BROADENING HORIZONS - STEM SCHOOL PACK

ARDOCH

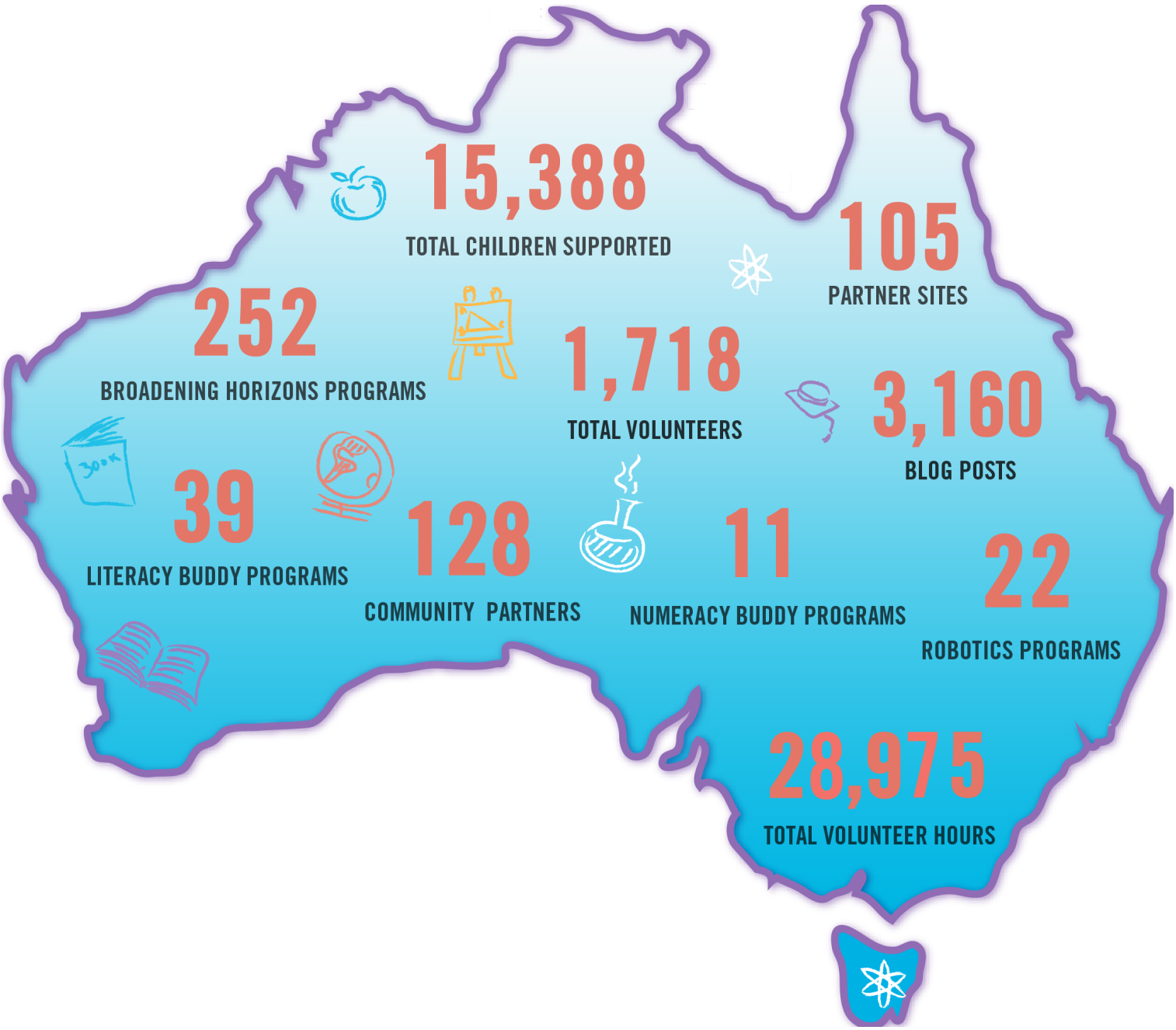
ABOUT ARDOCH

Ardoch is an education charity focused on improving educational outcomes for children and young people in disadvantaged communities. Our vision is that every child's potential is realised through full participation in education.

Multiple studies in Australia have demonstrated an unacceptable link between the socio-economic status of students and their educational outcomes. One in three children in Australia's most disadvantaged communities start school developmentally vulnerable and they continue to fall behind as they progress through school. We want to change this.

grow

Our 2018 highlights



Learning Outcomes

Science Inquiry Skills; Planning and Conducting

Year 3 and 4: With guidance, plan appropriate investigation types to answer questions or solve problems and use equipment, technologies and materials safely, identifying potential risks (VCSIS083)

Science Inquiry Skills; Communication

Year 3 and 4: Represent and communicate observations, ideas and findings to show patterns and relationships using formal and informal scientific language (VCSIS072)

Science Understanding; Science as a Human Endeavor

Year 5 and 6: Scientific understandings, discoveries and inventions are used to inform personal and community decisions and to solve problems that directly affect people's lives (VCSSU073)

Year 7 and 8: Science and technology contribute to finding solutions to a range of contemporary issues; these solutions may impact on other areas of society and involve ethical considerations (VCSSU090)

Year 9 and 10: Advances in scientific understanding often rely on developments in technology and technological advances are often linked to scientific discoveries (VCSSU115)

"The kids just thoroughly enjoyed being able to experience everything on offer. Something they often don't get to do. Thank you."

Teacher, 2018 STEM excursion

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REALISING CHILDREN'S POTENTIAL THROUGH EDUCATION

BROADENING HORIZONS - STEM

Approximately 75% of the fastest growing occupations require STEM knowledge. In STEM Broadening Horizons programs, students access hands-on STEM experiences to increase interest in science through increased participation.

2815	50	84
children participated in 2018	STEM Broadening Horizons in 2018	parents participated in 2018

WHAT THE PROGRAM OFFERS

- HANDS ON ENGAGEMENT WITH STEM
- PARTNERSHIP WITH SCIENCEWORKS
- PARTNERSHIP WITH MUSEUMS VICTORIA
- PARTNERSHIP WITH ANIMAL ENCOUNTERS

91% of students could name at least one new word they learnt at the STEM excursion in 2018; 96% of teachers said their students displayed significant cooperation with one another at the STEM excursion in 2018; 93% of students tried new STEM activities at the excursion in 2018.

Broadening Horizons in 2019+

67	3240	100	4
PROGRAMS	CHILDREN	PARENTS	COMMUNITY PARTNERS

Activity 1

Activity 2

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STUDENT

GUIDE

In each activity, what did you hear which interested you most?

My excursion today was to:

Activity3

Activity 4

STEM Excursion Question Prompts

What did I see today that was new?

What question did I ask myself or others?

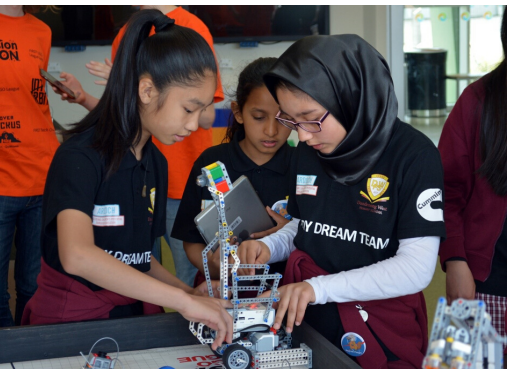
What did I wonder about?

What was surprising today?

What did I see today which reminded me of something we did in class?

What did I do today that I would I like to do again?

EXPECTATIONS OF THE DAY



EXPECTATIONS OF TEACHERS

Book date and time for STEM excursion with Ardoch liaison and confirm in school calendar

Book bus to travel to the STEM excursion

Forward bus invoice to Ardoch liaison for payment

Organise what time event should commence and agree with Ardoch liaison

Ensure students are aware the STEM excursion is happening

Prepare students for the event by discussing what they will see and do

Encourage students to reflect on the experience throughout the activity and in coming weeks

Complete Ardoch's post-STEM excursion teacher survey

Ensure that students complete Ardoch's post-STEM excursion student survey

Ensure Ardoch photo /content permission forms are returned to Ardoch liaison.

EXPECTATIONS OF ARDOCH

Secure partnerships with a variety of high-quality STEM excursion locations

Prepare teachers by sending program activity booklet

Issue photo/content permission forms to teacher

Encourage feedback and student voice by issuing teacher with surveys for students to complete.

Approximately 75% of the fastest growing occupations require STEM knowledge.

(Office of the Chief Scientist 2016)

FOR MORE INFORMATION PLEASE CONTACT

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