on page 41.

### STAV Business Centre

The STS Committee would like to express its appreciation to the STAV Business Centre for their cooperation, understanding and assistance with the organisation of STS throughout the year. They have all given time willingly and have maintained their support for STS.

## A very special thank you

Janice Teng has once again worked tirelessly on this year's STS. Her support for STS is greatly appreciated.



## The Peter Craig School Awards

### Serpell Primary School

*Sponsored by STAV Publishing*

### Holy Rosary School

*Sponsored by STAV Publishing*

### McKinnon Secondary College

*Sponsored by STAV Publishing*

### Presbyterian Ladies' College – Senior School

*Sponsored by STAV Publishing*

## The Hugh McKnight Encouragement Awards

### Syndal South Primary School

*Sponsored by The BHP Foundation Science and Engineering Awards, managed by CSIRO*

### Camberwell Girls Grammar School – Ormiston House

*Sponsored by The BHP Foundation Science and Engineering Awards, managed by CSIRO*

### Viewbank College

*Sponsored by The BHP Foundation Science and Engineering Awards, managed by CSIRO*

### Camberwell Girls Grammar School – Senior School

*Sponsored by The BHP Foundation Science and Engineering Awards, managed by CSIRO*

## A very special thank you

David Trotter has once again worked tirelessly on the STS databases. David's expertise, persistence and unwavering support for STS is greatly appreciated.

# Experimental Research

## Experimental Research - Lower Primary

### Major Bursary - \$70

Name	School	Project Title	Sponsor
Charlotte D'Amore	Paynesville Primary School	What is the Best Glitter - Adhesive Combination?	The BHP Foundation Science and Engineering Awards, managed by CSIRO

## Experimental Research - Middle Primary

### Major Bursary - \$80

Name	School	Project Title	Sponsor
Vikram Biju Sajitha	Doncaster Gardens Primary School	Effect of saline water on seed germination and early seedling growth of lentil seeds	The Field Naturalists Club Of Victoria Inc.
Grace Hallifax	Melbourne Girls Grammar School - Morris Hall	Collect experimental data to build a rubbish sorting robot	Engineers Australia

### Minor Bursary - \$70

Name	School	Project Title	Sponsor
William Gardiner	Our Holy Redeemer School	Making a Home Desalination Plant	Chemistry Education Association
Emma Robinson	Holy Rosary School	What is the impact of climate change on coral?	Catholic Education Melbourne
Aditi Ajish	Syndal South Primary School	Leaf Colour Chromatography Experiment	Quantum Victoria

## Experimental Research - Upper Primary

### Major Bursary - \$90

Name	School	Project Title	Sponsor
Isabelle Alldritt	St Leonard's College - Primary	Don't judge a book by its cover	Engineers Australia
Jessica Morgan	St Leonard's College - Primary	Grow, Grow, Grow!	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Tom Roberts	Paynesville Primary School	Which Sunscreen Provides the Best Protection?	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Elise Orme	Camberwell Girls Grammar School - Ormiston House	Does Bokashi juice, Actizyme or water work fastest to relieve a household pipe blockage?	Biology Teachers' Network Inc.
Isha Prasanth Nair	Syndal South Primary School	Watch What You Wash With! - the pH of different soaps and their effect on human skin	Chemistry Education Association
Naomi Arias	2020 STAV Entry Arias	An Investigation of Water Quality Variables in Selected Locations on the Mornington Peninsula	Chemistry Education Association

### Minor Bursary - \$80

Name	School	Project Title	Sponsor
Jessie Atkins	St Leonard's College - Primary	Parachutes	Engineers Australia
Joshua Finney	St Leonard's College - Primary	Raft buoyancy: what floats your boat?	Engineers Australia
Junlin Yu	St Leonard's College - Primary	Let's get rolling!	Deakin University: Faculty of Science, Engineering & Built Environment
Russell Atkins	St Leonard's College - Primary	Let's get rolling!	Deakin University: Faculty of Science, Engineering & Built Environment
Emilia Nguyen	Holy Rosary School	How Temperature Affects Yeast	Australian Society for Biochemistry & Molecular Biology
Oscar Walliss	Lab Rats Science Club Primary	Chickens on Mars. Can they help humans with agriculture on Mars?	Australian Skeptics
Emily Crunden	Holy Rosary School	What is the Best Insulator?	Catholic Education Melbourne
An Phan			





## Experimental Research - Upper Primary

### Minor Bursary - \$80 (continued)

Name	School	Project Title	Sponsor
Anagh Urs	Serpell Primary School	Coral Bleaching	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Sonara Weerasinghe	Serpell Primary School	Dissolution Rates of Over-the-counter Painkillers	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Marie-Claire O'Callaghan	Methodist Ladies' College - Junior School	Does Warmer Water Affect Marine Life?	Swinburne University of Technology
Usha Nadarajah	Camberwell Girls Grammar School - Ormiston House	What conditions are best for storing bread?	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Henry Prychodzen	Mentone Grammar School - Middle School	The Life of Goldilocks	Australian Skeptics

## Experimental Research - Junior

### Major Bursary - \$250

Name	School	Project Title	Sponsor
Anika Saha	Strathcona Baptist Girls Grammar School - Secondary	The Effect of Plant Cell Membrane Damage in both Acidic & Alkaline Environments	Australian Society for Biochemistry & Molecular Biology
George Teague	Wesley College - St Kilda Road Senior	The effect of watering techniques on plant growth	Rowe Scientific Pty Ltd
Naomi Attalla	Strathcona Baptist Girls Grammar School - Secondary	Comparative investigation of coronavirus cases internationally (multivariate comparison)	The Walter and Eliza Hall Institute of Medical Research
Sidra Khan	Sirius College - Eastmeadows Secondary Campus	Does essential oil infused and dried cotton buds prevent bacterial growth?	Rowe Scientific Pty Ltd
Ruby Lee	Strathcona Baptist Girls Grammar School - Secondary	Cookie Flour Power	Rowe Scientific Pty Ltd
Sudiksha Dand Mathangi Sritharan	Fintona Girls School - Senior Secondary	Which Water?	Rowe Scientific Pty Ltd
Elizabeth Pantazis Angelina Tavlaridis	Fintona Girls School - Senior Secondary	How Does Acid Rain Affect Plants?	Rowe Scientific Pty Ltd
Tilana Jeyaretnam Maggie Little	Fintona Girls School - Senior Secondary	Why Do Wine Glasses Sing?	Rowe Scientific Pty Ltd
Gurnoor Sidhu	Haileybury - Berwick Campus	Whether Spraying Water on Leaves is Beneficial for Plants	Rowe Scientific Pty Ltd
Charvi Shetty	Haileybury - Berwick Campus	Which Frozen Liquids Melt The Fastest?	Rowe Scientific Pty Ltd
Adrianna Kosasih	Avila College	Factors affecting seashell break down	Rowe Scientific Pty Ltd
Oliver Mina Finn O'Donoghue	St Kevin's College - Senior School	The Effect of Freshwater Plant Species on Tank Acidity	Rowe Scientific Pty Ltd

### Minor Bursary - \$180

Name	School	Project Title	Sponsor
Aveline D'Souza Teresa Tran	Sacred Heart Girls College	Pigmentation in flowers.	Rowe Scientific Pty Ltd
Izzy King	Strathcona Baptist Girls Grammar School - Secondary	Short Term Memory Test	Rowe Scientific Pty Ltd
Olivia Graham	Strathcona Baptist Girls Grammar School - Secondary	Which flavour of mentos will create the tallest explosion?	Rowe Scientific Pty Ltd
Sarah Wansborough	Strathcona Baptist Girls Grammar School - Secondary	Effect of Solvent Type on the Removal of Permanent Marker	Rowe Scientific Pty Ltd
Michela Tosolini	Genazzano F C J College	Which climate preserves Bunya Bunya Pine nuts the best?	The BHP Foundation Science and Engineering Awards, managed by CSIRO

# Experimental Research

## Experimental Research - Junior

### Minor Bursary - \$180 *(continued)*

Name	School	Project Title	Sponsor
Ines Brear	Genazzano F C J College	CO2 Enrichment: The effect on plant growth	The Walter and Eliza Hall Institute of Medical Research
Zara Linnane	Genazzano F C J College	Does the way a cupcake looks affect what flavour people taste?	Rowe Scientific Pty Ltd
Sofia Moran	Genazzano F C J College	Which substance keeps fresh cut flowers alive the longest?	Rowe Scientific Pty Ltd
Hannah Courtney	Genazzano F C J College	How much baking powder do quick breads need?	Rowe Scientific Pty Ltd
Arda Anaz Emir Cicek	Sirius College - Eastmeadows Secondary Campus	Does the addition of mango husk powder to soil affect the height of spring onion?	The Walter and Eliza Hall Institute of Medical Research
Ayan Ahmed Junaid Asif	Sirius College - Eastmeadows Secondary Campus	Is biochar beneficial for growing plants?	Rowe Scientific Pty Ltd
Mahnoor Imran	Sirius College - Eastmeadows Secondary Campus	Gum rosin prevents pest growth on plants, but does it harm the plants?	The Walter and Eliza Hall Institute of Medical Research
Frances Chan	Strathcona Baptist Girls Grammar School - Secondary	The Effect of Baking Powder on Muffins	Rowe Scientific Pty Ltd
Sophie Stevens-Williamson	Strathcona Baptist Girls Grammar School - Secondary	To Find out Why Coloured Fabrics Fade in the Light	Rowe Scientific Pty Ltd
Rachel Zhou	Strathcona Baptist Girls Grammar School - Secondary	Relationship Between Colour and Reaction Time	Rowe Scientific Pty Ltd
Cynthia Shi	Strathcona Baptist Girls Grammar School - Secondary	White and Black	Rowe Scientific Pty Ltd
Amy Dickson	Avila College	To discover if there is a relationship between genetics and fingerprint patterns	Rowe Scientific Pty Ltd
Lana Buswell	Hume Anglican Grammar Mt Ridley - Secondary	The effects of different pollutants on the Ph of the ocean	The Walter and Eliza Hall Institute of Medical Research
Linh Duong Justina So	Fintona Girls School - Senior Secondary	Can the Ocean Acidification Problem Be Solved?	Rowe Scientific Pty Ltd
Kabir Gandhi Aaradhy Pruthi	Haileybury - Newlands Campus	Does acid rain effects plant growth?	Rowe Scientific Pty Ltd
Neve McClure	The Hamilton and Alexandra College - Senior	UV protective clothing	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Hannah Croft	The Hamilton and Alexandra College - Senior	Effect of photosynthesis on the intensity of plant pigment.	The Walter and Eliza Hall Institute of Medical Research
Micah Cheung	Haileybury - City Campus Secondary	Can you see with sound?	The BHP Foundation Science and Engineering Awards, managed by CSIRO

## Experimental Research - Intermediate

### Major Bursary - \$350

Name	School	Project Title	Sponsor
Bethany Orme	Camberwell Girls Grammar School - Senior School	Which toilet paper alternative has the least potential to occlude a household sewerage pipe?	Engineers Australia
Eesa Hussain	Sirius College - Eastmeadows Secondary Campus	Does biochar help rejuvenate soil and help boost plant growth?	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Sanawar Shakeel	Sirius College - Eastmeadows Secondary Campus	Does biochar help rejuvenate soil and help boost plant growth?	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Zain Atif Zain Chohan	Sirius College - Eastmeadows Secondary Campus	Cheesy delight: producing the highest amount of curds in cheese using different vinegars	Australian Society for Biochemistry & Molecular Biology





## Experimental Research - Intermediate

### Major Bursary - \$350 (continued)

Name	School	Project Title	Sponsor
Sophia Dadan	Sirius College - Eastmeadows Secondary Campus	Testing the antibacterial properties of various wattles steeped in solutions	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Tooba Irfan	Sirius College - Eastmeadows Secondary Campus	Comparison of edible packaging films extracted from citrus fruits	Rowe Scientific Pty Ltd
Raaif Mollah	Suzanne Cory High School	Effectiveness of Different Types of Covalent Bonds on Ultraviolet Radiation Absorption	Rowe Scientific Pty Ltd

### Minor Bursary - \$250

Name	School	Project Title	Sponsor
Serene Karunaratne	Presbyterian Ladies' College - Senior School	Blasting Flu Viruses	The Walter and Eliza Hall Institute of Medical Research
Rishara Fernando	Presbyterian Ladies' College - Senior School	The Study of Ocean Currents	Rowe Scientific Pty Ltd
Annabelle Sakurai	McKinnon Secondary College	The effect of distance and obstructions on the speed of WiFi measured on a device	Engineers Australia
Lachlan Quiney	McKinnon Secondary College	The effect of freezing time on tofu hydrophilicity	Australian Society for Biochemistry & Molecular Biology
Dinesh Jayasena	McKinnon Secondary College	The effect monitor refresh rate has on image loading speed	Engineers Australia
Aleksandra Simic	McKinnon Secondary College	The Effect of Water Temperature on the Growth of Sourdough Starter	Chemistry Education Association
Ariel Golembo	McKinnon Secondary College	The Effect of Oxygen on Yeast Growth	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Cathleen McLeish	McKinnon Secondary College	Hand Hygiene Efficacy	The Walter and Eliza Hall Institute of Medical Research
Nathan Tyrrell	McKinnon Secondary College	How Does Changing Boiling and Roasting Time Affect the Texture of a Roast Potato?	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Iftikhar Ahsan	Sirius College - Eastmeadows Secondary Campus	Using thermoplastics to waterproof prosthetics	Engineers Australia
Abraham Rajput-Bhatti	St Joseph's College - Mildura	Investigation into the factors influencing buoyancy	Engineers Australia

## Experimental Research - Open

### Major Bursary - \$450

Name	School	Project Title	Sponsor
Lachlan Chau	Viewbank College	Proposed Solutions to Diminish the Effects of Blue Light Towards Sleep	The BHP Foundation Science and Engineering Awards, managed by CSIRO

### Minor Bursary - \$350

Name	School	Project Title	Sponsor
Ashleigh Dowling	Tintern Grammar - Secondary	The effect of temperature on the germination of Phaseolus lunatus seeds	The Walter and Eliza Hall Institute of Medical Research
Dylan Wild	Tintern Grammar - Secondary	Measuring the extent to which a change in concentration of gelatine solutions can be detected by a Light Dependent Resistor.	Rowe Scientific Pty Ltd

# Class Research Project

## Class Project - Middle Primary

### Major Bursary - \$300

School		Project Title	Sponsor
Holy Rosary School		Maribrynong River Detectives - Can fish survive?	Catholic Education Melbourne
Riley Axalan	Lara Cunningham	Lucas D'Mello	William Dearness
Lucy Donaghey	James Hadley	Gregory Jenkins	Emily Martinuzzo
Joshua McGloin	Addyson Nguyen	Marisha Panagiotidis	Alice Plevy
Ciaran Posar	Emma Robinson	Sophia Sharma	Tom Tatulaschwili
Leila Turone	Tyson Vujaklija	Jemima Wagner	

## Class Project - Upper Primary

### Major Bursary - \$300

School		Project Title	Sponsor
Holy Rosary School		I've run out of sanitiser!	Australian Skeptics
Callie Axala	Helena Carra	Emily Crunden	Jie Giovannitti-Nowak
Gus Gouskos	Isabelle Hadley	Harris Harford	Grace Healey
Max Martinuzzo	Minami McCartney	Madeleine Nguyen	Archie Oswald
Abigail Ruiu	Coco Silvestro	Paul Wagner	Alisa Webb



## Creative Writing - Lower Primary

### Major Bursary - \$45

Name	School	Project Title	Sponsor
Clarissa Ma	Serpell Primary School	My Ocean Cleaning Device	Engineers Australia
Jenny Wu	Serpell Primary School	My Ocean Adventure	Australian Skeptics
William Hui	Auburn South Primary School	My ocean cleaning device	Don and Robyn Hyatt

### Minor Bursary - \$35

Name	School	Project Title	Sponsor
Yorikage Kitayama	Rosanna Golf Links Primary School	Journey to the Bottom of the Ocean	Humanists Victoria
Eric Song	Auburn South Primary School	My Ocean Adventure	Mordialloc Skeptics
Harriet Byrne	Auburn South Primary School	My (Hayley's) Ocean Adventure	Australian Skeptics
Danyal Malik	Serpell Primary School	The Journey to the Bottom of the Ocean	Bank First
Aarav Balachandra	Northside Christian College - Primary	My Ocean Cleaning Advice	Humanists Victoria
Alyssa Lawless	Auburn South Primary School	My Ocean Adventure	Bank First
Jack Wang	Livingstone Primary School	My Ocean Adventure	Australian Skeptics

## Creative Writing - Middle Primary

### Major Bursary - \$50

Name	School	Project Title	Sponsor
Jivesh Sachdeva	Auburn South Primary School	Journey to the bottom of the ocean	Don and Robyn Hyatt
Raja Rodriguez	Our Holy Redeemer School	My Ocean Adventure: Uncovering the Secrets of the Ocean	Catholic Education Melbourne
Aaliya Jaiswal	Good News Lutheran College - Junior School	SOS: Save our oceans!	Victoria University
Georgie Bradford Eleanor Murdoch	Auburn South Primary School	My Ocean Cleaning Device	Engineers Australia
Rithik Eedula	Syndal South Primary School	Journey to the bottom of the ocean	Bank First
Jonah Wong	Haileybury - Newlands Campus	My Ocean Cleaning Device	Minerals Council of Australia (Victorian Division)

### Minor Bursary - \$40

Name	School	Project Title	Sponsor
Brenda Soetanto	Our Holy Redeemer School	Journey to the Bottom of the Ocean: Exploring the Deep Sea	Catholic Education Melbourne
Anna Drew	Templestowe Park Primary School	My Ocean Adventure	Humanists Victoria
Harper Smith	Great Ryrie Primary School	The invention for the sea	Engineers Australia
Josephine Kuan	Lab Rats Science Club Primary	Plastic Invasion (Topic: Journey to the bottom of the ocean)	Don and Robyn Hyatt
Charmayne Lee	Serpell Primary School	Journey to the Bottom of the Ocean	Australian Skeptics
Harriet Lung	Fitzroy North Primary School	My Ocean Adventure	Humanists Victoria
Sandaru Suraweera Arachchilage	Good News Lutheran College - Junior School	My ocean cleaning device	Engineers Australia
Mohamed Hafeez Nonjai Noormohideen	Haileybury - City Campus Primary	One Fish, Two Fish	Victoria University
Lauren Tay	Balwyn Primary School	Deep Blue: innovations for the future of our oceans	Ken Greatorex
Sophie Ng	Balwyn Primary School	Deep Blue: innovations for the future of our oceans	Mordialloc Skeptics
Jaden Liu	Ivanhoe Grammar School - Buckley House	My ocean cleaning device	Bank First
Daniel Arvanitis Jaden Fan	Essex Heights Primary School	Journey to the Bottom of the Ocean	Australian Skeptics



# Creative Writing

## Creative Writing - Upper Primary

### Major Bursary - \$55

Name	School	Project Title	Sponsor
Mark Anthony Birchall	Serpell Primary School	Journey to the Bottom of the Ocean	Humanists Victoria
Edilyn Wong	Serpell Primary School	My Ocean Cleaning Device	Swinburne University of Technology
Natasha Cameron Aaliyah D'Rozario	Camberwell Girls Grammar School - Ormiston House	My Ocean Cleaning Device	Don and Robyn Hyatt
Fiona Lin Clara Motiwalla	Methodist Ladies' College - Junior School	Journey to the Bottom of the Ocean	Engineers Australia
Vidya Sivakumar	Fintona Girls School - Primary	Journey to the Bottom of the Ocean	Ken Greateorex
Isabella Madden	Fintona Girls School - Primary	My Ocean Adventure	Bank First
Vienna Sood	Fintona Girls School - Primary	Overfishing- Spongebob's Tale	Australian Skeptics
Evelyn Teng	Fintona Girls School - Primary	The Black Horizon	Australian Skeptics
Chloe Singh	Fintona Girls School - Primary	Mysteries of the Mariana Trench	Humanists Victoria

### Minor Bursary - \$45

Name	School	Project Title	Sponsor
Aidan Hey	Holy Rosary School	My Ocean Cleaning Device	Catholic Education Melbourne
Jayden Li	Caulfield Grammar School - Wheelers Hill Junior Campus	My ocean cleaning device	Engineers Australia
Chelsea Paule	Serpell Primary School	Ocean Adventure	Humanists Victoria
Yaara Hammard	Serpell Primary School	The S.O.S.R.C.: My Ocean Cleaning Device	Engineers Australia
Joshua Tan	Overnewton Anglican Community College - Secondary	My ocean adventure	Australian Skeptics
Mahlia Ratnam	Fintona Girls School - Primary	My Ocean Adventure	Engineers Australia
Larissa Lazaris	Fintona Girls School - Primary	Time Travel to save the ocean	Humanists Victoria
Cynthia Luo	Fintona Girls School - Primary	Changes	Minerals Council of Australia (Victorian Division)
Anagi Nihalsingha	Fintona Girls School - Primary	My Ocean Cleaning Device	Minerals Council of Australia (Victorian Division)
Ruicheng Wang	Fintona Girls School - Primary	Albert and Alice's Ocean Cleaning Device	Engineers Australia
Yahara Wimalasuriya	Fintona Girls School - Primary	My Ocean Adventure	Bank First
Kewei Yang	Fintona Girls School - Primary	My Ocean Adventure	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Mason Green	Haileybury - Newlands Campus	Journey to the Bottom of the Ocean	Australian Skeptics
Alexander Cena-Bandosz	2020 STAV Entry Cena-Bandosz	Journey to the bottom of the ocean	Don and Robyn Hyatt
Jem Lewis	Balwyn Primary School	Deep Blue: innovations for the future of our oceans	Minerals Council of Australia (Victorian Division)
Min Xin Sim	Camelot Rise Primary School	Journey To The Bottom of The Ocean	Bank First
Rose Jarvis	Eltham East Primary School	My Ocean Cleaning Device	Humanists Victoria
Olivia McLean	Firbank Grammar School - Turner House	My Ocean Cleaning Device	Engineers Australia
Jamie Xenos	Haileybury - Newlands Campus	My Ocean Adventure	Humanists Victoria



## Creative Writing - Junior

### Major Bursary - \$65

Name	School	Project Title	Sponsor
Sofia Sanfilippo Joanne Tu	Camberwell Girls Grammar School - Senior School	2100, Oceans of the future	Australian Skeptics
Hannah Balkin	Camberwell Girls Grammar School - Senior School	Oceans of the future	Bank First
Katherine Mason Emily Price	Camberwell Girls Grammar School - Senior School	Our Future's Final Plea	Humanists Victoria
Annabel Nation	Methodist Ladies' College - Senior School	Oceans of the Future	Engineers Australia

### Minor Bursary - \$55

Name	School	Project Title	Sponsor
Kate McRae	Rosanna Golf Links Primary School	The deep, deep ocean	Don and Robyn Hyatt
Jessica Tran	Sacred Heart Girls College	Uncovering the secrets of the ocean: beyond the depths	Catholic Education Melbourne
Katherine Irving	Carwatha College - Secondary	Letters From The Alternate Future: The Oceans	Engineers Australia
Bethany Leung	Loreto Mandeville Hall - Secondary	The deep, deep ocean	Catholic Education Melbourne
Isabelle Devadass	Sacred Heart Girls College	SOS: Save our Oceans - 'Fantasea' Oceans	Catholic Education Melbourne
Millie Blank	Tintern Grammar - Secondary	Uncovering the secrets of the ocean	Humanists Victoria
Chloe Kidney	Bayside Christian College - Secondary	The Oceans Of Our Future	Victoria University
Zoe Viney (Brisk) Isabella Wood	Camberwell Girls Grammar School - Senior School	Echo	Engineers Australia
Evan Ellis	Lab Rats Science Club Secondary	Synergy: How humans can coexist with the ocean and the resources it provides (Topic: Oceans of the future)	Minerals Council of Australia (Victorian Division)
Dinel Bomiriya	Lab Rats Science Club Secondary	Project Megalodon - Eradicate Global Warming with the Power of the Ocean (Topic: Oceans of the future)	Australian Skeptics
Jack Edlin-Ewison	Yarra Valley Grammar School	SOS: Save our Oceans	Engineers Australia
Cassidy Coetzee	Yarra Valley Grammar School	SOS: Save our Oceans	Bank First
Aislinn Chester	Yarra Valley Grammar School	The deep, deep ocean	Engineers Australia
Abbie Kerr	Methodist Ladies' College - Senior School	Die Coral, Die! (SOS: Save our Oceans)	Australian Skeptics
Inez Singer	Methodist Ladies' College - Senior School	The Deep Deep Ocean	Humanists Victoria
Riley Giosis	Parade College - Bundoora	SOS: Save our oceans!	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Flynn Hassett	Parade College - Bundoora	SOS: Save our oceans!	Australian Skeptics
Sarina Stepanovski	Santa Maria College	Uncovering the Secrets of the Ocean	Australian Skeptics
Amelia Sujana	Glen Eira College	Jigsaw Puzzle	Engineers Australia
Kiara Blyth	Kurunjang Secondary College	The Deep Deep Ocean	Victoria University
Otylia Jasinska Walisz	Templestowe College	Oceans of the future	Australian Skeptics
Gevin Kankanamalage	Scotch College - Senior	Uncovering the secrets of the ocean	Engineers Australia
Alexander Larocca	Parade College - Bundoora	SOS: Save our oceans!	Australian Skeptics

# Creative Writing

## Creative Writing - Intermediate

### Major Bursary - \$75

Name	School	Project Title	Sponsor
Malcolm Kilfoyle	Nazareth College	Oceans of the future	Catholic Education Melbourne
Clio Chan	Presbyterian Ladies' College - Senior School	SOS: Save Our Oceans!	Engineers Australia
Nancy Yang	Presbyterian Ladies' College - Senior School	The Deep, Deep Ocean	Australian Skeptics
Bethany Orme	Camberwell Girls Grammar School - Senior School	The Deep, Deep Ocean	Humanists Victoria
Veronika Cena-Bandosz	2020 STAV Entry Cena-Bandosz	Uncovering The Secrets Of The Ocean	Australian Skeptics
Victoria Paitaridis	Haileybury - Keysborough Senior School Campus	SOS: Save Our Oceans!	Humanists Victoria
Arkash Jayasinghe	Haileybury - Berwick Senior School Campus	The Deep, Deep Ocean	Engineers Australia
Armaan Gupta	2020 STAV Entry Gupta	Oceans of the Future: An Explanation	Australian Skeptics

### Minor Bursary - \$65

Name	School	Project Title	Sponsor
Nathaniel Louey	Mazenod College	SOS: Save Our Oceans!	Catholic Education Melbourne
Maeghan Armstrong	Presbyterian Ladies' College - Senior School	SOS: Save Our Oceans!	Engineers Australia
Phoebe Heynemand	Presbyterian Ladies' College - Senior School	Oceans Of The Future	Engineers Australia
Olivia Lee	Presbyterian Ladies' College - Senior School	Oceans Of The Future	Australian Skeptics
Shelling Chen	Presbyterian Ladies' College - Senior School	Uncovering The Secrets Of The Ocean	Humanists Victoria
Claudia Pak	Presbyterian Ladies' College - Senior School	Oceans Of The Future	Engineers Australia
Anika Deshmukh	McKinnon Secondary College	Uncovering The Secrets Of The Ocean	Australian Skeptics
Amira Mahmoud	Suzanne Cory High School	Oceans Of The Future	Victoria University
Darrius Ooi	Gleneagles Secondary College	The Deep, Deep Ocean	Engineers Australia
Kai Xuan Tee			
Sophie Wolrige	Koonung Secondary College	Oceans Of The Future	Engineers Australia
Michael Cotugno	Emmaus College	Oceans Of The Future	Catholic Education Melbourne
Zoe Hammond	Santa Maria College	Oceans of the future	Engineers Australia
Anna Fei	Haileybury - Keysborough Senior School Campus	Oceans of the future	Engineers Australia
Ling Yu Jan			
Abhinav Chimalkar	Haileybury - Berwick Senior School Campus	Uncovering The Secrets Of The Ocean	Australian Skeptics
Aysel Sapukotana	Haileybury - Berwick Senior School Campus	Oceans Of The Future	Engineers Australia





## Working Models - Lower Primary

### Major Bursary - \$50

Name	School	Project Title	Sponsor
Thomas Donaghey	Holy Rosary School	Bioluminescence and Biofluorescence in the Deep Blue Sea	Institution of Engineering and Technology (Victoria Network)

### Minor Bursary - \$40

Name	School	Project Title	Sponsor
Shubham Dhar	Creekside K - 9 College	Springing into Action!	Monash University - Faculty of Engineering

## Working Models - Middle Primary

### Major Bursary - \$55

Name	School	Project Title	Sponsor
Junya Jiang	Methodist Ladies' College - Junior School	Oceanic Aquaculture	Deakin University: Faculty of Science, Engineering & Built Environment
James Shang Yu Lee	Auburn South Primary School	Click Clack on the Track	Engineers Australia

### Minor Bursary - \$45

Name	School	Project Title	Sponsor
William McLeod	Holy Rosary School	Could we holiday at the bottom of the Mariana Trench	Catholic Education Melbourne
Alice Plevey	Holy Rosary School	Light in the Ocean	Deakin University: Faculty of Science, Engineering & Built Environment
Rachel Franco	Serpell Primary School	The Digestive System	Monash University - Faculty of Engineering
Sophia Lorensen	Wheeler's Hill Primary School	How Cameras Work	Institution of Engineering and Technology (Victoria Network)

## Working Models - Upper Primary

### Major Bursary - \$60

Name	School	Project Title	Sponsor
Dylan Benjamin	Creekside K - 9 College	Buoyancy of Submarines	Victoria University
Griffin Smail	Coatesville Primary School	Converting Wave Energy Into Electrical Energy	Electric Energy Society of Australia Inc.

### Minor Bursary - \$50

Name	School	Project Title	Sponsor
Freya Wilson	Rosanna Golf Links Primary School	Generating Electricity for Light for the Deep Sea	Electric Energy Society of Australia Inc.
Trevin Tirikawala	Great Rye Primary School	Electromagnetism	Institution of Engineering and Technology (Victoria Network)
Antonina Tyurina	Huntingtower School - Primary	Brain activity during dreams	Engineers Australia
Zachary Kwei	Serpell Primary School	Original Wave Energy Generator	Monash University - Faculty of Engineering
Chloe Jin	Serpell Primary School	Submarine	Deakin University: Faculty of Science, Engineering & Built Environment
Marcus Ball	Wheeler's Hill Primary School	Hydraulic Lifter	Deakin University: Faculty of Science, Engineering & Built Environment
Tiffany Guo	Donvale Christian College - Primary	Solar Powered Scarecrow	Monash University - Faculty of Engineering
Maddie Smith	Firbank Grammar School - Turner House	What's Down There?	Deakin University: Faculty of Science, Engineering & Built Environment

# Working Models

## Working Models - Junior

### Major Bursary - \$75

Name	School	Project Title	Sponsor
Aaron Benjamin	Creekside K - 9 College	Submerged Point Absorber Type Wave Energy Converter	Electric Energy Society of Australia Inc.
Hannah Kilpatrick	Methodist Ladies' College - Senior School	Hydraulic Crush	Deakin University: Faculty of Science, Engineering & Built Environment
Kiran Biju Karshin Sachdeva	Haileybury - Berwick Campus	Model Submarine	Rowe Scientific Pty Ltd
Sam Gazzola Ciaran Kinsella	St Kevin's College - Senior School	Wave generator	Engineers Australia
Harry Clark	University High School - GTAC	Desalination	Chemistry Education Association
Nelson Blake Thomas Chan	Trinity Grammar School - Senior	Eddy Current Spinner	Monash University - Faculty of Engineering

### Minor Bursary - \$65

Name	School	Project Title	Sponsor
Komal Joshi	Hume Anglican Grammar Mt Ridley - Secondary	Tidal Energy Wave Machine	Rowe Scientific Pty Ltd
Victoria Gonsalves Jessica Leung	Fintona Girls School - Senior Secondary	Fantasea	Rowe Scientific Pty Ltd
Lucas Carra	Flinders Christian Community College - Carrum Downs	Magnetic Levitation Train	Rowe Scientific Pty Ltd
Lucas Carne	St Kevin's College - Senior School	The Swift Detector	Engineers Australia

## Working Models - Intermediate

### Major Bursary - \$85

Name	School	Project Title	Sponsor
Rita Liao	Presbyterian Ladies' College - Senior School	Wind Energy: Efficient, Effective, Endless	Rowe Scientific Pty Ltd

### Minor Bursary - \$75

Name	School	Project Title	Sponsor
Katrina Luu	Presbyterian Ladies' College - Senior School	Light Reflection	Rowe Scientific Pty Ltd
Mason Bartholomeusz	Viewbank College	Tidal power	Rowe Scientific Pty Ltd

## Working Models - Open

### Major Bursary - \$95

Name	School	Project Title	Sponsor
Ishwarya Poliseti	Glen Eira College	How paper centrifuges are used to diagnose malaria	Rowe Scientific Pty Ltd



## Inventions - Lower Primary

### Major Bursary - \$70

Name	School	Project Title	Sponsor
Joshua Pratley	Auburn South Primary School	Ocean Garbage Magnet	Engineers Australia

## Inventions - Middle Primary

### Major Bursary - \$80

Name	School	Project Title	Sponsor
RuiHeng Cai	Northside Christian College - Primary	Automatic Fire Extinguisher	Swinburne University of Technology
Chloe Hughes Rebekka Simcox	Auburn South Primary School	FILTRASH	Australian Skeptics

## Inventions - Upper Primary

### Major Bursary - \$90

Name	School	Project Title	Sponsor
Hayden Glenk	Lab Rats Science Club Primary	Reef Investigator Fish (RIF)	Monash University - Faculty of Engineering
Amelie Biencourt	Coatesville Primary School	Innovation For Deep Sea Mining and Solar Farms	Minerals Council of Australia (Victorian Division)

### Minor Bursary - \$80

Name	School	Project Title	Sponsor
Asher Aylett	Huntingtower School - Primary	Solar powered fan system	In Memory of Eileen Goodfield & Dorothy Dalton

## Inventions - Junior

### Major Bursary - \$250

Name	School	Project Title	Sponsor
Adithya Ravichandran	Lab Rats Science Club Secondary	Ocean of Recycled Electricity!	Electric Energy Society of Australia Inc.
Rebecca Paratz	Lab Rats Science Club Secondary	The Giraffe Walker	Rowe Scientific Pty Ltd

### Minor Bursary - \$180

Name	School	Project Title	Sponsor
Lawson Gallup Gabrielle Simcox	Melbourne Girls College	Season Safe - Be Safe All Year Round	Rowe Scientific Pty Ltd

## Inventions - Intermediate

### Major Bursary - \$350

Name	School	Project Title	Sponsor
Kloe Lashkariov-Lee	Haileybury - Berwick Senior School Campus	Dynamic Shoe	Rowe Scientific Pty Ltd



# Posters – Scientific Wallcharts

## Posters Scientific Wall Charts - Lower Primary

### Major Bursary - \$45

Name	School	Project Title	Sponsor
Ethan Paice-Brandt	Mentone Grammar School - Primary	Ocean Energy	Don and Robyn Hyatt
Felix Jia	Mentone Grammar School - Primary	SOS: Save our Oceans!	Bank First
Isabella Smith	Firbank Grammar School - Turner House	SOS: Save Our Oceans	Australian Skeptics

### Minor Bursary - \$35

Name	School	Project Title	Sponsor
Feivel Yeoh	Northside Christian College - Primary	Conserving Ocean Life	Australian Skeptics
Agasti Thota Hewage	Good News Lutheran College - Junior School	Deep Blue Ocean	Australian Skeptics
Dominik Buschkuehl	Mentone Grammar School - Primary	Ocean Energy	In Memory of Eileen Goodfield & Dorothy Dalton
Mannix Woods	Mentone Grammar School - Primary	Conserving Ocean Life	Don and Robyn Hyatt
Hamish DeLivera	Mentone Grammar School - Primary	Deep Blue Ocean	Humanists Victoria
Emma Kong	Wesley College - Junior Campus	To change the world change yourself	Humanists Victoria

## Posters Scientific Wall Charts - Middle Primary

### Major Bursary - \$50

Name	School	Project Title	Sponsor
Greneth Olayvar	Creekside K - 9 College	Deep Blue Ocean	Victoria University
Loshaya Jayasinghe	Serpell Primary School	Deep Blue Ocean	Minerals Council of Australia (Victorian Division)
Guhan Ganesan	Doncaster Gardens Primary School	Ocean Energy: Radical, Renewable and Reliable	In Memory of Eileen Goodfield & Dorothy Dalton
Tomisin Faniyi Tobiloba Faniyi	Northside Christian College - Primary	Conserving Ocean Life	Australian Skeptics
Avika Thakkar	Essendon North Primary School	Ocean Energy	Engineers Australia
Haritas Kethinayakanahalli	Essex Heights Primary School	Deep Blue Ocean	Australian Skeptics
Noah Carr	Donvale Christian College - Primary	SOS: Save our Oceans	Humanists Victoria

### Minor Bursary - \$40

Name	School	Project Title	Sponsor
Isabelle Tartaglia	Auburn South Primary School	SOS: Save Our Oceans Coral reef destruction	Quantum Victoria
Tom Tatalaschwili	Holy Rosary School	Deep Blue Ocean	Catholic Education Melbourne
Windsor Tao Ma	Doncaster Gardens Primary School	Ocean Energy	In Memory of Eileen Goodfield & Dorothy Dalton
Keziah Nimalan Atara Ramanathan	Northside Christian College - Primary	Oceans Are in Danger, So Are We!	Australian Skeptics
Mikha Thapa	Northside Christian College - Primary	Deep Blue Ocean - Mariana Trench	Humanists Victoria
Ryan Lui	Balwyn Primary School	Deep Blue: innovations for the future of our oceans	Quantum Victoria
Indi Maheswaran	Balwyn Primary School	Deep Blue: innovations for the future of our oceans	Engineers Australia
Zoe Dwyer	Mentone Grammar School	Deep Blue Ocean - Primary	Don and Robyn Hyatt
Lily Kerr	Mentone Grammar School - Primary	Conserving Ocean Life	Mordialloc Skeptics



## Posters Scientific Wall Charts - Middle Primary

### Minor Bursary - \$40 (continued)

Name	School	Project Title	Sponsor
Zac Hones	Mentone Grammar School - Primary	Ocean Energy	Bank First
Fergus Riddle	Mentone Grammar School - Primary	Deep Blue Ocean	Australian Skeptics
Sanjar Asad	Haileybury - Berwick Campus	SOS: Save our oceans!	Mordialloc Skeptics
Advika Gopakumar	Syndal South Primary School	SOS: Save Our Oceans, Save Ourselves!	Don and Robyn Hyatt
Christina Puiyin Meyer	Syndal South Primary School	Beach Cleaner	Australian Skeptics
Lucy Bonga	Eltham East Primary School	Ocean Energy	Minerals Council of Australia (Victorian Division)

## Posters Scientific Wall Charts - Upper Primary

### Major Bursary - \$55

Name	School	Project Title	Sponsor
Rivya Nambi Subramaniyan	Camberwell Girls Grammar School - Ormiston House	SOS: Save Our Oceans	Bank First
Amelly Chea	Haileybury - Newlands Campus	Conserving Ocean Life	Don and Robyn Hyatt
Amy Howlett	Balwyn Primary School	Deep Blue: innovations for the future of our oceans	Engineers Australia
Matilda Zhang	Balwyn Primary School	Deep Blue: innovations for the future of our oceans	Australian Skeptics
Hudson Close	Mentone Grammar School - Middle School	Deep Blue: Ocean Energy	Humanists Victoria
Hayden Lee Gabriel Tan	Essex Heights Primary School	Conserving ocean life.	Humanists Victoria
Dinethi Yapa	Syndal South Primary School	Deep Blue	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Chloe Rollason	Firbank Grammar School - Turner House	Deep Blue Ocean	Australian Skeptics
Isabella Chapple	Firbank Grammar School - Turner House	Saving kelp forests	The Field Naturalists Club Of Victoria Inc.
Soham Deb	2020 STAV Entry	Ocean energy	Engineers Australia

### Minor Bursary - \$45

Name	School	Project Title	Sponsor
Malintha Kanakaratne Sophie Mahoney	Rosanna Golf Links Primary School	Future of our coral reefs	Humanists Victoria
Felix Smith	Camberwell Grammar School - Junior School	The Hunted Great White Sharks	Bank First
Gigi Goffman Olivia Stasiuk	Mentone Girls' Grammar School - Junior Campus	Conserving Ocean Life : Can the smallest food resource make a big impact? (Phytoplankton)	Swinburne University of Technology
Marcus Schena	Serpell Primary School	Deep Blue Ocean	Humanists Victoria
Daniel Condello	Overnewton Anglican Community College - Secondary	SOS-Save our oceans	Engineers Australia
Viraaj Tandon	Good News Lutheran College - Junior School	Ocean energy	Victoria University
Avni Hegde	Methodist Ladies' College - Junior School	Conserving Ocean Life	Biology Teachers' Network Inc.
Jeralyn Teh	Good News Lutheran College - Junior School	SOS: Save our oceans!	Victoria University
Nimalan Suresh	Auburn South Primary School	Ocean Energy	Minerals Council of Australia (Victorian Division)

# Posters – Scientific Wallcharts

## Posters Scientific Wall Charts - Upper Primary

### Minor Bursary - \$45 (continued)

Name	School	Project Title	Sponsor
Xinyan Zhou	Fintona Girls School - Primary	Save Our Seas	Australian Skeptics
Jayda Mukhlif Alexia Stefanou	Fintona Girls School - Primary	Ocean Wave Energy: Pelamis Wave Energy Converter	In Memory of Eileen Goodfield & Dorothy Dalton
Mia Atanasov	Essendon North Primary School	Ocean Energy	Minerals Council of Australia (Victorian Division)
Malhaar Mehta	Balwyn Primary School	Deep Blue: innovations for the future of our oceans	Engineers Australia
Melody Tran	Balwyn Primary School	Deep Blue: innovations for the future of our oceans	Engineers Australia
Inuki Mannapperuma	Haileybury - Berwick Campus	SOS: Save Our Ocean	Australian Skeptics
Benjamin Chan	Syndal South Primary School	SOS Save Our Ocean	Humanists Victoria
Archie Bonga	Eltham East Primary School	Ocean Energy	Humanists Victoria
Maya Bernardini	Eltham East Primary School	Ocean Energy	Australian Skeptics
Mitchell Lee Noah Sperry-Jones	Essex Heights Primary School	SOS: Save our oceans!	Humanists Victoria5
Maria Cecilia Carvalho Bastos	Firbank Grammar School - Turner House	Deep Blue Ocean	The BHP Foundation Science and Engineering Awards, managed by CSIRO

## Posters Scientific Wall Charts - Junior

### Major Bursary - \$65

Name	School	Project Title	Sponsor
Seneja Alles Nilu Perera	Carwatha College - Secondary	Floating Cities	Don and Robyn Hyatt
Violet Chong	Camberwell Girls Grammar School - Senior School	Oceans of the future: Coral bleaching	Australian Skeptics
Mehar Chug	Hume Anglican Grammar Mt Ridley - Secondary	Oceanic Aquaculture	Victoria University
Dashiell O'Donnell	Hume Anglican Grammar Mt Ridley - Secondary	SCUBA Droids of the Deep	Victoria University
Alexandra Carroll	Yarra Valley Grammar School	Biomimicry in our Oceans	Chemistry Education Association
Sharuka Sivasuthan	Haileybury - Berwick Campus	Oceanic Aquaculture	Engineers Australia
Mehar Saroya	Haileybury - Berwick Campus	Oceans of The Future: Saving Nemo	Humanists Victoria
Ankush Roy	Haileybury - Berwick Campus	The Oceans of the Future	Engineers Australia
Inakshi Sehgal	Haileybury - City Campus Secondary	Ocean Energy	Electric Energy Society of Australia Inc.

### Minor Bursary - \$55

Name	School	Project Title	Sponsor
Tanish Bonthula	Keysborough College - Acacia Campus	Scuba Droids of the Deep	Quantum Victoria
Grace Boromeo	Tintern Grammar - Secondary	Oceanic Aquaculture	Ken Greatorex
Brooke Fennessy	Tintern Grammar - Secondary	Oceanic Aquaculture	Engineers Australia
Baoyi Zhu	Camberwell Girls Grammar School - Senior School	Oceanic Aquaculture	Swinburne University of Technology
Sofia Panedli	Camberwell Girls Grammar School - Senior School	Oceanic Aquaculture	Engineers Australia
Michelle Wesley	Northside Christian College - Secondary	Saving Our Oceans of the Future	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Kiera Edelstein	Bialik College	Diving Deep Into Sharkskin	Engineers Australia
Raine Bansal Tvisha Joshi	Hume Anglican Grammar Mt Ridley - Secondary	Oceanic Aquaculture	Victoria University
Dinel Bomiriya	Lab Rats Science Club Secondary	Harnessing Ocean Energy to Reduce Global Warming (Topic: Oceans of the future)	In Memory of Eileen Goodfield & Dorothy Dalton



## Posters Scientific Wall Charts - Junior

### Minor Bursary - \$55 (continued)

Name	School	Project Title	Sponsor
Gideon Tse	Yarra Valley Grammar School	Biomimicry in our Oceans	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Aarya Nalla	Haileybury - Newlands Campus	Marine Energy	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Keira Murugasu Alice Richards	Methodist Ladies' College - Senior School	OceanOne - A Robotic Scuba Diver	Institution of Engineering and Technology (Victoria Network)
Ava Gross	Methodist Ladies' College - Senior School	Marine Aquaculture	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Ella Ventura	Santa Maria College	Ocean Pollution	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Suvetha Rajeswaran	Santa Maria College	Oceans of the Future	Swinburne University of Technology
Hannah Agius	Santa Maria College	Scuba Droids	Engineers Australia
Ingrid Cardak	Santa Maria College	Oceanic Aquaculture	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Sahana Kehoe	Haileybury - City Campus Secondary	Oceanic Aquaculture	Victoria University
Eric Zhang	Haileybury - Berwick Campus	Oceans of The Future	Deakin University: Faculty of Science, Engineering & Built Environment
Cailey Finlayson	Pascoe Vale Girls College	Devocean: Developments for our Ocean	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Emmanuel Joby Daivik Thettayil	Hume Anglican Grammar Mt Ridley - Secondary	Oceans of the future - Ocean Energy	Victoria University

## Posters Scientific Wall Charts - Intermediate

### Major Bursary - \$75

Name	School	Project Title	Sponsor
Ruby Soh	East Doncaster Secondary College	The Aquatic Future In Our Hands	Bank First
Neha-Maria Sibi Aldrin Sibi	Hume Anglican Grammar Mt Ridley - Secondary	Oceans of the Future	Victoria University
Ibiene Ogaji	Suzanne Cory High School	Oceans of the Future	Victoria University
Belle Shi	Viewbank College	Oceanic Aqua Culture	Minerals Council of Australia (Victorian Division)

### Minor Bursary - \$65

Name	School	Project Title	Sponsor
Tristan D'Souza Trent Rogers	Mazenod College	Environmentally Friendly Algae Shoes	Catholic Education Melbourne
Patrick Chong Ryan Doan	Mazenod College	Kelp Me	Catholic Education Melbourne
Clarice Lim	Presbyterian Ladies' College - Senior School	Oceans of the Future	Australian Skeptics
Danya Daoud	Lyndale Secondary College	Our oceans in prospect: Oceans of the future	Quantum Victoria
Riley Fong Priscilla Leung	East Doncaster Secondary College	Oceans Of The Future	The BHP Foundation Science and Engineering Awards, managed by CSIRO



# Posters – Scientific Wallcharts

## Posters Scientific Wall Charts - Intermediate

### Minor Bursary - \$65 *(continued)*

Name	School	Project Title	Sponsor
Neha-Maria Sibi	Hume Anglican Grammar Mt Ridley - Secondary	SCUBA Droids of the Deep	Victoria University
Alexander Bui	Parade College - Bundoora	Journey to the Deep Sea	Australian Skeptics
Ray Wang	Yarra Valley Grammar School	Oceans of the Future	Engineers Australia
Piyumi De Zoysa	Canterbury Girls Secondary College	Oceanic Aquaculture: A sustainable way of life?	Australian Skeptics



## Games - Middle Primary

### Major Bursary - \$50

Name	School	Project Title	Sponsor
Guhan Ganesan	Doncaster Gardens Primary School	Marvellous Marine Makers: Design your own Deep	Australian Skeptics

### Minor Bursary - \$40

Name	School	Project Title	Sponsor
Elisabeth Li Anne Teh	Serpell Primary School	Coral-Lation	Australian Skeptics
Jeongbae Seo	Balwyn Primary School	Aqua Warrior	Don and Robyn Hyatt
Ruby Gooday	Fitzroy North Primary School	Drowning	Australian Skeptics

## Games - Upper Primary

### Major Bursary - \$55

Name	School	Project Title	Sponsor
Oscar Simonovski	Donburn Primary School	Climate Change: Ocean Affects	Australian Skeptics
Hannah Thompson	Methodist Ladies' College - Junior School	Beyond the Abyss	Don and Robyn Hyatt
Hugo Brosnahan	Wesley College - Junior Campus	Food Chain Failure	The Field Naturalists Club Of Victoria Inc.

### Minor Bursary - \$45

Name	School	Project Title	Sponsor
Leben Rowe Bowen Yan	Rosanna Golf Links Primary School	Sea-No	Don and Robyn Hyatt
Ava Kirkwood Natasia Stefanou	Fintona Girls School - Primary	Ocean Warriors	Australian Skeptics
Matilda Hodge	Fintona Girls School - Primary	Fantastic Plastic?	Engineers Australia

## Games - Junior

### Major Bursary - \$65

Name	School	Project Title	Sponsor
Olivia Carletti Chriselle Cayetano	Fintona Girls School - Senior Secondary	Mercury: The Hidden Problem in Our Oceans	Minerals Council of Australia (Victorian Division)
Charlotte Castle Camille Shultis	Methodist Ladies' College - Senior School	Our Neglected Ocean	Humanists Victoria
Charlotte Eury Frigo	Santa Maria College	The Game of Bones	Minerals Council of Australia (Victorian Division)

### Minor Bursary - \$55

Name	School	Project Title	Sponsor
Tavleen Kaur	Lyndale Secondary College	Wild World	The Field Naturalists Club Of Victoria Inc.
Kyrah Cossens	Tintern Grammar - Secondary	Ocean Cleanup	Humanists Victoria
Veronica Goulko Gabby Osvath	Wesley College - St Kilda Road Senior	Quick Chem Craze	Chemistry Education Association
Maya Shu	Yarra Valley Grammar School	Marine Octopus Party Board game	Swinburne University of Technology
Konrad Himmelreich	Haileybury - Brighton Campus	Balance	Humanists Victoria
Erina O'Doherty	Canterbury Girls Secondary College	Garblenge: The Great Garbage Challenge	Quantum Victoria
Oliver Henry	St Kevin's College - Senior School	Slicks	Catholic Education Melbourne

# Games

## Games - Intermediate

### Major Bursary - \$75

Name	School	Project Title	Sponsor
Erica Tia	Presbyterian Ladies' College - Senior School	Our Earth's Worth	Australian Skeptics
Helia Darivandi-Shoushtari Chantelle Lloyd-Shrimpton	Canterbury Girls Secondary College	Destination: Ocean Floor	Don and Robyn Hyatt

### Minor Bursary - \$65

Name	School	Project Title	Sponsor
Methuli Galhinderachchi	Presbyterian Ladies' College - Senior School	Ocean Commotion	Australian Skeptics

## Games - Open

### Major Bursary - \$85

Name	School	Project Title	Sponsor
Teagan Hayward	Haileybury - Berwick Senior School Campus	Fate and Choice	Engineers Australia



## Computer Programs - Lower Primary

### Major Bursary - \$50

Name	School	Project Title	Sponsor
Emma Williams	Fitzroy North Primary School	Deep Sea Researcher	Institution of Engineering and Technology (Victoria Network)
Naufal Iskandar Mirza	Essendon North Primary School	Deep Sea Hero	Monash University - Faculty of Engineering

## Computer Programs - Middle Primary

### Major Bursary - \$55

Name	School	Project Title	Sponsor
Lionel Chan	Wesley College - Junior Campus	Coronavirus Attack	Engineers Australia

### Minor Bursary - \$45

Name	School	Project Title	Sponsor
Priscilla Lin	Templestowe Park Primary School	What happens to your body when you have an allergic reaction to food?	Australian Society for Biochemistry & Molecular Biology
Ethan Schafer	Holy Rosary School	Dodge the Virus	Catholic Education Melbourne
Eric Li	Northside Christian College - Primary	The Deep Blue	Monash University - Faculty of Engineering
Victor Zhao			
Raylin Wang	Balwyn Primary School	Deep Blue: innovations for the future of our oceans	Institution of Engineering and Technology (Victoria Network)
Dilmi Jayaratne	Essendon North Primary School	Life Cycle of a Coral Reef	Deakin University: Faculty of Science, Engineering & Built Environment

## Computer Programs - Upper Primary

### Minor Bursary - \$50

Name	School	Project Title	Sponsor
Theo Dalton	Coatesville Primary School	Periodic Table: Run for the Elements	Deakin University: Faculty of Science, Engineering & Built Environment
Elizabeth Lazarow			
Krishav Gupta	Good News Lutheran College - Junior School	Life in Ocean Zones	Institution of Engineering and Technology (Victoria Network)
Aryan Mittal	Northside Christian College - Primary	Converting Plastic Into Petrol	Chemistry Education Association
Jarrold Tay	Balwyn Primary School	Deep Blue: innovations for the future of our oceans	Deakin University: Faculty of Science, Engineering & Built Environment
Arjun Acharya	Syndal South Primary School	Ocean Watch!	Engineers Australia
Ishita Kumar	Narre Warren South P-12 College - Primary	Planet explorations using web designing	The BHP Foundation Science and Engineering Awards, Managed by CSIRO



# Computer Programs

## Computer Programs - Junior

### Major Bursary - \$75

Name	School	Project Title	Sponsor
Katrina Tong Laura Tong	Camberwell Girls Grammar School - Senior School	Lab simulator - pH testing	Chemistry Education Association
Sam Bieju	Kolbe Catholic College	Sam's Aqua World	Institution of Engineering and Technology (Victoria Network)
Clarence Antonmeryl	Haileybury - Berwick Campus	MecClearen	Deakin University: Faculty of Science, Engineering & Built Environment

### Minor Bursary - \$65

Name	School	Project Title	Sponsor
Rudraksh Bhardwaj	Lab Rats Science Club Secondary	Save the Ocean!	Rowe Scientific Pty Ltd
Dennis Yahnov	Highvale Secondary College	Renewable Energy	Deakin University: Faculty of Science, Engineering & Built Environment
Emily Colligan	Haileybury - Berwick Campus	Deep Heat	Rowe Scientific Pty Ltd
Lavanthan Saynthan	Haileybury - Berwick Campus	Whales: What they eat and how they live?	Swinburne University of Technology
Movidu Gannoruwa	Haileybury - Berwick Campus	Exploring the Deep Blue.	Deakin University: Faculty of Science, Engineering & Built Environment

## Computer Programs - Intermediate

### Major Bursary - \$85

Name	School	Project Title	Sponsor
Sarah O'Connor	St Margaret's School - Senior School	Oceanic Biomimicry	Deakin University: Faculty of Science, Engineering & Built Environment

### Minor Bursary - \$75

Name	School	Project Title	Sponsor
John Huynh Lohith Karthesan	Mazenod College	Ocean Snake Man	Institution of Engineering and Technology (Victoria Network)



## Science Photography - Lower Primary

### Major Bursary - \$45

Name	School	Project Title	Sponsor
Takahiro McCartney	Holy Rosary School	The Lifecycle of the Mosquito	The Field Naturalists Club Of Victoria Inc.

## Science Photography - Middle Primary

### Major Bursary - \$50

Name	School	Project Title	Sponsor
Aarya Parhar	Creekside K - 9 College	Organ Pipes	Minerals Council of Australia (Victorian Division)

## Science Photography - Upper Primary

### Major Bursary - \$55

Name	School	Project Title	Sponsor
Marley Hinson	Haileybury - Berwick Campus	The Leaves of All Shapes and Sizes	The Field Naturalists Club Of Victoria Inc.
Shanna Lee	Haileybury - Berwick Campus	The Colours of Sea and Sky	Engineers Australia

### Minor Bursary - \$45

Name	School	Project Title	Sponsor
Abby Zhao	Fintona Girls School - Primary	Refraction Action	Mordialloc Skeptics
Eleanor Duggan	Essendon North Primary School	Pressure	Engineers Australia
Sofia Gray			
Sarah Howlett	Balwyn Primary School	Deep Blue: innovations for the future of our oceans	Australian Skeptics
Brooke Bernasconi	Mentone Grammar School - Middle School	Magnetic Fields	Engineers Australia
Khris Navaneetharaja	Camberwell Grammar School - Junior School	Coastal Erosion	Don and Robyn Hyatt

## Science Photography - Junior

### Major Bursary - \$65

Name	School	Project Title	Sponsor
Iliyah Shulin	Bialik College	Fruit Decomposition	Humanists Victoria
Olive Swain	Methodist Ladies' College - Senior School	Erosion by Sea Level Rise	Australian Skeptics
Mehal Agrawal	Haileybury - Berwick Campus	Fungus	The Field Naturalists Club Of Victoria Inc.

### Minor Bursary - \$55

Name	School	Project Title	Sponsor
Molly Atkinson	Hume Anglican Grammar Mt Ridley - Secondary	Deep Blue: Innovations for the future of our oceans	Humanists Victoria
Sophie Ang	Fintona Girls School - Senior Secondary	Diversity in the Ocean	Australian Skeptics
Lauren Kernick	Toorak College	How the full moon affects the tide and my local environment	The Field Naturalists Club Of Victoria Inc.
Sunny Yuen	Haileybury - Berwick Campus	Refraction of Light	Monash University - Faculty of Engineering
Otylia Jasinska Walisz	Templestowe College	Ocean Life	Australian Skeptics

# Science Photography

## Science Photography - Intermediate

### Major Bursary - \$75

Name	School	Project Title	Sponsor
Hoi Tung Hilary Yiu	Presbyterian Ladies' College - Senior School	Oxidation in Our Daily Life	Chemistry Education Association
Franco Lin	Kilvington Grammar School - Senior	Symbiotic Relationship between Clownfish and Anemones in Oceans	Humanists Victoria
Armaan Sandhu	Nossal High School	The effect of using different filters on the observation of a planet through a telescope	Engineers Australia

### Minor Bursary - \$65

Name	School	Project Title	Sponsor
Anna McLennan	Presbyterian Ladies' College - Senior School	Photographic Evidence on Hydrophobic and Hydrophilic Plants	The Field Naturalists Club Of Victoria Inc.
Samudra Pathmasiri	Nossal High School	Density Tower	Engineers Australia
Joanna Mitsaris	Kilvington Grammar School - Senior	The Structure of Leaves	The Field Naturalists Club Of Victoria Inc.
Alannah Macgowan	Kilvington Grammar School - Senior	Structure of mammals noses	Don and Robyn Hyatt
Diya Matthew	Kilvington Grammar School - Senior	Reflections through a lens	Engineers Australia

## Science Photography - Open

### Major Bursary - \$85

Name	School	Project Title	Sponsor
Maria Ebi	Sacred Heart Girls College	Environments of the World	Catholic Education Melbourne



## Video Productions - Lower Primary

### Major Bursary - \$50

Name	School	Project Title	Sponsor
Beatrix Ohle	Holy Rosary School	Waves	Catholic Education Melbourne

### Minor Bursary - \$40

Name	School	Project Title	Sponsor
Archie Pelosi	Warrandyte Primary School	Ocean Pollution	Quantum Victoria

## Video Productions - Middle Primary

### Major Bursary - \$55

Name	School	Project Title	Sponsor
Lauren Yim	Serpell Primary School	Ocean Energy	The BHP Foundation Science and Engineering Awards, managed by CSIRO
Kiara Fernando	Wesley College - Junior Campus	Why We Should Protect Oceans	The BHP Foundation Science and Engineering Awards, managed by CSIRO

### Minor Bursary - \$45

Name	School	Project Title	Sponsor
Asher Larratt	Warrandyte Primary School	Ocean Acidification	Chemistry Education Association
Alex Zhang	Caulfield Grammar School	The Great Barrier Reef	The Field Naturalists Club Of Victoria Inc.
Ali Zhang	- Wheelers Hill Junior Campus		
Gloria Lian	Serpell Primary School	May the Magnetic Force be with You	Deakin University: Faculty of Science, Engineering & Built Environment
Nadia De Angelis	Serpell Primary School	Ocean Cleanup	The Field Naturalists Club Of Victoria Inc.
Andrew Bernardi	Camelot Rise Primary School	Exploring Pressure	Deakin University: Faculty of Science, Engineering & Built Environment

## Video Productions - Upper Primary

### Major Bursary - \$60

Name	School	Project Title	Sponsor
Celia Lung	Fitzroy North Primary School	Innovation in the Ocean	Quantum Victoria
Lucy Williams	Fitzroy North Primary School	A Brief History of Underwater Exploration	Australian Skeptics
Samantha Garbutt	Ivanhoe Grammar School - Buckley House	Desalination	Chemistry Education Association
Connor Stevens	Ivanhoe Grammar School - Buckley House	A Coast of Power	Humanists Victoria

### Minor Bursary - \$50

Name	School	Project Title	Sponsor
Patrick Mehan	Rosanna Golf Links Primary School	Sound Under the Sea	Engineers Australia
Olivia Oates			
Helena Carra	Holy Rosary School	The Algae Octopus	Mordialloc Skeptics
Anushka Valecha	Lab Rats Science Club Primary	Exploring Tidal Energy	Don and Robyn Hyatt
Dylan Le Mon	Serpell Primary School	Ocean Energy	Australian Skeptics
Olivia Ho	Serpell Primary School	Deep Blue: For the Future of our Oceans	Ken Greateorex
Olivia Monro	Mentone Grammar School - Middle School	Saving Our Oceans	Don and Robyn Hyatt



# Video Productions

## Video Productions - Junior

### Major Bursary - \$75

Name	School	Project Title	Sponsor
Joanna Sun	Camberwell Girls Grammar School	The Future of Our Oceans	Australian Skeptics
Ben Jones	St Kevin's College - Senior School	Tsunami Detection System	Catholic Education Melbourne
Emily O'Keefe	Casey Grammar School - Secondary	Fossils: A hidden world captured in stone	The Field Naturalists Club Of Victoria Inc.
Luke Eaton	St Kevin's College - Senior School	Percy's Predicament	Australian Skeptics

### Minor Bursary - \$65

Name	School	Project Title	Sponsor
Madeleine McDonald	Camberwell Girls Grammar School - Senior School	The Deep Blue	Humanists Victoria
Jessica Collins	Santa Maria College	The Deep Blue	Australian Skeptics
Maggie Preston	Santa Maria College	Planet of Change	Bank First
Linda Cuzzi	Santa Maria College	Solid Waste Rubbish on Planet Earth	The Field Naturalists Club Of Victoria Inc.
Austin Bylsma	St Kevin's College - Senior School	Grief for our Reef	The Field Naturalists Club Of Victoria Inc.
Geordie Batten	Casey Grammar School - Secondary	How the shape of a crystal is determined by its atomic structure.	Minerals Council of Australia (Victorian Division)
Kiarah Coliphus	Casey Grammar School - Secondary	Formation of Crystals using salt	Minerals Council of Australia (Victorian Division)
Jugal Anish	Casey Grammar School - Secondary	Crystals: Master minerals	Minerals Council of Australia (Victorian Division)

## Video Productions - Intermediate

### Major Bursary - \$85

Name	School	Project Title	Sponsor
Himalaya Joshi	Balwyn High School	The Hijackers	Biology Teachers' Network Inc.

### Minor Bursary - \$75

Name	School	Project Title	Sponsor
Chloe Wong	Presbyterian Ladies' College - Senior School	Marine Permaculture	Australian Skeptics
Lechu Pei	Presbyterian Ladies' College - Senior School	Threats to Coral Reefs	Humanists Victoria
Samudra Pathmasiri	Nossal High School	Pinhole Camera	Engineers Australia
Katinka Schmid	Koonung Secondary College	Seaweed Marine Permaculture	The Field Naturalists Club Of Victoria Inc.
Rose Fegan Lucas King	East Doncaster Secondary College	Atlantis IRL?	Quantum Victoria



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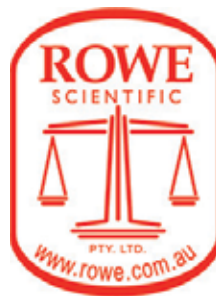
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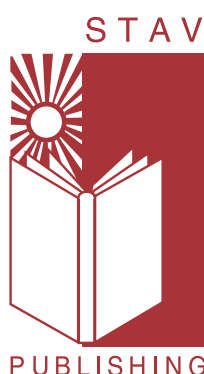
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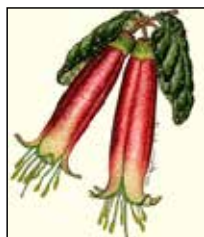
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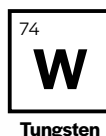
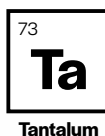
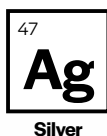
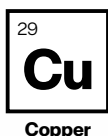
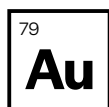
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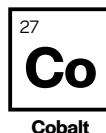
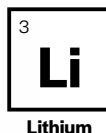
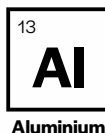
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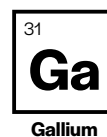
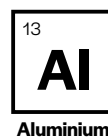
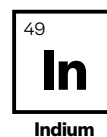
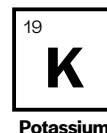
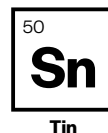
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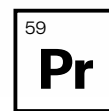
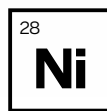
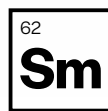
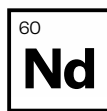
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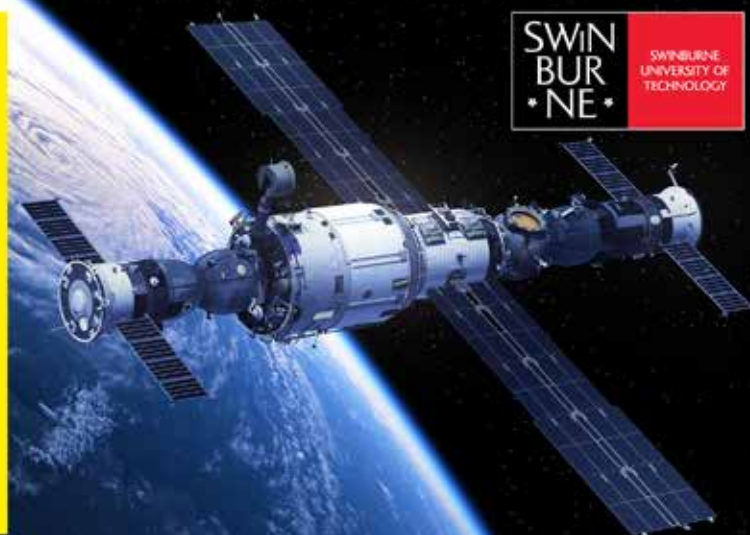
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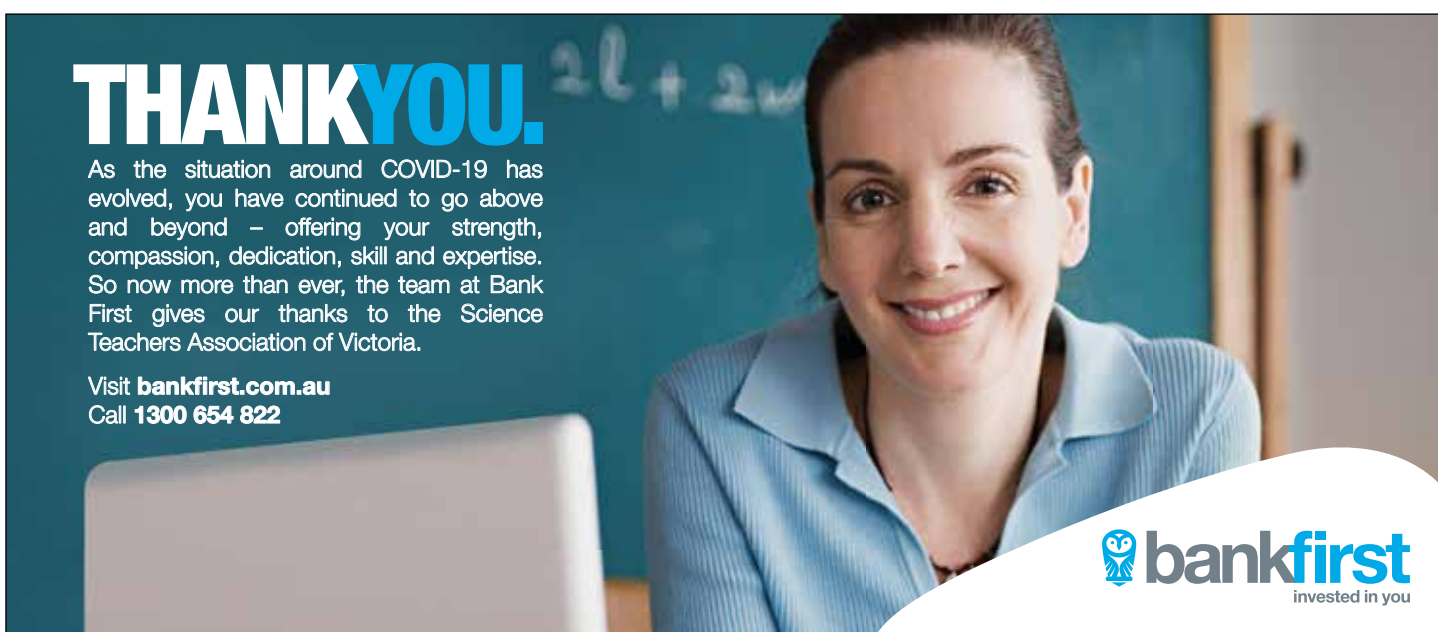
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Blair Odom	Wesley College
Pina Pikos	Hume Anglican Grammar
Ann Pisarevsky	Science Educator
Sarah Shatford	Hume Anglican Grammar
Frances Sidari	Science Educator
Jason Smith	St Monica's College
Amelia Strezbonski	Science Educator
Rosina Tassone	Kolbe Catholic College
Kylee Townsend	Hazel Glen College
Brittany Vining	Monash University
Janice Youl	Science Educator

## STS Assistants

David Trotter	Science Educator and STS Database
Janice Teng	STS Officer
Anne Heard	STAV Receptionist
Kellie Jackson	STAV Desktop Publishing
Sofie Krcmar	STS Assistant
Violet Zarce	STS Assistant
Natalija Borizovski	STAV Administration Officer

Auburn South Primary School	Emily Bond Sarah Jang Joanne Kretsis
Avila College	Catie Morrison
Baden Powell College - Tarneit Primary	Damiano Lo Nigro
Balwyn High School	Claire Moloney
Balwyn Primary School	Beau Christakakis Cathy Pynta Alexander Wignall
Bayside Christian College - Secondary	Ulli Austermann
Bayside Secondary College - Williamstown Campus	Jeff Frampton
Bialik College	Emily Donaldson Julie Hart
Blackburn High School	Gaya Vazirani
Camberwell Girls Grammar School - Ormiston House	Charlotte Forwood Emma Hinchliffe Micah Wilkins
Camberwell Girls Grammar School - Senior School	Leanne O'Doherty Eleanor Wood
Camberwell Grammar School - Junior School	Tristen Haines Mathew McRae Michael Pettolino Michelle Ponert
Camelot Rise Primary School	Sarah Woods
Canterbury Girls Secondary College	Georgia Lumb
Carwatha College - Secondary	Vithuran Jogaratnam Esme Wright
Casey Grammar School - Secondary	Jacinta Moreau Gina Upward
Caulfield Grammar School - Wheelers Hill Junior Campus	Clare Caulfield
Coatesville Primary School	Melissa Binding Megan Macfarlane
Coburg West Primary School	Agatha Blatti
Creekside K - 9 College	Maria Collins Nichole Fraser
Donburn Primary School	Ashleigh Walker
Doncaster Gardens Primary School	Kerri Brown Michael O'Dwyer
Doncaster Secondary College	Angela Reid
Donvale Christian College - Primary	Carmen Wong
East Doncaster Secondary College	Cris Rabaja
Eltham College	Dave Tonkin
Eltham East Primary School	Sarah Nichols Amy Stubberfield
Emmaus College	Karen Daniels
Essendon North Primary School	Brenton Logan Carole Upton
Essex Heights Primary School	Marita Steward

# STS Judges 2020

Fintona Girls School - Primary	Kate Brooke Rachel Carpenter Vanessa Lee
Fintona Girls School - Senior Secondary	Elli Burdan Leah Heath
Firbank Grammar School - Turner House	Melanie Smith
Fitzroy North Primary School	Kathleen Feeny
Flinders Christian Community College - Carrum Downs	Duncan Neil
Genazzano F C J College	Michael Kuspira
Gleneagles Secondary College	Mai Dang Julie Mullins Loyd Phillips-Madeira Lyndal Scolyer
Good News Lutheran College - Junior School	Christina Jasem Janet Moeller
Good News Lutheran College - Senior School	Gabrielle Kaoustos
Great Ryrie Primary School	Lisa Moon
Haileybury Berwick Campus	Aaron Bermingham Kanchana deSilva Nicole Hinson Dominika Kapustka Gary Shiell
Haileybury - Berwick Senior School Campus	Eloise Egorov
Haileybury - Brighton Campus	David Simpson
Haileybury - City Campus Primary	Louise Elletson
Haileybury - City Campus Secondary	Louise Elletson
Haileybury - Keysborough Senior School Campus	Jordyn Exner
Haileybury - Newlands Campus	Clare Gilheany Scott Hamilton Melissa Short David Simpson
Highvale Secondary College	Harrie Kingston
Holy Rosary School	Stacey Cheeseman Jodie Donaghey Pippa Murray
Hume Anglican Grammar Mt Ridley - Secondary	Daniela Campanale Marisa Jarvis
Huntingtower School - Primary	Katrina Watson
Ivanhoe Grammar School - Buckley House	Jason Coleman
Kerrimuir Primary School	Luke Van Koll
Keysborough College - Acacia Campus	Jessica Vieusseux
Kilvington Grammar School - Senior	Kirsten Horne Michael Schmidt
Kolbe Catholic College	Julie Buick Thanasi Gessas Tracey Kift
Koonung Secondary College	Kate Arnold

Korowa Anglican Girls' School - Secondary	Pramana Tedjosiswoyo
Kurunjang Secondary College	Shreeja Babu Amarjeet Basra John Gerohristodoulou
Lab Rats Science Club Primary	Caitlin Ingham
Lab Rats Science Club Secondary	Caitlin Ingham
Laburnum Primary School	Jacqueline Purcell
Livingstone Primary School	Brooke Cowley Jamina Japara
Loreto Mandeville Hall - Secondary	Eric Friedman
Lyndale Secondary College	Monique Lenehan-Moustafa Anna Watts
Mazenod College	Jacinta Fox George Stoforidis
McKinnon Secondary College	Kerryn Scott Therese Sweeney
Melbourne Girls College	Wendy Keen
Melbourne Girls Grammar School - Morris Hall	Wendy Johnson
Mentone Girls' Grammar School - Junior Campus	Donnah Ciempka
Mentone Grammar School - Middle School	Hayley Kuperholz
Mentone Grammar School - Primary	Hayley Kuperholz Mark Smith
Methodist Ladies' College - Junior School	Bridget Crough Deb Krumples Monne Allen
Methodist Ladies' College - Senior School	Cassie Blainey Rachael Rutkowski
Mitcham Primary School	Peter Raven
Narre Warren South P-12 College - Primary	Jason Brewster
Nazareth College	Sandeep Gurm
Northside Christian College - Primary	Sharon Halden Amy Horneman
Northside Christian College - Secondary	Sharon Halden
Nossal High School	Lisa Mandeltort
Oakleigh Primary School	Elenor Pletsias
Our Holy Redeemer School	Stephanie Axon
Overnewton Anglican Community College - Secondary	Vicky Hantzis Lisa Newton
Parade College - Bundoora	Rachael Costanzo Geraldine Nicholas Jason Smith Isabella Verrocchi
Parade College - Preston	Daniel Willcocks
Pascoe Vale Girls College	Hadeel Almadhoun Fal Bhatt
Paynesville Primary School	Carol Roberts



# STS Judges 2020



Presbyterian Ladies' College - Senior School	Misja Carbo Jill Detez Sibella Guest
Princes Hill Secondary College	Shantelle Brown
Rosanna Golf Links Primary School	Katy Wheeler
Sacred Heart College - Kyneton	Marika Payne
Sacred Heart Girls College	Peter McClive Kerrilee Pywell
Santa Maria College	Virginia Arter Maureen Matthews
Scotch College - Senior	Marta Cassidy
Serpell Primary School	Jamie Clark Lauren Faulkner Katelin Hoskin Lachlan Zubevich
Sirius College - Eastmeadows Secondary Campus	Jamie Astill Alexander Lowdin
Southern Cross Grammar - Secondary	Angielette Atal Carreon
St Joseph's College - Mildura	Tony Begley John McGlashan
St Kevin's College - Senior School	Robert Bell Adam Bylsma
St Leonard's College - Primary	Belinda Barton Michelle Brent Gaya Wignarajah Oliver Woollett
St Margaret's School - Junior School	Katie Cooper Simon Powys
St Patrick's Primary School	Katherine Pallot
Strathcona Baptist Girls Grammar School - Secondary	Michael Goldberg Geoff Wriedt
Suzanne Cory High School	Nicholas Kemp
Syndal South Primary School	Jessie Evans Rachel Ivin
Templestowe College	Meg Bailey
Templestowe Park Primary School	Alexandra Augello
The Grange P-12 College Secondary Campus	Ajshe Thaqi Sophie Zwolanski
The Hamilton and Alexandra College - Senior	Amy Andrews Rebekah Bonnett Sylvia McMullen

Tintern Grammar - Secondary	Lanna Derry Jessie Petchell
Toorak College	Olivia Edwards Kirsten Laurie
Trinity Grammar School - Senior	Kevin Christofelsz
University High School - GTAC	Paul Cuthbert
Viewbank College	Finn Mulhall Veena Nair
Warrandyte Primary School	Shamirah Dutovich Jennifer McDonnell
Wesley College - Junior Campus	Blair Odom
Wesley College - St Kilda Road Senior	Helen Faulkner
Wheeler's Hill Primary School	Melise Gurpnar Timothy Lee
Wyndham Christian College - Primary	Victoria Smith
Yarra Valley Grammar School	Todd Briscoe Daniel Lilburne Randy Senn
Science Educator	Mary Donaghy Ruth Evans Janice Teng Craig Hunter Torrens
The University of Melbourne	Emma Stevenson

## Committee members needed for 2021

The STS Committee invites new members for 2021. Without this volunteer committee the competition cannot operate. There are many benefits to be gained by joining the committee - you will be helping ensure STS continues to run, you will be making an active contribution to your profession, you will gain insight into how the competition operates and you will gain personal satisfaction from working with a group of dedicated science professionals.

For more information about the STS Committee go to [www.sciencevictoria.com.au/sts/stscommittee](http://www.sciencevictoria.com.au/sts/stscommittee) or contact STAV:  
sts@stav.vic.edu.au; phone 9385 3999



# STS Coordinator Reports

## Experimental Research – Primary

### Section Coordinators: Raquella Neiger and Pina Pikos

The students of Primary Experimental Research showed great triumph and resilience in the face of the pandemic and COVID 19. The reports were well structured and well written, and it was obvious that a huge effort went into each research project despite materials and resources being hard to obtain. From the gathering of materials, to following the scientific methodology accordingly, these young brilliant minds showed promise in the future of tomorrow! A future that will be filled with innovative and scientific ideas to lead the new generations of tomorrow. We look forward to your research projects next year with great anticipation and wish you all the best in 2020.

## Experimental Research – Junior

### Section Coordinators: Josie Crisara, Marisa Jarvis and Sarah Shatford

This year we received some high quality research projects. The level of skill demonstrated in experimental design and report writing was evident in many of the projects. Some projects were variations of standard experiments but others showed great creativity. Students should look towards designing an experiment that has an interesting outcome in order to find an answer.

Every year we focus on the importance of experimental design and the collection of data. Due consideration needs to be given to designing an experiment where variables are carefully controlled and it is clear what data needs to be collected or measured. Students should be reminded that someone else should be able to replicate their experiment, so they need to provide appropriate detail in the method. The importance of repeating experiments to check for valid results should also be emphasised.

Many students were able to complete some research into their topic and present this in an introduction. The next step is to use this information when discussing the results and coming to conclusions.

Thank you to all the judges who assisted this year. Entries were judged online, and feedback was provided to students.

## Experimental Research – Intermediate

### Section Coordinators: Jamie Astill, Ray Harvey, and Alexander Lowdin

Many excellent reports were entered, despite this being such a difficult year. Some stood out for their wonderful originality, others for their rigorous experimental design. Judges were amazed by the levels of complexity found, by the amount of effort put in, and by the presentation skills displayed.

So, congratulations to those who find themselves with bursary prizes – they are well deserved!

Noteworthy entries were:

- Comparison of edible packaging films extracted from citrus fruits
- Effectiveness of Different Types of Covalent Bonds on Ultraviolet Radiation Absorption
- Testing the antibacterial properties of various wattles steeped in solutions
- Which toilet paper alternative has the least potential to occlude a household sewerage pipe?
- Does biochar help rejuvenate soil and help boost plant growth?
- Cheesy delight: producing the highest amount of curds in cheese using different vinegars
- The effect of freezing time on tofu hydrophilicity

The most common problems encountered by judges this year, which held many entries back from bursary prizes, can serve as advice to students for next year: do your background research to ensure your experiment is based on sound reasoning; make sure that you repeat trials a minimum of three times for each condition to obtain reliable results; avoid projects which have been done before, where results are known or predictable; have someone proof-read your report (good science requires good communication). And, this year's students, please take the time to read the feedback given.

Thank you to all the judges for your invaluable help.

Stay safe, everyone. Look after yourselves and those around you.

## Experimental Research – Open division

### Section Coordinators: Janice Youl

This COVID year has been particularly challenging for all students and teachers, especially senior students. So a big congratulations to the students who submitted individual entries, and to the three different group entries.

There was an interesting selection of topics and the three outstanding bursary winners covered a wide scope including "Blue Light and Sleep," a comprehensive study of the effect of temperature on the germination of *Phaseolus lunatus* seeds. Another topic was the investigation of gelatin concentrations using a light dependent resistor.

As one of the judges commented on one entry, "I am amazed by the amount of time and effort that went into this research." This was true for all the entries. For next year, keep in mind that this division needs to be experimental work with quantitative results. Nearly all entries addressed the set criteria and results were well set out with effective use of graphs, tables and photos. Being succinct is advised. As Albert Einstein said, "If you can't explain it simply, you don't understand it enough".



A big thank you to the judges Robert Bell, Helen Faulkner and Caitlin Ingham who offered encouragement and constructive advice. Finally, the Science Talent Search acknowledges the teachers and mentors who supported the students and I trust that you will also influence budding scientists to enter in 2021.

## Class Experimental Research Project

### Section Coordinators: Marisa Jarvis and Sarah Shatford

The Class Experimental Research Project of the Science Talent Search is a unique section in that it is the only one that allows an entire class to work collaboratively on a common investigation topic. Class Projects give students the opportunity to become immersed in an investigation where they firstly develop and refine questions of an experimental nature. They then seek answers to their questions following an experimental research structure. On completion of their experimental work, they evaluate and reflect on the entire process and look at ways to extend their learning further. The culmination of the project is on Judging Day where they celebrate and communicate their learning to the wider community.

This year proved challenging due to the unique and unusual circumstances we found ourselves in! We would like to congratulate and commend those teachers who committed to entering a Class Project during the time of remote learning. As the section coordinators, we were immensely impressed with the quality and standard of the projects and the in-depth learning the students achieved. We really enjoyed seeing the ingenuity with which teachers, students and parents overcame the challenges and completed projects that were truly representative of whole class involvement.

Topics are not limited to the year's National Science Week theme, so a project can be chosen that integrates well with the primary class learning focus. In the past, topics have been taken from all four content areas. Some of the more ingenious and unique projects over the years have included ornithology studies, toilet paper performance, biodegradable balloons, human bodies as a chemical factory, plants and natural dyes. Judges enjoy the diversity of the topics covered and the level of student engagement within the topics. When making choices, it is important to encourage student involvement and decision making in all parts of the process, as the student-centred projects shine through clearly at judging day. Remember, Science is often inexact and 'messy', but often problems and mistakes can teach far more than obtaining perfect answers. It is the mess, and the clarity that comes out of the mess, that produces some amazing Science Projects and scientists!

## Picture Story Books (Creative Writing) – Lower Primary, Middle Primary and Upper Primary Divisions

### Section Coordinator: Leonie Lang

Primary students clearly love the ocean and its creatures and are very concerned for its future. They responded enthusiastically to this year's topic of Deep Blue: innovations for the future of our oceans. "My ocean adventure", "Journey to the bottom of the ocean" and "My ocean cleaning device" were all popular topics, with many exciting stories about submarines and sea-monsters, concerns for lost and endangered sea creatures and wonderfully creative designs for machines to clean up the rubbish. Students integrated the science of oceanography and aquatic biology well into their stories and there were many imaginative and detailed illustrations of deep sea creatures, coral reefs and sea-going vessels. Many students showed evidence of detailed research, with a range of resources quoted in the bibliography rather than just relying on the internet. The best entries were those that included innovative ideas for the future of our oceans.

Most students managed to follow the essential guidelines, such as keeping to the word limit, giving a word count, including a bibliography and writing a sound appendix of the scientific ideas included in the story. Perhaps the few who wrote a long story without pictures were looking at the guidelines for Junior Creative Writing on the next page of the handbook. Students also need to ensure that their story is related to the intention of the theme and identifies the topic they have chosen.

For the last two years we have trialled judging entries online and in this year of COVID-19 restrictions, STS was able to extend this facility to judges from all sections to complete assessments and comments online. There were few glitches, but most judges managed to complete the task in the time required and we thank them for their patience and persistence in getting the job done. We also greatly appreciate the continued support of the science and classroom teachers (many of whom are also judges) for this section of the Science Talent Search.

A big thank you to the many parents and grandparents who inspire and assist students to think, to research and to produce picture stories highlighting science. Judging from the acknowledgements, they provided invaluable support for the many students completing their projects as a part of remote learning.

Congratulations to all students who took the challenge of creating such delightful picture story books in 2020; do keep writing and illustrating in 2021.

# STS Coordinator Reports

## Creative Writing – Junior

**Section Coordinators: Amelia Strzebonski, Rosina Tassone and Kylee Townsend**

Ocean exploration and human impacts on the environment tend to be topics of great interest for young people today. The 2020 Science Talent Search theme, *Deep Blue: Innovations for the future of our oceans*, enabled entrants to further their knowledge in these and other areas, whilst also developing their creativity. Each year, Junior Creative Writing comprises the largest number of entries in the competition. This year there were 168 entries, read and enjoyed by over 20 volunteer judges.

As always, the Junior Creative Writing Section provided a wonderful avenue for students to present their writing in a style that suited them. Writing styles included journal entries, letters, and comic strips. The higher scoring entries, especially in the case of comic strips and illustrated stories, were those that integrated science concepts into a creative story well, explaining each concept more fully in an Appendix.

In general, the creative pieces most scientifically accurate were those that wrote about ocean exploration to the Challenger Deep. A number of entries referenced James Cameron's journey in the Deepsea Challenger, or re-imagined the journey with themselves as explorers. To increase their scientific understanding, students are encouraged to read a range of reputable sources, and list them in their Bibliography. There were many entries that painted a bleak view of the future, but several extended their scientific writing to include credible solutions.

This year highlighted the value of the drafting process in entering creative writing pieces of a high standard. Access to teacher guidance in ensuring entries met the Handbook requirements posed a challenge during remote learning. We appreciate all of the teachers who were able to assist their students to produce quality work, as well as students' family and friend networks acknowledged in their entries.

In recognition of the unprecedented changes faced by Victorian students this year, we endeavoured to be more flexible when awarding entries, whilst keeping the integrity of the creative and scientific standards intact. It can be a complex task to balance the importance of scientific content with the creativity and originality of a writing piece. Additional valuable comments from judges that drew attention to specific entries allowed us an opportunity to consider some of the more unusual entries for awards.

Congratulations to the students, and thank you to their families and teachers/mentors, as well as the judges for their enthusiastic involvement in the Junior Creative Writing Section, and for ensuring that the competition was a success this year.

## Creative Writing – Intermediate Report

**Section Coordinator: Lynden Fielding**

In 2020, a team of ten judges assessed fifty-three Intermediate Creative Writing entries from eighteen schools. The number of entries 'received' was equal to the 2019 total. The number of schools submitting entries was five less than in 2019. A nineteenth school contributed to thirty-seven registered but 'not received' entries from ten schools. In 2019 eight registered entries were 'not received'. The ninety registered entries were a fifty percent increase from 2019. The increase in 'not received' entries is possibly due to years 9 and 10 students commencing remote online learning from the start of term 2, introducing a new level of complexity in schools to teacher and STS coordinator liaison with students and the process of entry finalisation and submittal.

The overall standard of Intermediate Creative Writing entries was again consistently high in 2020 and judging has continued to be very competitive. There were four allowed topics relating to the 2020 theme of 'Deep Blue: innovations for the future of our oceans'. Two of the topics were equally popular. 'Oceans of the future' and 'Uncovering the secrets of the ocean' were chosen by about sixty per cent of entrants. 'The deep, deep ocean' and 'SOS: Save our oceans!' were chosen by about forty per cent of entrants. Eight Major Bursaries of \$70 and fifteen Minor Bursaries of \$60 were awarded, thanks to the generosity of sponsors and donors. Five entries gained a Distinction award. All other entries were of a standard deserving of a Merit Certificate, which was a positive acknowledgment of their writing endeavour.

In 2020, it was stipulated that the creative writing pieces on one of the four topics must relate to the theme of 'Deep Blue: innovations for the future of the oceans'. Overall, the relationship between the students' writing and the theme was generally tenuous. Stories were original and creative, but often didn't have a connection to innovations for the future of the oceans. Key judging criteria discriminators for the award of a Major Bursary were again the integration of science ideas into writing, the amount of scientific content included in the writing, and originality and creativity. It is always important that students gain a thorough understanding of the section Guidelines page in the STS Handbook prior to commencing their writing project. The additional page on How to Cite References and Write a Bibliography will alert entrants to the requirement to list both the date and time that they access websites. If students have this in mind from the commencement of their entry, then they should be able to fulfil this formatting requirement. Importantly, students can use the Entry Guidelines as a self-assessment checklist prior to submitting their entry.

Congratulations to all the 2020 Years 9 and 10 authors on their creative writing, with all entrants receiving a Bursary, Distinction or Merit Award. The judging team from ten schools across the Government, Catholic and Independent sectors is especially commended for using the online





system of receiving entries for judging and entering comments and results so well. Judges did a sterling job of evaluating all entries using the judging criteria for Scientific Content and Presentation. They wrote feedback comments for each entrant, and they provided advice to the Section Coordinator. We are most appreciative of the judges' volunteer time, expertise, and careful judging. We are grateful for the involvement of parents and other mentors. Thank you to all the school Science learning area directors, coordinators, teachers and education support staff for supporting and encouraging the students.

## Working Models and Inventions – All divisions

**Section Coordinators: Janice Teng, Maureen Frith, Manju Mohandoss, Frances Sidari and Veena Nair**

Congratulations to all the bursary winners of the Working Models and Inventions. We know that many spent long hours, making and refining their models and inventions in order to ensure that they were performing to their satisfaction. This year there were 13 Major bursaries and 19 Minor bursaries awarded in the Working Models section, and 8 Major bursaries and 2 Minor bursaries awarded in the Inventions section.

Students did a great job of completing their projects during lock down, especially those who had to improvise and substitute parts for those which they would normally be able to purchase. Families should be thanked for the support that they have given to students in completing their projects and making their videos. Overall, the entries were of good quality and enjoyable for judges to read and view. If you were unable to complete your projects on time, don't give up but have another go next year!

The following aspects of the Working Models and Inventions category that could be given more attention next year still apply:

- (a) Differentiating between an Invention, Information Model and Scale Model – In order to decide whether they have made a model or invention students should consider whether the object already exists. Could they find a picture of one or read about it in the media? Would it be possible to buy one? If so, it is not an invention, it is a model of an object which already exists. An invention is a new object which no-one has yet designed or made, or a new innovation no one else has done before. A working model can be one of two things: a model which demonstrates a scientific principle or a model which is an exact copy of an existing object but reduced or enlarged in size by a particular ratio.
- (b) Information Models – students need to keep in mind their purpose for building the model, i.e. to demonstrate a scientific principle. We would expect students, after stating what the scientific principle is, to explain in detail their understanding of the principle and how the working model shows this.

- (c) Inventions – We suggest that you start with a real-world problem, one that your invention has a purpose to help solve and make applications to improving people's lives or the community.
- (d) Originality and Creativity – Watching YouTube videos can be a great stimulus for new ideas. However, we would expect students who make models following YouTube instructions to personalise them by modifying or extending the original design.
- (e) Risk assessment – The risk assessment should be carried out before any activity to identify, eliminate or control the hazards and risks associated with the construction and use of their model or device.
- (f) Static vs Working devices – Both the Working Models and Inventions state in the guideline that the device should be 'working'. The moving or 'working' parts should be an integral part of the model and demonstrate the scientific principle or concept.
- (g) Written report – Presentation of a report which does not follow the guidelines makes judging more difficult and, in some instances, disadvantages the student. Reports should be easy to access (word or PDF format), easy to identify (Entry face sheet) and easy to read. Diagrams should be neat and well labelled. There should be a photograph of the device. A sample format is available online for students new to writing a report for Working Models and Inventions.
- (h) Scientific principles – students are reminded that this is a Science Talent Search and the device is the vehicle through which they are demonstrating their scientific knowledge.
- (i) Appendices and supporting information – Sometimes you can show the depth of your investigation and design process by scanning and supplying a copy of your log book. You may even consider providing the results and measurements of testing your device, or for example when referring to 'learnt coding' the actual codes you developed in the appendix.
- (j) References and acknowledgements – students are reminded that there is a correct way to record websites and print resources in their bibliography and references. This is explained clearly in the STS Handbook on page 23.

Many students are inspired by the year's theme, but we would like to remind students that in Working Models and Inventions, they do NOT have to be limited to the theme and can be creative as well as pursuing their own interests in any aspect of Science! In fact, we prefer students to start off with a question for themselves concerning a current issue and how they would solve it for the Inventions section, or those who have an interest in how something works and then investigate this to produce a Working Model.

Students are reminded that if they are re-entering a project that has been developed since the previous year, they must clearly show in their model/device and report all the new modifications and/or improvements made



# STS Coordinator Reports

from their previous entry. This is also important if they are entering different aspects of their project into two sections in the same year.

We would like to thank all the judges who provided time and expertise to view and evaluate the students' entries and providing them valuable feedback.

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## Posters - Scientific Wallcharts – Lower Primary, Middle Primary and Upper Primary divisions

### Section Coordinator: Ann Pisarevsky

2020 Science Talent Search Poster-scientific wallchart division was like no other year for, this year, students were expected to not only provide a poster but to present it and a short talk online.

Congratulations to all those students who made the effort to compete in the poster section of Science Talent Search.

This year 207 posters were entered with 104 from upper primary, 75 from middle primary and 28 from lower primary students. Of those students who entered the lower primary section, 3 received a major bursary and 6 received a minor bursary. In the middle primary section 7 students received a major bursary and 15 received a minor. As for upper primary, 10 students received a major bursary and 20 received a minor.

Students were asked to address one of the topics given. The topics were- SOS: Save our oceans!, conserving ocean life, ocean energy and deep blue ocean.

From reading the judges' reports, all felt that the posters presented were well set out and showed a good understanding of the scientific content relating to the topic. There were, however, a number of posters that did not comply with the guidelines. In some cases photographs were attached to the poster and yet in the handbook guidelines it clearly states that a poster-scientific wallchart should include original diagrams. If references are mentioned from web sites, then time and dates should be included in the reference. Clearly a number of students were unaware of these guidelines.

Furthermore, students should note that as Posters-Scientific Wallcharts are complete in themselves, then anything else provided is irrelevant. On the other hand, students and teachers should make sure that entry details on the face sheet are complete.

The judges were impressed by the enthusiasm of the students and their understanding of the concepts presented on their posters.

Many thanks to those who gave up their time to be involved in the judging.

## Posters - Scientific Wallcharts – Junior and Intermediate Divisions

### Section Coordinators: Rebecca Hann and Stephanie Lewis

The online judging this year succeeded due to the tireless efforts of 17 volunteer judges made up of primary and secondary teachers who volunteered their time to judge entries online with a platform that they had not used before. A big thank you to all judges who gave their time to make it possible to judge so many entries this year.

Also, thank you to the teachers who supported their students in meeting the altered entry requirements, and the submission of entries this year.

The number of Junior entries received was 76. Of the entries submitted, 9 won Major Bursaries, 21 won Minor Bursaries, 19 entries received a Distinction certificate and 27 received a Merit certificate.

42 Intermediate entries were received, more than double last year's total. Of the entries submitted, 4 won Major Bursaries, 9 won Minor Bursaries, 5 received Distinction certificates and 24 received a Merit certificate.

We encourage more students to enter next year. The favourite STS topic for entrants was "Oceans of the future" at 44%. Next popular was "Oceanic aquaculture" at 32%, then "Biomimicry in the oceans" and "SCUBA droids of the deep" both at 11%. Another 2% of entrants did a non-official STS topic for this year, which led to their posters losing marks.

Student posters focused on topics such as future floating cities due to global warming, machines to clean the pollution in our oceans, harnessing ocean energy to reduce global warming, the effects of coral bleaching, marine chemical contamination, closed or open aquaculture systems, ocean acidity, sea dredging and a robotic data-collecting fish.

Students are reminded that work must be presented in one poster, not double sided, or across multiple sheets of paper. PowerPoints do not meet the requirements. Diagrams must be hand- or computer-drawn. These all need to be titled and parts labelled. Diagrams should be referred to in the written information on the poster; for example, "see figure 1". Diagrams can be graphs, tables or flow charts. Written information needs to be titled/ headed for each relevant section of the poster. Oral presentations should expand and add depth to the poster where possible, rather than reading the poster word for word. Students need to remember when accessing the internet to include the site, dates and times in their bibliography. The bibliography needs to be on the front of the poster so that it is visible when the poster is put on a wall.



Congratulations to all students who entered. Judges were amazed by the high standard of most posters. In our first year of being section coordinators, we have been delighted by the standard of work that has been presented, along with how well students verbally presented their posters. It was evident that most students fully understood the content and were passionate about what they had chosen to report on.

## Games – All divisions

### Section Co-ordinators: Damiano Lo Nigro and Lucy Cassar

Over 95 percent of Earth's oceans have never been explored, and in the case of STS Games this percentage rings true of the untapped budding scientists out there in our schools. Through the trials and tribulations of 2020, our children have outshone themselves again! Judging 'Day', more like 'Judging Week' this time around, was a little different this year, but the tried-and-true shone through. It is no better showcase of talent on display than students having fun playing games of their own devising about the science topics that interested them.

In 2020, virtually through the Google Suite and the STS judging platform, judges enjoyed seeing the creative ways the students presented their games. The judges used a rubric which closely followed the guidelines listed in the Science Talent Search Handbook.

This year 78 entries (representing 94 students) were judged, of which 24 were awarded bursaries. It is pleasing that teachers are making time available in the crowded curriculum for students to pursue very worthwhile projects such as STS.

The best entries were those that not only contained good science, but showed evidence that research was used to develop the game around finding solutions to real issues.

Although students entering the Games section are not obliged to follow the theme for the year, the topic of Deep Blue: innovations for the future of our oceans was embraced enthusiastically by the students, with games such as Destination: Ocean Floor, Ocean Commotion, Marvellous Marine Makers and Aqua Warriors to name a few. Students also showed concerns about animal and marine conservation issues with games such as Food Chain Failure, Fantastic Plastic?, The Game of Bones and Garblenge: The Great Garbage Challenge. Other popular topics included The Solar System, Habitats and Pollution. It is very encouraging that students are applying real-life problems to their games, making our students global citizens in the world of science.

Tasks that promoted problem solving were highly regarded, whereas "luck" squares in board games and recall of trivial facts did not score well. Overall, the judges were very impressed with the creativity shown by students to produce eye-catching and innovative games that were original and fun to play.

All this was made possible by the generosity of many science teachers who encouraged their students to enter the Science Talent Search, guided their research of the science ideas and inspired them to express their creativity in many different ways. Many of these teachers also gave hours of their free time to judge the entries. We thank the parents for supporting their children in preparing their entries.

We also thank the students who put so much work into completing their entries and uploading them to be judged. They have achieved much learning about science and shared their learning with the judges virtually.

We hope for a bigger and better 2021, hopefully this time in person. Until next time, Yours in Science, the STS Games team!

## Computer Programs (Games and Simulations)

### STS Section Coordinators: Blair Odom, Finn Mulhall and Joseph Ghaly

As with most things in Melbourne, COVID-19 brought major changes to the way entries were judged in all sections of the Science Talent Search in 2020. Judges in the Computer Programs section dealt with enormous challenges as they worked to download programs that were written in a variety of programming languages and uploaded onto multiple platforms by sponsoring teachers on behalf of their students. By the end of the judging period, many emails had been sent between judges, coordinators, supporting teachers and students to ensure that every program, written report and accompanying explanatory video could be adjudicated fairly.

Judges worked together remotely in pairs or groups of three to evaluate a single division's entries and cross-check with each other to ensure they had interpreted the scoring rubrics in the same way in order to maintain fairness, moderating their results before submitting them. Once scores were completed, the section coordinators went back through the results to determine bursary winners.

While judging remotely presented many challenges, it also allowed judges to spend more time on each entry. They were able to control the games themselves and play them without the normal time pressures that are felt on an in-person Judging Day. Because of this, they were able to analyse the entries with greater focus and collaboration. As a result, we feel confident that this year's entries have been judged to an exceptionally high standard.

Each year, the judges are awe-struck by the breadth of science topics covered using a range of programming skills and variety of software. As always, our judges were impressed at the level of sophistication in both computer programming skills and scientific understanding that they observed when viewing entries. It is always pleasing to see that students endeavour to become experts in an area of scientific focus, rather than merely concentrating on creating a computer program. Well done to these children in particular!

# STS Coordinator Reports

We are normally grateful to our judges for sacrificing a Saturday morning to assess entries. This year, these wonderful volunteers gave up at least triple the amount of time, due to the challenging nature of collaborating remotely and downloading the programs and accompanying files in a viewable version depending on the computer they were using at home. We were, once again, stunned at the expertise and dedication of our team of volunteer judges. Without them, the students would not receive meaningful feedback for their hard work. We offer our sincere thanks and deep appreciation to our judges.

Thank you to the students for their considerable efforts and interest in furthering the cause and path of science. We hope this competition ignites a passion for science and helps you progress toward a bright future in a field of science you enjoy.

With sincere appreciation and wonder, this year more than ever, we acknowledge the unending support of Janice Teng, at STAV, for her tireless efforts to pull everything together during a global pandemic. It has been remarkable to watch her work and we appreciate the support she has given us.

We look forward to 2021 in the hope that we can enjoy another face-to-face Judging Day, so that we may celebrate scientific curiosity and computer programming in person!

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## Photography – All divisions

### Section Coordinators: Sheba Gurm and Matt Story

This year the students in the Scientific Photography section submitted some wonderful work. The way students adapted to a wholly online submission format was well organised, with many students picking very unique themes to focus on in their work. The competition for the bursaries this year was quite close, which just goes to show the effort students are putting into their submissions.

We would particularly like to thank the judges who took time during this time to judge the entries diligently and in a timely manner, while managing the new digital submission format.

We look forward to seeing more entries in photography and hopefully being able to converse with the students about submissions in the future.

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## Videos – All divisions

### Section Coordinators: Jennifer Cutri and Jason Smith

The Video Section for the Science Talent Search continued in 2020, albeit without the usual Judging Day in August. With the change in entry criteria in lieu of the Judging Day, students submitted two videos, one on their topic and one explaining the learnt camera and production techniques along with the scientific content of their topic.

Well done to all students for embracing the changes for 2020. Congratulations to the bursary winners for submitting original and engaging videos, and clearly communicating not only their topic, but the way they captured and presented their videos.

Thank you to all the teachers and volunteers who gave their time as Judges to evaluate the projects.

I recommend students read their judging comments, as they provide valuable advice. We would like to emphasise that students read the judging criteria in the STS Handbook and follow the guidelines.

We look forward to 2021 being another successful Science Talent Search in the Videos section.

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# Notes



# Special thank you

**The following organisations are thanked for their donations and contributions to our expenses:**

Australian Skeptics

Australian Society for Biochemistry and Molecular Biology

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5 Munro Street Coburg VIC 3058

Postal Address: PO Box 109 Coburg 3058

Phone: (03) 9385 3999 Email: [sts@stav.vic.edu.au](mailto:sts@stav.vic.edu.au)

Websites: [www.stav.org.au](http://www.stav.org.au) and [www.sciencevictoria.com.au](http://www.sciencevictoria.com.au)