

2014 Annual School Report

Field of Mars Environmental Education Centre

NSW Public Schools – Leading the way



Principal's message

One of the key goals of the Field of Mars Environmental Education Centre (EEC) is to ensure students have high quality authentic learning experiences in natural settings. Research suggests that when students experience quality time in these environments there are a range of measurable benefits including; increased creativity, increased resilience and reduced stress. Students are calmer, better at critical thinking, their behaviour and attention span improves, signs of attention deficit disorder are reduced and as a result, students tend to do better in standardised tests. The benefits of taking students outside are therefore real and quantifiable. As an educator I believe one of the biggest benefits is that this leads to engaged, self-regulated learners.



During 2014, the centre continued its focus on the development of new and innovative sustainability education programs and resources as well as the renewal and updating of existing core programs. All our programs have a strong focus on literacy, numeracy, visual arts and science and technology and many are regarded as exemplars of the high-quality learning that can be accomplished using mobile and connected classroom technologies. The teaching and learning in our programs has been carefully planned to be student-focussed and driven in-line with contemporary educational best practice and curriculum priorities and is clearly focussed on the quality teaching dimensions of intellectual quality, significance and quality learning environments.

I certify that the information in this report is the result of a rigorous school self-evaluation process and is a balanced and genuine account of the school's achievements and areas for development.

Steven Papp

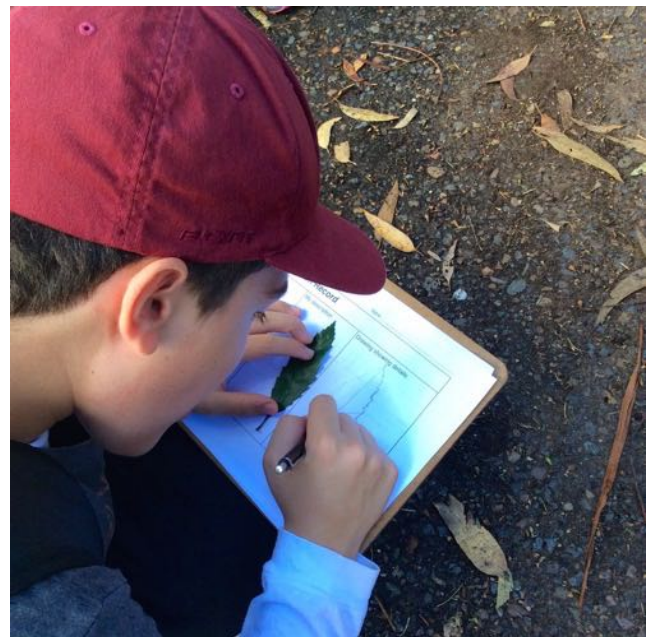
Principal

School Context

The Field of Mars EEC is one of 25 environmental education and zoo education centres run by the NSW Department of Education and Communities (DEC).

EECs provide authentic contexts for exploring, investigating and understanding values, concepts and systems in the natural and made environments and equip students to design solutions to real world sustainability problems.

Field of Mars EEC is located in a reserve of remnant urban bushland in East Ryde. It offers programs to support schools and their communities with environmental and sustainability education. Programs are conducted on site at the



Field of Mars Reserve, at other sites such as local reserves, in school grounds and via connected classrooms video conferencing technology.

The centre provides support, advice and resources for teachers. It is also used as a workshop venue for schools and other professional learning meetings.

Visitor profile

The centre provides professional learning for teachers and learning activities for students in many different modes including excursions, incursions, units of work, video conferences, themed programs and online coursework.

Total incursion and excursion student numbers by term:

	2014	2013	2012
Term 1	3138	3333	3417
Term 2	3734	3629	2717
Term 3	4677	4265	3104
Term 4	5412	3320	3570
Total	16961	14547	12808

Virtual student numbers:

	2014	2013	2012
K-12	814	3640	4537

Combined virtual and physical student numbers:

	2014	2013	2012
Total Students	17775	18187	17345

Percentage of students per stage groupings:

	2014	2013	2012
Stage ES1 - 3	93%	87%	78%
Stage 4 – 6	7%	13%	22%

Teacher Professional Learning numbers:

	2014	2013	2012
K-12	666	490	1109

Our incursion and excursion numbers increased by 16.59% in 2014. This is due to an increase in our capacity and ability to accept large bookings and through the development of new innovative and high quality student programs.

Most of the increase in student numbers has been in ES1-3, resulting in 93% of our students now coming from these stages. The apparent decrease in percentages for Stage 4-6 programs is due to the replacement of a face to face Biology introductory lesson with a new digital iTunes U Course for Y11 Biology - A Local Ecosystem.

To accommodate an increase in physical students we have had to reduce the amount of connected classrooms lessons we offer in each term. This has led to a significant drop in virtual student numbers in 2014.



Workforce Information

Staff information

It is a requirement that the reporting of information for all staff must be consistent with privacy and personal information policies.

The principal and teacher are supported by valuable input from a variety of specialist casual teachers, a school administrative manager and a general assistant. This variety of staff greatly increases the creativity of responses to new curricula, provides a greater pool of knowledge,

experience and self assessment options and ensures consistent delivery of programs. All staff are highly experienced in both classroom teaching and environmental education in a variety of contexts.

Position	Number
Principal	1
Classroom Teachers	1
School Admin and Support Staff	1

Indigenous staff

There are no indigenous staff currently working at the centre.

Teacher qualifications

All teaching staff meet the professional requirements for teaching in NSW public schools.

Qualifications	% of staff
Degree or Diploma	100
Postgraduate	50



Professional learning and teacher accreditation

Professional learning is provided to all permanent, temporary and casual staff in the centre through in-house workshops and sharing sessions or via other professional learning providers.

In 2014 there was significant expenditure on professional learning to ensure all staff were capable of supporting the development and delivery of high quality centre programs.

Professional Learning Expenditure - \$10,315

Average expenditure per person - \$1473.57

Professional learning provided the opportunity for staff to develop knowledge and skills in environmental and sustainability education with a focus on integrating these skills across all Key Learning Areas. Professional learning included attendance at:

- Apple Distinguished Educator Global Conference in San Diego USA
- NSW EEC annual conference in Newcastle
- iBooks Author workshop
- Google Docs workshop
- Quality Literature and Sustainability VC
- Climate Clever Facilitators' Conference
- Brekky with an EEC VC series
- NSW PETA English K-6 Conference
- NSW Aboriginal Education Conference
- NSW EEC Principals' Conference
- NSW EEC Leadership Conference
- ilnnovate Conference
- NSR leadership forums
- ITEC Digital Outreach Conference
- Head teacher Science and Maths Conference
- NSR principal network meetings
- SASS Conference
- SASS GA Conference
- Apply First Aid
- Virtual Excursions Australia Conference

- iTunes U workshop and Conference
- Navigating the new NSW BOSTES Syllabus
- AAE Biennial Conference 2014

Financial summary

This summary covers funds for operating costs and does not involve expenditure areas such as permanent salaries, building and major maintenance.

Date of financial summary	30/11/14
<u>Income</u>	\$
Balance brought forward	95,378.83
Global funds	36,076.32
Tied funds	61,139.27
School & community sources	275,062.97
Interest	2,173.15
Trust receipts	0.00
Canteen	0.00
Total income	374,451.71
<u>Expenditure</u>	
Teaching & learning	
Key learning areas	189,537.05
Excursions	0.00
Extracurricular dissections	27,766.87
Library	774.05
Training & development	10,315.12
Tied funds	101,800.93
Casual relief teachers	0.00
Administration & office	33,618.82
School-operated canteen	0.00
Utilities	5,618.28
Maintenance	2,972.51
Trust accounts	0.00
Capital programs	10,152.70
Total expenditure	382,556.33
Balance carried forward	87,274.21

A full copy of the school's 2014 financial statement is available. Further details concerning the above statement can be obtained by contacting the centre.

School performance 2014

Significant programs and initiatives

The continued evolution of our programs and teacher resources focussed on the integration of 21st learning skills and the meaningful use of technology.

Multi-Touch Books

The centre launched its second digital multimodal text *Ringtail Possum*. This interactive multimodal text is available on the iBookstore for iPads and Macs. It is designed to support classroom teachers and the requirements of the NSW Board of Studies Teaching and Learning Standards (BOSTES) Syllabuses for the Australian Curriculum.

The centre is currently developing *Habitat, Invertebrate Explorer* and *Traditional Wiradjuri Culture* for release in 2015.



Climate Clever

The centre coordinated the final year of implementation of the Climate Clever Energy Savers Program. Over the past four years this program has supported 134 teachers from 50 schools to develop energy efficiency focussed teaching and learning programs.

Professional Learning

The centre developed and successfully trialled the *Plugging into Nature: Learning Outside* with iPads teacher professional learning course. *Plugging into Nature* explores the use of iPads to support authentic learning outside the four walls of the classroom.

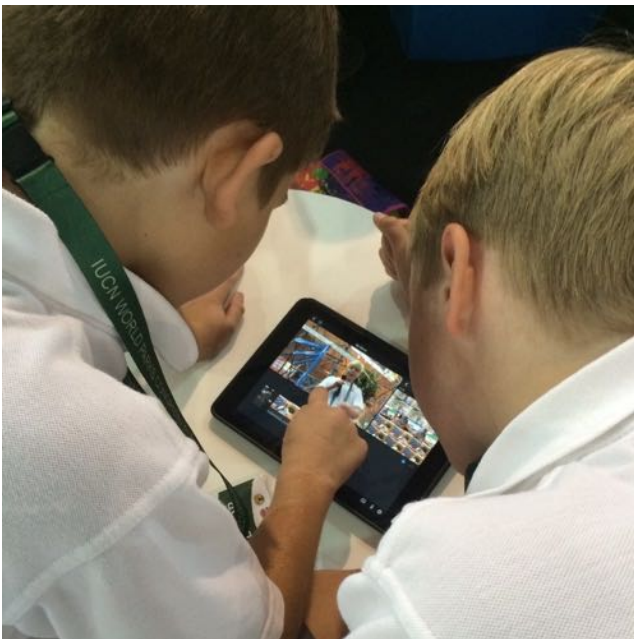
The course outlines a range of practical ideas and enables teachers to explore the pedagogy behind the use of mobile technology both inside and outside the classroom. The course focusses on ways technology can be used to support cross

curriculum priorities and integrated into the syllabus.

Based on the trial with 70 teachers from four schools, Plugging into Nature was accredited for 20 hours of registered professional learning by BOSTES.

Student leadership

The centre collaborated with Gibberagong, Botany Bay, Observatory Hill, and Wooglemai EECs along with Taronga Zoo to design and implement two successful student leadership events. The Year 7-10 Enviro Forum at Taronga Zoo and the Year 3-6 Project Powerful Owl were attended by 346 students.



The centre worked with 6 councils to develop and deliver the Lane Cove River Catchment community day, where 84 students from 10 high schools developed leadership resources for their school communities.

Aboriginal Education

Aspects of Aboriginal culture and knowledge are integrated into most of the centre's programs.

The centre offers specific programs that educate students about the traditional Aboriginal inhabitants of the area, their relationship with the land and their use of bush resources.

Staff took part in professional learning focussed on the "8 Ways of Learning" Aboriginal pedagogy framework. This framework allows for a more

systematic approach in programming for Aboriginal students and integrating specific curriculum content and learning related to the cross curriculum priority of Aboriginal and Torres Strait Islander histories and cultures.

Multicultural Education

The centre's programs are developed to be suitable for, and sympathetic of, students from various cultural and religious backgrounds.

Other programs

WHS and site-specific procedures

In 2014, the centre performed a systematic review of its WHS procedures and other processes for its unique site-specific teaching and learning programs. Protocols and communication resources were developed for: first aid, communications, student management, ICT setup at remote sites, workflow management when handling student iPad projects, wheelchair access, bus access, emergency evacuation of field sites, communications with parents and visiting staff sign on sheets.

Booking procedures

During 2014 the centre continued to refine its new online program booking system to replace the older phone and paper-form based booking system. This has simplified the process of booking and discussing program design with teachers from schools.

School planning and evaluation 2012—2014

School evaluation processes

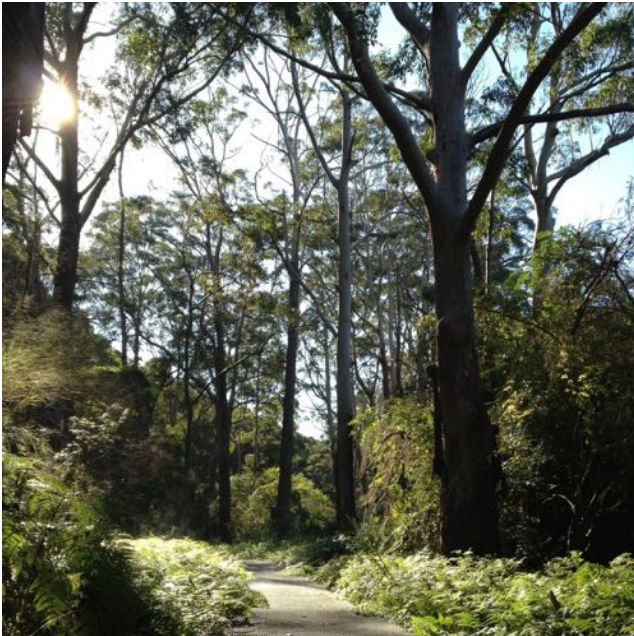
NSW public schools conduct evaluations to support the effective implementation of the school plan.

The processes used include: formal evaluations, informal feedback, staff discussions and surveys.

Priority 1 - Student Learning

Outcome for 2012–2014

Provide all students with quality differentiated sustainability education programs and resources that support increased achievement in literacy and numeracy.



Target 1

2014 Target

To increase the diversity of quality sustainability education programs aligned with new syllabuses.

Evidence of progress towards outcomes in 2014:

During 2014 the centre worked with schools to develop a range of new and updated fieldwork programs designed for the new syllabuses.

New, and updated programs include:

- Stage 1 - *Watch it Grow* and *The Need for Shelter (nestbox edition)*, *Movie Bugs*
- Stage 2 - *Phasmids*, *Wildtracker*, *Plants in Action*
- Stage 3 - *Be Energy Efficient*
- Stage 4 - *Plants in Place*
- Other - *Kids vs Wild*
- Development of digital resources on iTunes U to provide teachers with support for teaching the new Stage 1 *Movie Bugs* program and Year 11 Biology - *A Local Ecosystem*.

- Successful development and implementation of student leadership programs.
- Provision of support and advice to schools on education for sustainability.

Strategies to achieve these outcomes in 2014:

- Audit of new syllabus documents and review current centre programs.
- Collaborate with Department of Education and Communities (DEC) schools to develop new or revised programs aligned with syllabuses and the Quality Teaching Framework.
- Develop supporting digital resources to enhance student engagement and deep learning in new and existing programs.
- Lead collegial professional development sessions focusing on the delivery of environmental education in a variety of educational settings.



Priority 2 - Connected Learning

Outcome for 2012–2014

Expand the use of digital technologies to enhance communication, professional learning and student engagement in environmental and sustainability education.

Target 2

2014 Target

Increase student engagement in authentic learning through the use of digital technologies and mobile devices.

Evidence of progress towards outcomes in 2014:

- The development and implementation of a new literacy and science focussed program *Movie Bugs*. This Stage 1 incursion focusses on students creating a narrated stop motion animation to explore science concepts using an iPad. *Movie bugs* is supported via online digital learning materials hosted on iTunes U or on the Field of Mars EEC website. These materials are used by classroom teachers to guide students as they create a script and storyboard to explore chosen science concepts before an animation occurs. The development of these materials has resulted in an increase in the quality of student-produced animations.
- The evolution of classic fieldwork programs through the introduction of new activities that redefine or replace conventional activities. This includes introducing a student developed multimodal text into the Plants in Place excursion to replace traditional teacher centred worksheets.



Strategies to achieve these outcomes in 2014:

- Develop or modify centre programs to increase the use of mobile devices such as iPads in fieldwork and specialist excursions and incursions.
- Develop high quality digital resources such as multimodal texts to support centre and school programs.
- Develop online learning materials to support flipped learning and centre programs.

Priority 3 - Professional Learning

Outcome for 2012–2014

Strengthen the capacity of schools and communities to implement authentic learning programs aligned with the new syllabus.

2014 Target

To build leadership capacity in environmental and sustainability education through the provision of quality professional learning and leadership programs.

Evidence of progress towards outcomes in 2014:

- Developed professional learning courses for teachers such as Plugging into Nature: Learning Outside the Classroom with iPads.
- Collaborated with Apple Australia to develop two videos that showcase the innovative ways Field of Mars EEC uses Apple hardware and software to develop best practice teaching and learning programs and supporting digital resources. The videos focused on the Documentary program <http://bit.ly/1vOOpqQ> the supporting iTunes U course <http://bit.ly/1kvRCVc> and the development of the Multi-Touch book Phasmids <http://bit.ly/1nRvEZz>. These videos were a core resource for Apple's professional learning programs during the second half of 2014.
- A significant investment of centre funds to increase the capacity of full time and casual centre staff to lead the development of digital outreach programs and the integration of mobile devices.

- Providing environmental and sustainability focussed professional development workshops for 666 teachers.

Field of Mars staff presented keynotes and ran workshops for the following:

- Apple Distinguished Educator Institute Global Conference
- Copyright Agency
- Museums Australia Education Group
- Australian Association of Environmental Education Conference
- University of Technology School of Education
- Indian and Thai teachers
- Apple Store Sydney
- Apple iTunes U Workshop
- Slide2Learn Sydney
- National Parks Congress 2014
- YES Conference
- Community of Schools in the Eastern Suburbs Conference



Strategies to achieve these outcomes in 2014:

- Develop more professional learning courses for teachers such as Integrating Environmental Education and Developing Digital Multimodal Texts.
- Collaborate with a range of environmental education centres to develop professional learning for centre, school and regional staff to support differentiated learning and the integration of environmental education through the new syllabuses.

- Collaborate with Apple Education to develop exemplary professional learning programs focussing on mobile learning, quality teaching, leadership and environmental and sustainability education.



- Participate in professional learning to develop pedagogical skills and curriculum knowledge.

Future Directions 2015-2017 School Plan

NSW DEC is implementing a new school planning process for 2015-17. The new plan will be published on the school's website from the beginning of Term 2 2015.

Parent, student and teacher satisfaction

In 2014 the centre sought opinions of parents, students and teachers about the centre.

Discussion and unsolicited feedback indicates a high level of satisfaction with the centre's programs and our interactions with staff and students.

In particular, comments indicate that experiences are engaging, memorable, informative and relevant.

About this report

In preparing this report, the self-evaluation committee has gathered information from evaluations conducted during the year and analysed other information about the school's practices and student learning outcomes. The self-evaluation committee and school planning committee have determined targets for the school's future development.

Steven Papp – Principal

Patrick Spiers – Teacher

Gaye Braiding – Teacher

Christina McGee – Teacher

Elizabeth Shenstone – Teacher

Julie Overton – Teacher

Jodie Murphy – Teacher

Helen Curry - Teacher

Jill Page - Teacher

Julie-Ann Sheridan - Teacher

Charmaine Hermansyah - Teacher

Kate Hooghuis - Teacher

Lynette Crossley – Administrative Manager

Andrew Sutcliffe – General Assistant



School contact information

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Parents can find out more information about Annual School Reports, how to interpret information in the reports and have the opportunity to provide feedback about these reports at: <http://www.schools.nsw.edu.au/asr>