

2013 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 improves, attention span improves, signs of attention deficit disorder are reduced and finally the 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 2013 the centre continued its focus on the development of innovative new sustainability education programs and resources. These programs have a strong focus on literacy, numeracy, visual arts and science and technology and are exemplars of the high-quality learning that can be accomplished using mobile and connected classrooms 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).

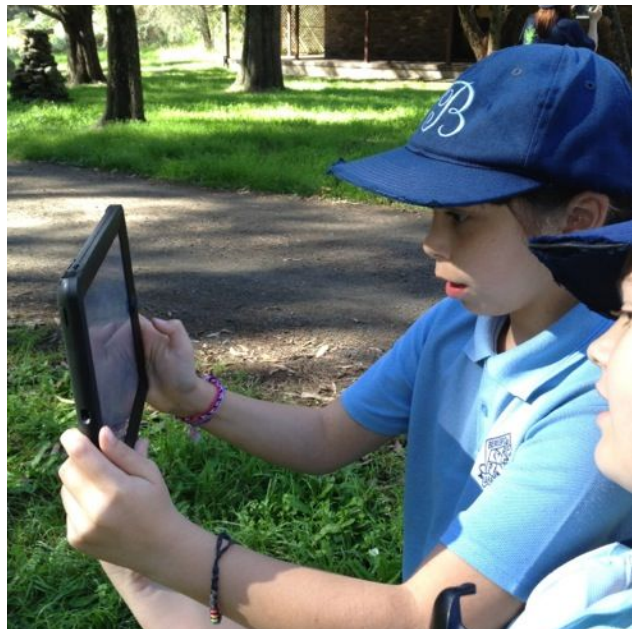
EECs provide authentic contexts for exploring, investigating and understanding values, concepts and systems in the natural and made environments and equip students to design solutions to real world sustainability problems.

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 also provides support, advice, training and resources for teachers. It is 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:

	2013	2012	2011
Term 1	3333	3417	4041
Term 2	3629	2717	3342
Term 3	4265	3104	2434
Term 4	3320	3570	3169
Total	14547	12808	12874

Virtual student numbers:

	2013	2012	2011
K-12	3640	4537	2026

Combined virtual and physical student numbers:

	2013	2012	2011
Total Students	18187	17345	14900

Percentage of students per stage groupings:

	2013	2012	2011
Stage ES1 - 3	87%	78%	83%
Stage 4 – 6	13%	22%	17%

Teacher Professional Learning numbers:

	2013	2012	2011
K-12	490	1109	923



An increasing emphasis on the provision of student leadership, digital and connected learning programs has provided opportunities for many more students to participate in centre programs from outside our traditional audiences.

The centre reduced the frequency of professional learning workshops while it prepares for the incoming BoS Syllabus for Australian Curriculum and the Australian Teacher Standards.

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
Total	2

Staff establishment

Staff retention

There has been no change in the principal and teacher positions.

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

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 30/11/2013

Income

	\$
Balance brought forward	52511.14
Global funds	35319.80
Tied funds	139244.05
School & community sources	210453.42
Interest	2711.04
Trust receipts	0.00
Canteen	0.00
Total income	440239.45

Expenditure

Teaching & learning	
Key learning areas	154598.94
Excursions	0.00
Extracurricular dissections	2730.68
Library	849.90
Training & development	15426.14
Tied funds	105307.45
Casual relief teachers	0.00
Administration & office	46407.12
School-operated canteen	0.00
Utilities	6021.25
Maintenance	1579.14
Trust accounts	0.00
Capital programs	11940.00
Total expenditure	344860.62
Balance carried forward	95378.83

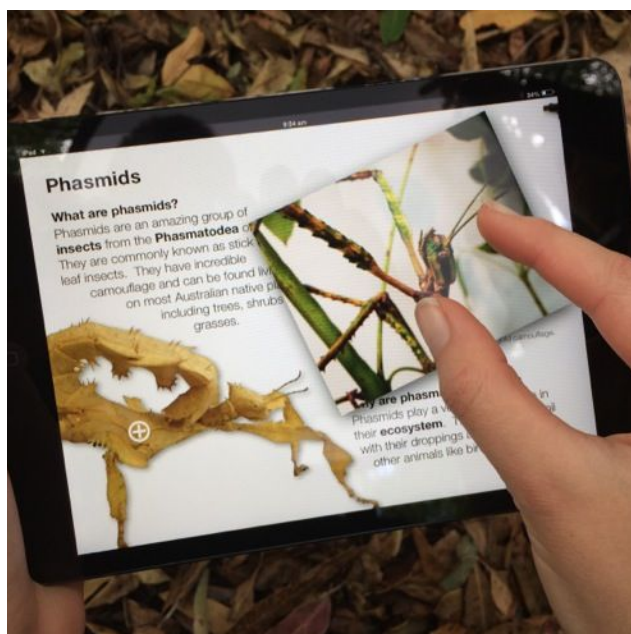
A full copy of the school's 2013 financial statement is available. Further details concerning the statement can be obtained by contacting the centre.

School performance 2013

Significant programs and initiatives

The centre was the first DEC school to launch digital teaching and learning materials publicly on the iTunes U platform. These online courses are designed to support a variety of Field of Mars EEC programs and classroom teachers using a flipped learning approach.

The centre launched its first digital multimodal text *Phasmids*. This interactive multimedia text is available on the iBookstore for iPads and Macs. It is designed to support classroom teachers and the requirements of the NSW BoS Syllabus for the Australian Curriculum. The ultimate goal of these texts is to encourage students to explore the natural world.



The centre expanded its range of connected classrooms programs that are available to all public schools state wide. These included new lessons focusing on arachnids and life cycles.

The centre collaborated with National Parks and Wildlife Service (NPWS) to design and develop K-6 teaching and learning sequences that supports BoS Syllabus for the Australian Curriculum as well as digital learning materials for NPWS.

The centre coordinated the Climate Clever Energy Savers Program. Through this program 42 teachers from 11 primary schools and 2 secondary schools have collaborated to develop energy efficiency focused teaching and learning programs.

Student leadership

The centre collaborated with Gibberagong, Georges River, Wooglemmai EECs and 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.

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.

Multicultural Education

All EEC programs are developed to be suitable for, and sympathetic of, students from various cultural and religious backgrounds.



Other programs

Environmental Management

In 2013 we continued to focus on initiatives that resulted in saving water, increasing energy efficiency and increasing biodiversity. These initiatives were shared as exemplars of sustainability in schools.

During 2013 the centre's solar panels generated 7803.38 kWh of energy. The 6.58kWh solar system was installed in 2012 as part of the federal government's Solar in Schools program. On most days this system generates more energy than is used.



School planning 2012—2014: progress in 2013

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

To increase the diversity of quality sustainability education programs aligned with new NSW BoS Syllabus.

Evidence of progress towards outcomes in 2013:

- The development of two new video conference collaborative outreach programs, *Arachnid* and *Life Cycle*. These

new programs along with six existing programs resulted in 3640 students participating from across NSW.

- Development of new excursion programs including *Botanica* and *Phasmids*.
- Development of new or modified incursion programs including *Animal House*, *Documentary* and *Digital Woodlands*.
- Collaboration with NPWS on the development of learning sequences to support *Wilderquest*.
- 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 NSW EECs to develop new or revised programs aligned with NSW BoS syllabuses and the Quality Teaching Framework.
- Develop supporting digital resources to enhance student engagement in new and existing programs.
- Participate in 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

2013 Target

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

Evidence of progress towards outcomes in 2013:

- The continued development and implementation of authentic learning programs such as *Documentary*. All prior learning in *Documentary* is now 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 and students to support the development of a documentary script and storyboard before filmmaking occurs. The development of these materials has resulted in an increase in the quality of student-produced nature documentaries.
- The development of *Phasmids*, a digital multimodal text available for iPads on the iBookstore.

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

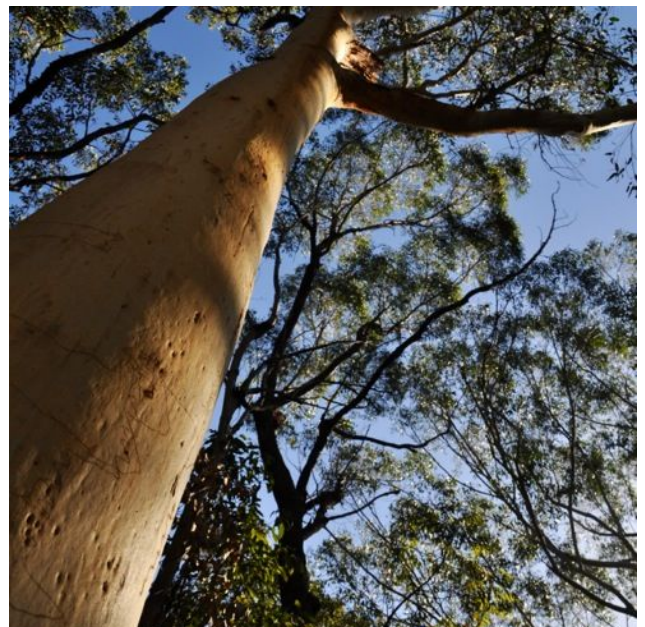
Strengthen the capacity of schools and community to implement authentic learning programs aligned with new BoS Syllabus.

2013 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 2013:

- 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 focused professional development workshops for 490 teachers.



- The principal Steve Papp was recognised for his leadership in digital education and was named an Apple Distinguished Educator (ADE). This has resulted in a close working relationship with Apple and the participation in, and development of, professional learning opportunities.
- The teacher Patrick Spiers was awarded the Premier's Copyright Agency creativity and innovation teachers scholarship. He undertook a five week international investigation that examined global best practices in using virtual collaboration techniques, especially for classroom sustainability projects. Two highlights were informative visits to small town classrooms in West Texas, USA and a large metropolitan infants school in East London, UK.



Strategies to achieve these outcomes in 2014:

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

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

Program evaluations

Digital Multimodal Texts

Background

One of the requirements in the new BoS Syllabus for Australian Curriculum is to enhance learning through the use of digital and multimodal texts. Recognising the potential of these texts to support learning for sustainability, the Field of Mars EEC has been investing significant resources and time on the development of these texts for iPads.

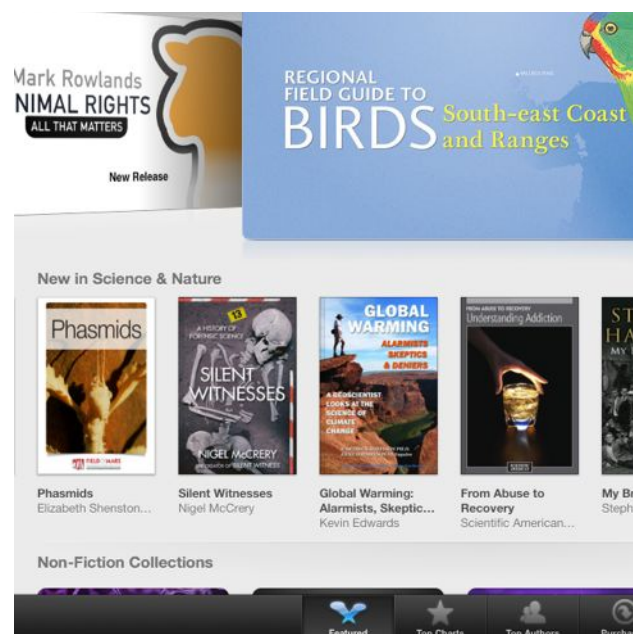
Rationale for the development of these texts:

Currently there is very little quality Australian content available in the form of digital multimodal texts.

These texts can be used to support pre and post visit learning.

The texts can be used as a bridge to facilitate student connections to nature.

FoM EEC used anecdotal evidence and surveyed teachers across NSW to gather feedback on their knowledge of multimodal texts, the use of texts such as *Phasmids* and the potential areas of need.



Findings and conclusions

Forty six teachers responded to the formal survey request.

Teachers that have used *Phasmids* provided very positive comments both anecdotally and in the survey. They indicated that students were highly engaged while interacting with text. Highlights included videos and interactive activities found within the *Phasmids* multitouch book.

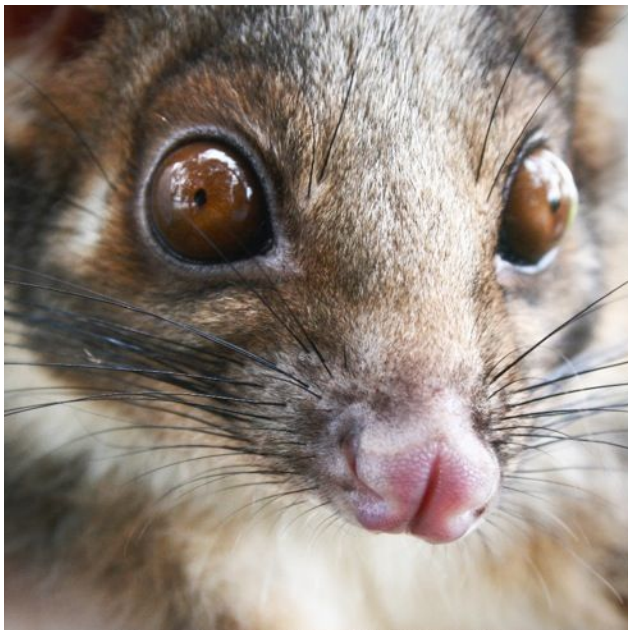
Survey comments demonstrated that *Phasmids* has exceeded expectations.

"Interactive options that provided student engagement and added enquiry. The students just wanted to know more."

"... easy clear to read, easy to navigate, great use as informative text, text easy to access..."

"Knowing it is authentic and interactive. Now we have iPads at school I can see its value as a learning tool."

Ninety percent of survey respondents indicated that they had had not seen or previously heard of *Phasmids*. Suggesting marketing needs to be expanded.



Ninety-eight percent of respondents were not familiar with supporting resources for *Phasmids* found on iTunes U.

Based on suggested future topics from survey respondents, the centre has begun development of additional texts including *Ringtail Possum*, *Invertebrates* and *Habitats*.

These texts will be modelled on *Phasmids* and will feature interactive elements, videos, high quality text and images.

Future directions

To investigate a variety of ways to promote the centre's digital multimodal texts and iTunes U courses.



To continue to expand the diversity of multimodal texts and to investigate opportunities to cater for the needs of secondary schools and teachers.

Professional learning

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 2013 the centre significantly increased its professional learning expenditure to ensure all staff were capable of supporting the development and delivery of high quality centre programs.

Professional Learning Expenditure - \$15426

Average expenditure per person - \$1402.36

Professional learning included attendance at:

- Apple Distinguished Educator Induction Conference
- NSW EEC annual conference in Bega. This provided the opportunity to develop knowledge and skills in environmental education and education for sustainability with a focus on learning for sustainability.
- iBook 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 BOS Syllabus

Parent, student and teacher satisfaction

In 2013 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

Jacqueline Cleary - Teacher

Helen Curry - Teacher

Jill Page - Teacher

Julie-Ann Sheridan - Teacher

Charmaine Hermansyah - Teacher

Lynette Crossley – Administrative Manager

Paul Brooke – 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>