



WONDER OF SCIENCE®

2016-17
ANNUAL REPORT



THE ESSENCE OF WONDER OF SCIENCE

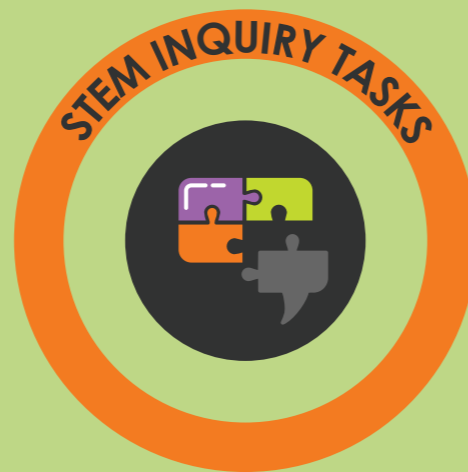
“A renewed national focus on STEM in school education is critical to ensuring that all young Australians are equipped with the necessary STEM skills and knowledge that they will need to succeed.” - National STEM school education strategy, 2016-2026, p3.

Wonder of Science promotes a STEM culture in schools – where students, their teachers and parents/carers understand the importance of STEM and believe that STEM education and careers are within their reach. It is creating aspiration for STEM education thus generating capacity for innovation in Queensland and ultimately, Australia.



INSPIRATIONAL PHD RESEARCH STUDENTS ARE PASSIONATE AND KNOWLEDGEABLE STEM ROLE MODELS

The Young Science Ambassadors are integral to Wonder of Science. Selected post graduate students from leading Queensland universities visit participating schools to work with students on their challenge tasks, and support them to develop a group presentation. The ambassadors are inspiring role models for both students and teachers, who have described them “as bringing STEM to life”. The ambassadors support implementation of Wonder of Science, and judge presentations at the student conferences.



CHALLENGING, REAL-WORLD TASKS ALIGNED TO THE AUSTRALIAN CURRICULUM

The Wonder of Science challenge tasks immerse students in authentic and collaborative inquiry. Students develop critical and creative thinking skills as they are challenged to develop a group response to a real-world problem or scenario. Representative teams are chosen to attend regional student conferences to present their response and showcase their work. Winning teams receive a trophy and individual medals, and are invited to attend a state conference.



ASPIRATIONAL REGIONAL AND STATE STUDENT SHOWCASE EVENTS

Representative teams from participating schools are invited to present their challenge task response at a one-day regional student conference. Students compete with opposing teams and have the opportunity to present twice; to two different teams and to different judges. In addition, students have the opportunity to participate in ‘Speed-meet-the-Scientist’ activities and workshops.



BETWEEN SCHOOLS, UNIVERSITIES, INDUSTRY GROUPS, NON-PROFIT ORGANISATIONS & GOVERNMENT AGENCIES

Wonder of Science is fostering partnerships between schools and the wider community through our partner organisations. Our university partners host student conferences and provide students for the Young Science Ambassador program. Representatives from our industry partners and other organisations attend student conferences to provide workshops and judge student presentations.

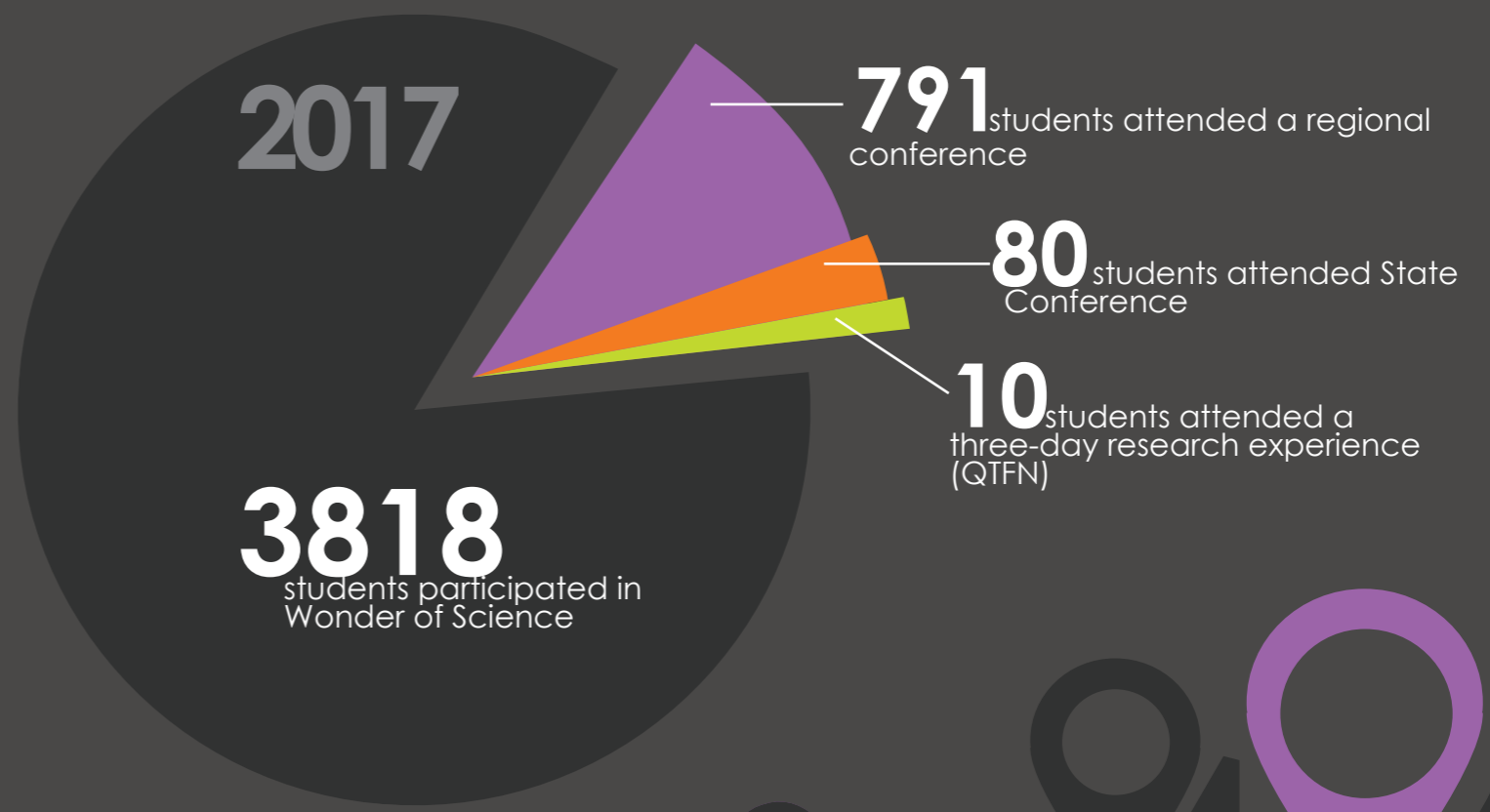
TYPICAL TIMELINE FOR SCHOOL ENGAGEMENT WITH WONDER OF SCIENCE



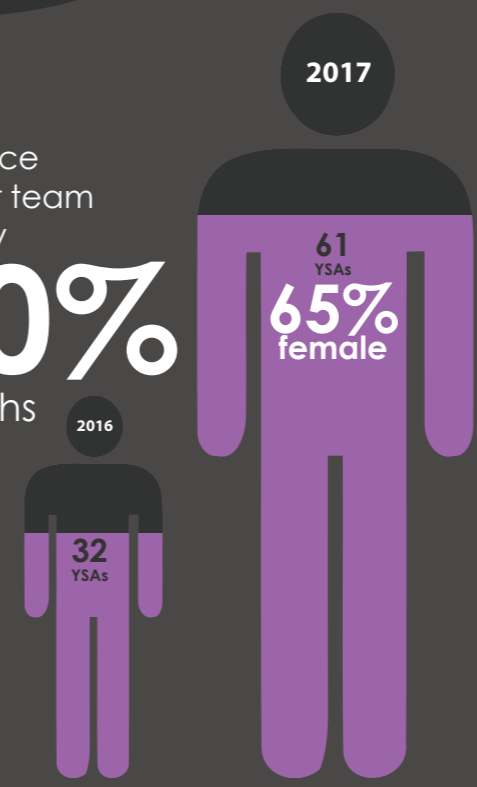


- WoS current reach
- WoS demand
- Flying Scientist visits

IMPACT



Young Science Ambassador team increased by **200%** in 12 months



58% of schools are rated below the average socio-education advantage (ICSEA)¹

¹ www.myschool.edu.au (2017)

THE WONDER OF SCIENCE ADVANTAGE



KAYE NORTH
STEM Champion
North Coast Region
Department of Education and Training

"I would actively encourage support for the Wonder of Science Program in any capacity. The team that run it are experts in their field, and run a program for schools that promotes a STEM culture. It focuses on all areas of the State Schooling agenda – building teacher capability in STEM subjects, improving student achievement and increasing student engagement. It impacts students in their approach to Science as they see the links to real life and how science is all around us. They can see the relevance of STEM careers and how it isn't just about the facts, it is about questioning, researching, coming up with ideas, testing the ideas and presenting the results."

Access to highly skilled STEM professionals and building a STEM-literate citizenry

QUEENSLAND AND AUSTRALIA



QLD DET
High quality support for schools with their STEM agenda

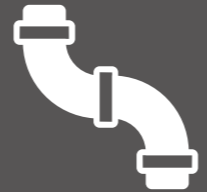


INDUSTRY
Building positive relationships with schools and communities

GOVERNMENT AND INDUSTRY



RHD STUDENTS
Broadened capability and STEM communication skills; understanding of teaching as a career pathway



UNIVERSITIES
Supporting a pipeline of skilled STEM students for university studies and engaging with communities

UNIVERSITIES



STUDENTS
Inspiration and capability for STEM studies and career pathways



TEACHERS
Increased enthusiasm and capability for STEM teaching; understanding STEM pathways for students



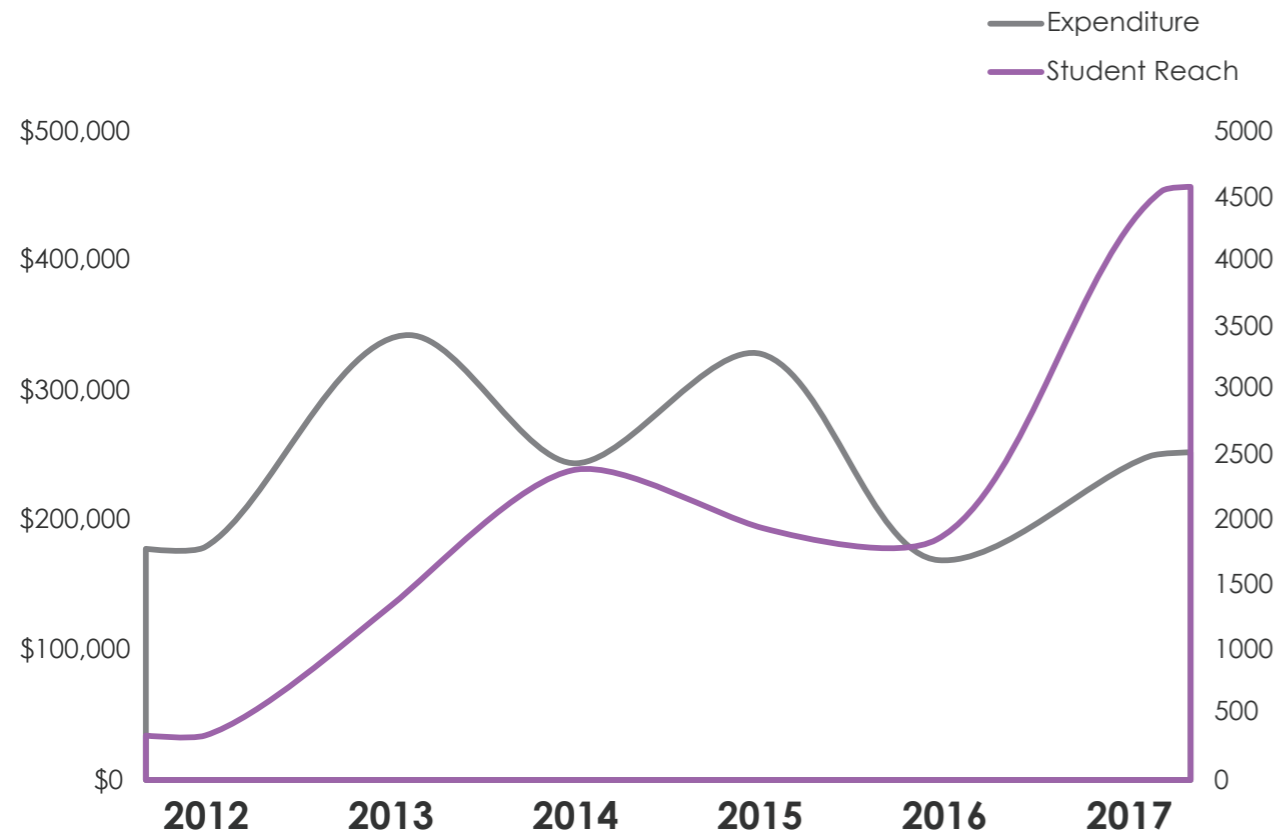
PRINCIPALS
Increased teacher capability; extended opportunities through partnerships with universities and industry

SCHOOLS



GROWTH

WONDER OF SCIENCE ANNUAL STUDENT REACH AND EXPENDITURE



EXPANSION

Growth in demand for Wonder of Science has significantly extended the reach into schools across Queensland in 2016-17. This has included schools in the metropolitan region as well as regional and remote areas, impacting almost 6000 students (175% growth) and their teachers in 130 schools.

20% of participating students attended a one-day regional student conference and 80 of those students progressed to the next level, participating in the inaugural state conference in December, 2017.

As depicted above, demand for Wonder of Science exceeds capacity, and it is likely that demand will continue to grow. Ongoing partner support will enable a continued focus on regional, remote and disadvantaged Queensland schools.

SUSTAINABILITY

Prior to 2016, through generous support from our partner organisations, Wonder of Science was provided free of charge to regional and remote Queensland schools.

To cater for the increased demand for the program, as well as a reduction in funded models (owing to downturn in the sponsor companies' markets) a fee for service program was successfully piloted in 2016. As well as continuation of industry-funded programs in 2017, almost 20 schools involving around 2000 students engaged via the fee for service program.

Efficient cost management combined with the fee-for-service program, as well as partner-funded programs, is ensuring that Wonder of Science is sustainable for schools, as well as our partner organisations.

FINANCIAL OVERVIEW 2016-17

INCOME (\$'000)	
Income from corporate partners	695
Total	695
EXPENSES (\$'000)	
Programs	181
Young Science Ambassadors	151
Administration	72
Total expenses	404
NET SURPLUS	291



JAMES FORREST
Principal
Kimberley Park State School

"The money we put forward on Wonder of Science supported the significant learning of 35 students. So if you work that at cost per head, it's less than \$100 per child. What they got out of the learning; bringing those specialised people into the school, having a follow up program (conference), and then building new partnerships. You couldn't do that for three times that amount of money. So in terms of value for money, principals if you see this come on board."



REACH

2016 Wonder of Science School Programs

Cluster/Region	Funding model		Number of schools	Number of classes		Total students	Conference attendees		
	Funded	Fee		Location	Teachers		Students		
Surat Basin	○		22	Year 5	13	820	Wondoan	11	80
				Year 6	14				
				Year 7	4				
				Year 8	4				
				Year 9	4				
Total	37			Total	27	217			
Far North Queensland	○		14	Year 5	4	690	Cairns	18	97
				Year 6	11				
				Year 7	9				
				Year 8	5				
				Year 9	6				
Total	35								
Logan primary	○		2	Year 5	3	160	Logan	5	90
				Year 6	3				
Total			38	74	1,670	Conference	50	404	



DARIN MAY
Principal
Jimbour State School

"Thanks for everything with the Wonder of Science this year. The students really enjoyed the learning and activities that they were involved in."

2017 Wonder of Science School Programs

Cluster/Region	Funding model		Number of schools	Number of classes		Total students	Conference attendees		
	Funded	Fee		Location	Teachers		Students		
Darling Downs South West	○		14	Year 5	11	505	Miles	14	130
				Year 6	14				
				Year 7	3				
				Year 8	3				
				Year 9	2				
Total	33			Total	26	250			
Roma SC and Surat SS	○		2	Year 5	3	260			
				Year 6	2				
				Year 7	3				
				Year 8	3				
				Year 9	1				
Total	12								
Brisbane metro secondary	○		10	Year 7	6	670	Shailer Park	25	125
				Year 8	12				
				Year 9	7				
				Total	25				
Brisbane metro primary	○		3	Year 5	3	435	Various	16	170
				Year 6	11				
North Coast			18	Year 5	27	1680	Sunshine Coast	18	162
				Year 6	15				
				Year 7	5				
				Year 8	1				
				Year 9	2				
Total	50			Total	29	236			
Total			47	135	3,818	Conference	96	791	



FLYING SCIENTISTS

THE INITIATIVE

The Flying Scientist Initiative, a partnership with the Queensland Office of the Chief Scientist (QOCS) is another key example of the value-add that WoS partnerships are bringing to Queensland schools and communities.

The initiative is designed to address the lack of science events and activities in regional and remote Queensland. The flying scientists speak at community engagement events and accompany the WoS ambassadors on school visits.

The flying scientists are drawn from Advance Queensland research fellows and the Chief Scientist's Young Tall Poppy Awardees, with WoS providing training and administration of the scientists, as well as coordination of the community events.



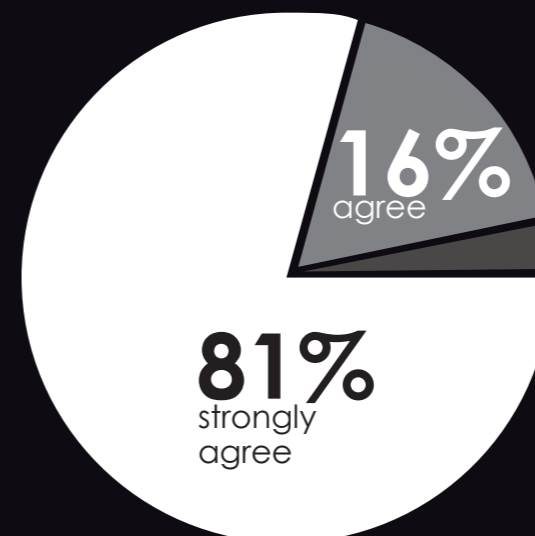
DR KATE HUTSON
Flying Scientist
James Cook University

"I think the program is fabulous. It is so challenging to reach out and engage with remote, regional communities – the Flying Scientist program enabled this... I especially liked talking to the parents afterwards ... having Dr Geoff Garrett there was an outstanding demonstration of state support for this initiative. Thanks for the opportunity to be involved!"

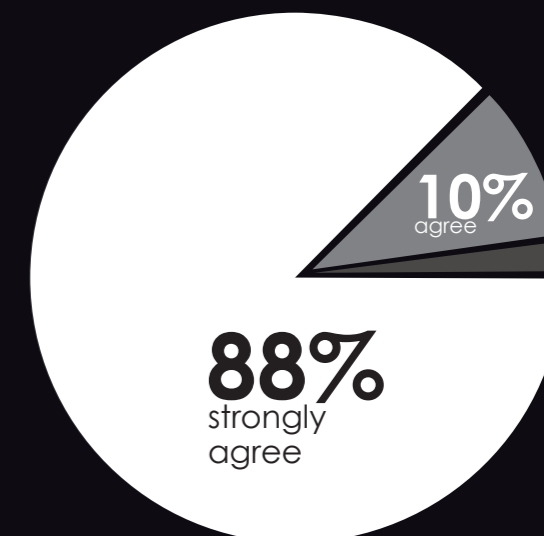
2017 Flying Scientist Events

Date	Location	Flying Scientist	Activities	Attendee numbers	Total numbers
3-4 March	Gladstone	Dr Paul Luckman Naomi Paxton (YSA)	Gladstone World Science Festival Community Day	3500	4200
			School visits (2)	200	
31 March - 1 April	Chinchilla	Dr Makrina Totsika Dr Dimitrios Vagenas	Chinchilla World Science Festival Community Day	1500	1500
14-15 August	Charleville	Dr Janie Hoormann	Cosmos Center Community Events (2)	90	200
			School visits (2)	110	
28 August	Mt Isa	Dr Paul Shaw	Community Event	65	65
29-30 August	Weipa	Dr Shihu Hu	Community Event	40	400
			School visits (3)	360	
1 September	Calen	Dr Alice Hayward	Community Event	12	52
			School visit	40	
Total	6 Locations	8 Flying Scientists	7 Schools	710	5917
			7 Community events	5207	

FLYING SCIENTIST COMMUNITY EVENT FEEDBACK



The presentation highlighted the value of science and its application in communities



More events like this would be useful and welcome in my community



PARTNERS

Wonder of Science would not be possible without our valued partners - thank you!



PARTNER WITH US

We welcome organisations, philanthropic foundations, universities, and other STEM agencies as partners.

For further information, please contact:
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