

Innovation Central @ Coolbinia

School Priority: Empowering Futures

- Science, Technology, Engineering, Arts & Mathematics (STEAM)
- Cross Curriculum Priorities:
 - Sustainability
 - Aboriginal & Torres Strait Islander Histories & Cultures
 - Australia's Engagement with Asia



All the ways in which our school is increasing our **social handprint**

Sustainable Schools WA
det.wa.edu.au/sustainableschools

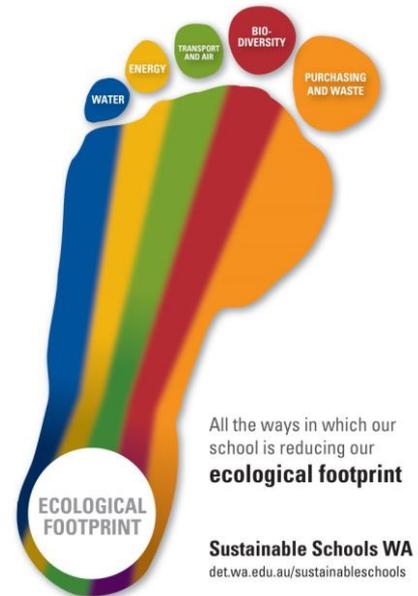
STEAM & Cross Curriculum Priorities embedded into learning ...



Honey bee



Blue-banded native bee



All the ways in which our school is reducing our **ecological footprint**

Sustainable Schools WA
det.wa.edu.au/sustainableschools

Welcome to the Term 3, 2017, edition of news from the Cross Curriculum Coordinator. The WA Curriculum identifies three cross curriculum priorities:

- ✚ Sustainability
- ✚ Aboriginal and Torres Strait Islander Cultures and Histories
- ✚ Australia's Engagement with Asia

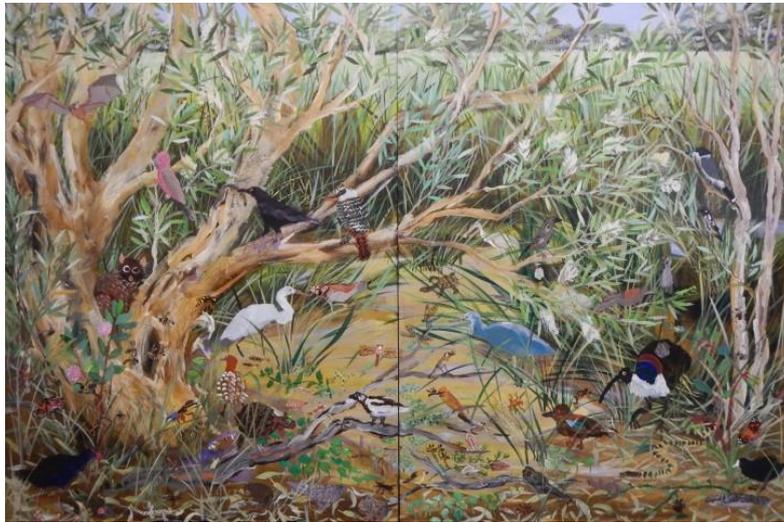
These priorities are embedded across a wide range of learning areas, from English to Science, Technologies, Engineering, Arts and Mathematics (STEAM), Geography, Health and Physical Education.

This article presents a summary of major innovations and initiatives that were held last term and news about what will be happening this term. The students were presented with real world challenges within a systems thinking perspective.

Wonders of our Wetlands

... Our little artists are at it again!

Working with the amazing environmental artist, Angela Rossen, our Year 5 & 6 students painted a stunning artwork for the school. The painting showcases the biodiversity of our wetlands. These workshops were fully funded by River Rangers.



The students were highly engaged in the full day workshops and thoroughly enjoyed themselves. See how focused they are:



Cross Curriculum links:

This artwork was completed as a component of our STEAM studies on minibeasts (Science, Technology, Engineering, Arts & Mathematics), Literacy and the Sustainability and Aboriginal Cross Curriculum Priorities.

Massive History Mural

A massive history mural was completed last term, transforming a rusty sea container into an ongoing learning resource! Students from Coolbinia Primary School worked with the amazing Jade Dolman, Noongar artist, to create a massive mural portraying the history of Australia. Kindy to Year 6 children were thrilled to have the opportunity to add their understandings of history to the mural.

The first scene on the mural is set 60,000 years ago, showing Australia's Aboriginal peoples, followed by representations of early explorers, progress towards democracy and citizenship, changes in technology and celebrations in Australia. The final scene depicted on the mural is the Mars One Project, in which Australian astronauts are vying for the privilege to be among the first settlers on Mars.



The before and after photos tell the transformation story! Sincere thanks to the Waste Authority, River Rangers and the P & C for funding support, and to staff, students and the P & C for hands-on creativity enabling this project to be such an outstanding success.

Cross Curriculum links for History Mural:

History, Arts, Literacy and the Sustainability and Aboriginal Cross Curriculum Priorities.



River Rangers

Children across the whole school participated in River Ranger activities throughout Term 2. The Year 5 and 6 art project (above) was an outstanding learning experience. Other exciting River Ranger activities included:

Drop by drop education!



An Education Officer from the South East Regional Centre for Urban Landcare (SERCUL) visited the early childhood classes to engage them in an interactive water catchment model. The children investigated the impact of different pollutants in the Swan Canning Riverpark.

Mookaroo time

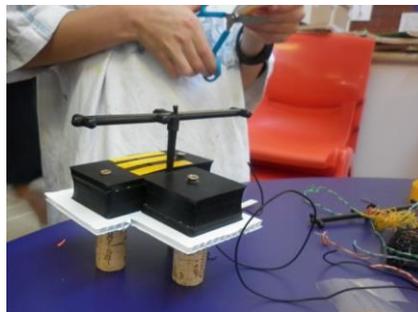
... cold and wet (June-July)



These Year 2 students are creating paintings that will become garden signage for the Noongar Six Seasons garden. The designs are with the sign maker now and will be ready for display this term.



Djilyara Djurapin: Bee Happy



Look at these fabulous bee models created by students in Year 3 (Rooms 4 & 5). The children made bee models from recycled materials, with support from Remida Education Officers. Year 3 students (Room 3) also created stunning bee designs on pavers. This incursion was funded by a Waste Authority grant as materials used in the designs were recycled, including the pavers.



What is That Cacophony?

...from moaning to motorbikes



Clicking, banjo sounds, moaning and motorbikes changing gears were heard coming from Year 4 and 6 classes last term! What was going on? Students were learning about different species of local frogs, including the Western Toadlet, the Moaning Turtle, Whooping and Motorbike frogs. One of our community partnerships, with the SERCUL again provided an Education Officer to conduct these workshops with our excited children.

Digital Microscopy ... is that a worm?

As part of their River Rangers program, Year 6 students visited Scitech to engage in a range of activities, from Digital Microscopy, to viewing a live bee hive, and attending a show about luminescence. A fabulous time was had by all; and after three and half hours the most common exclamation was: "Is it time to go already? It feels like we've only been here for 20 minutes!"



Water Testing Challenges

Our Year 6 River Rangers visited the Eric Singleton Bird Sanctuary, on the Swan River. The students conducted a range of tests to determine the water quality of the Bayswater Brook before flowing through a nutrient removing wetland, and again as it left the wetland to flow into the Swan River. As River Rangers the students had the opportunity to go beyond testing for the usual Fab 4 (temperature, salinity, pH and turbidity), to testing for nitrates, phosphates and dissolved oxygen.



While at the Sanctuary, the students also volunteered to collect litter as part of their community service as River Rangers.

Councillor for a Day! ... students planning for their future!



Ten Year 6 students attended a *Councillor for a Day* event to provide input to the City of Stirling's Urban Forest Strategy.

Our students, along with children from other schools, used their critical thinking skills to develop strategies to increase the percentage of tree canopy cover throughout the City of Stirling. They presented a PowerPoint of sustainability initiatives at Coolbinia Primary and the results of their brainstorming.



River Rangers in Term 3

There are huge adventures for the students in the weeks ahead, for example:

- ✚ NAIDOC Week celebrations and stalls to fundraise for Aboriginal literacy resources
- ✚ Tree planting in our bushland and school grounds
- ✚ United Nations Association of Australia WA leadership conference at Parliament House
- ✚ United Nations Association of Australia WA Yolande Frank art project
- ✚ Kids Teaching Kids Conference presenting the *Coolbinia Bots*
- ✚ *Coolbinia Bots* community presentations

... and more!

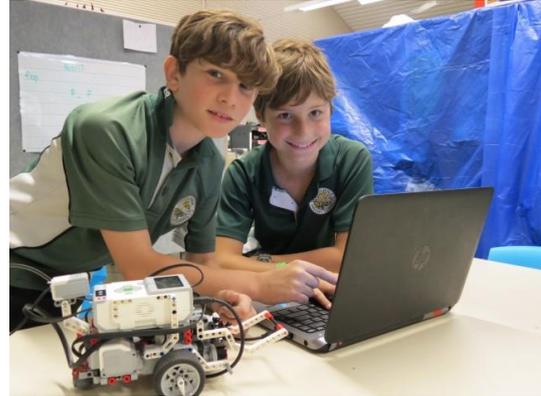
Cross Curriculum links for River Rangers:

All Learning Areas, the General Capabilities and Cross Curriculum Priorities.

STEAMtopia

During Coolbinia Primary's Science Week excited students participated in daily STEAM (Science, Technologies, Engineering, Arts & Mathematics) challenges and incursions. The week culminated on Friday 16th June with STEAMtopia, a community science event that ran from 3.30pm to 5pm. Some of the fabulous activities on offer were: construction with Technic Lego and Goldie Blox, EV3 robots, Spheros and Sphero painting, mapping and building with Ozobots, Bubble Mania, Snowman Shooters, Duplo with tools, Makerspace with DIY Fidget Spinners, and DIY Constellation Torches!





The Cross Curriculum Priorities were embedded into our Science Week, through participation on the Empowering Futures Committee. Committee members organised this successful week celebrating all things STEAM!

Community Links

Working with our community partners

Last term Coolbinia Primary demonstrated a commitment to working with members of the wider community, such as:

- ✚ SERCUL – as presented above.
- ✚ RSL Care – students participated in Anzac services and presented concerts to residents.
- ✚ Sir David Brand School – Gardening with our Year 6s.



Beans, carrots and onions were planted by Coolbinia and Sir David Brand School students working together. The Sir David Brand School has their own garden bed in our Six Seasons Mandala garden.

- ✚ Scientists in Schools Program – Geoff Kay’s science and technology support for Years 1-6.
- ✚ Red Cross – conducting the “In Search of Safety” program for the Year 6s.
- ✚ Your Move (TravelSmart) –conducted session with Year 5 students.
- ✚ Remida – conducted recycling workshops with Year 3 students.
- ✚ Pollinate Energy – fundraising for solar lanterns in India through the garden stalls.
- ✚ Wheelchairs for Kids – fundraising through aluminium can recycling and garden stalls.
- ✚ Cancer Council – fundraising through staff morning tea and Crazy Hair Day.
- ✚ Oxfam - fundraising through dress-up and a lunchtime stall.



Noongar PALS



Yirra Yaakin ... learning about Country

The undercover area echoed with the sounds and sights of Noongar culture last term. Kindy to Year 6 children attended this incursion, in which the performers told the story of the creation of the land (boodja) and the creatures upon it, from a Noongar perspective.



Can you do the Honey Bee dance?



Noongar educators visited the school to teach Year 3s the Honey Bee dance. This dance links Aboriginal culture into the integrated Bee Project the students were doing throughout Term 2. Children from Room 3 performed this dance at the last assembly of the term.



PALS Grant

Each year the school applies for a Partnerships Acceptance Learning and Sharing (PALS) grant. This grant aims to promote reconciliation and outstanding learning opportunities for aboriginal and non-aboriginal children. Coolbinia Primary has won many awards for our PALS projects.

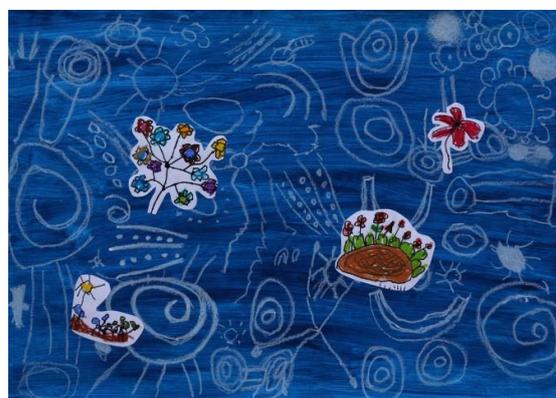
Our 2017 PALS project aims to increase student engagement and community participation. We will do this by developing sustainable community partnerships focused on building better relationships and futures between Aboriginal and non-Aboriginal people, leading to increased involvement and engagement of Aboriginal parents and communities in school life.

Some of the activities in our PALS project include:

Participation in *Boorna Waanginy: The Trees Speak* (Perth International Arts Festival) – our Year 3 students created butterfly totem seedpods. Each seedpod was lit:



Art workshops with Noongar artist Sharyn Egan – PrePrimary, Year 2 & 3 students worked with Sharyn to create Six Seasons and Creation Story paintings. These artworks are being made into signage for our gardens.



Yr 3: Creation art on display at Dianella Library PrePrimary: Mookaroo (June-July) & symbols

We are Global Citizens!

Coolbinia Primary is a founding member of the United Nations Association of Australia's Global Citizenship Schools Program. This means we are committed to supporting the Sustainable Development Goals (SDGs).

Our school supports the achievement of these goals by:

- Global Goal 13 (Climate action) through our work on our carbon emissions reduction plan.
- Global Goal 3 (Good health and wellbeing) through participation in our various wellbeing programs, plus contributing entries to the Yolanda Frank Art Award.

- Global Goal 5 (Gender equality) by participating in the *Tomorrow's Citizen Leaders – Local to Global*, conference at Parliament House and subsequent action to address this student concern.
- Global Goal 15 (Life on land) through our planting and bee hotel programs.
- Global Goal 16 (Peace, justice and strong institutions) by participating in harmony Day and attending an incursion called "In search of safety".

THE GLOBAL GOALS For Sustainable Development



Some Year 5 students will be attending a leadership conference at Parliament House on Monday 31st July. These children will investigate the work of the United Nations and select Global Goals they wish to work on.

Thanks to Parent Volunteers

Sincere thanks to parent helpers for: Maintaining the Kwobadarn – cleaning and checking equipment/stock; helping with cooking lessons; weeding; providing plants for the assembly garden; and helping in class and on excursions and incursions. Without parent help we wouldn't be able to provide the amazing learning opportunities that we do! Thank you.

Cross Curriculum links for Community Engagement:

All Learning Areas, the General Capabilities and Cross Curriculum Priorities.

Eco Footprints Actions

100 Tonne Plan Progress

Since starting to monitor the school's carbon emission in 2011, we have reduced our emissions by a total of 360 tonnes!

Our emissions reduction target for 2017 is 100 tonnes! Also this year we are working on comprehensive:

- ✚ Energy and
- ✚ Water audits

to determine if we can make further reductions in our emissions and achieve substantial financial savings for the school. Our forthcoming Science Week will include a focus on energy, a national priority.

Biodiversity Action

"Wow... it's Alive!" ... So said a chorus of voices when little creatures were delivered to classrooms.

Children from Kindy to Year 6 were excited to study the little creatures living in their classrooms! These rooms were not only decorated with different insects, like bees, they had living specimens to observe up close and beautiful, like Goliath, Spiny and Lichen stick insects, Lacewings and crickets.



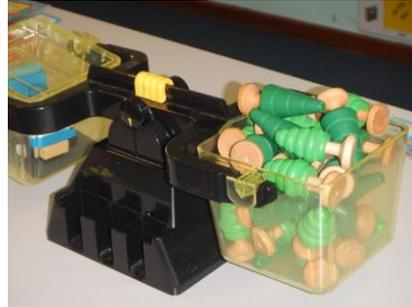
Releasing Lacewings

CSIRO at Coolbinia

Belinda Bloxsome, CSIRO Education Officer, visited our school. Belinda coordinates the CSIRO Sustainable Futures - Carbon Kids program in WA. Every year Belinda comes to our school to engage our students in some of the current work of the Commonwealth Scientific and Industrial Research Organisation (CSIRO). This year students in Years 4 & 6 learnt about the biodiversity hotspot in WA and how we can contribute to a national atlas of biodiversity by monitoring plants and animals in the environment.



Students were also amazed to learn how many trees need to be grown to counteract the carbon pollution of one car driven for one year:



Students learnt how science can solve real issues and make a difference to people, industry and the planet.

Gardening

All students continued to be involved in our gardening and cooking programs. This includes learning about bees, planting in class raised beds, harvesting fruit from our orchard and participating in Curtin University's Mildew Mania program (growing barley).



Mildew Mania is here again! Our school has participated in Curtin Uni's outreach science program, Mildew Mania, since it started six years ago. Year 1 children (ELC2) are our Mildew Maniacs this year. They are learning about the importance of barley as a Western Australian crop and the challenges our farmers face in coping with mildew growing on the barley. The students have planted Baudin, Wyalkatchem, Oxford, Hindmarsh and Buloke varieties of barley. As the seedlings grow the students will be watching for symptoms of mildew infection on the different varieties. Will some varieties more more resistant to mildew?



Waste Warriors on the march!

We cleaned up ... for Clean Up Australia Day!
All classes participated in Schools Clean-Up Day:

A waste audit of the collected litter was conducted, separating and weighing different categories of waste, such as paper products, food scraps, glass and plastic. Subsequently, during digital technology lessons, students created excel



spreadsheets and graphed their findings. This information was submitted to the National Schools Clean-Up Day database. These lessons involved real life impacts of waste, practical actions for sustainability and powerful engagement with digital technology!

Room 1 children were the Waste Warriors during second term. These students collected food scraps and recycled them in worm farms and compost bins. Great job Waste Warriors! Term 3 Waste Warriors are from Room 2.



Nude Food continues to be an important initiative at our school. Nude Food refers to student lunchboxes containing food without wrapping.

Information about healthy, nude food lunches may be found at:

<https://www.kitchengardenfoundation.org.au/content/pick-mix-1-6-lunchbox-poster>

Other items we recycle at Coolbinia Primary include:

-  batteries
-  old toothbrushes & oral care packaging
-  mobile phones
-  plastic bread bag clips
-  old pairs of glasses
-  ink cartridges
-  paper and cardboard
-  coffee pods

All these bins may be found at the Kwobadarn (student kitchen).

Please continue to support our focus on being Wastewise ...



Drop by drop we are Waterwise!

Water Saver Actions

Year 3 students are our water saver helpers. Room 3 children were the Water Warriors during Term 2 and this term Room 4 has that role. Students collected rainwater from the tanks for watering the gardens and hanging baskets, as well as topping up bird baths and frog habitat ponds. They also monitored taps for leaks.

Award Winning School

Last year Coolbinia Primary achieved the Silver Award from the Water Corporation for our Waterwise actions. By the end of 2017 we are aiming to achieve Gold Award status!

Education is the key for water saving at school and home. Visit watercorporation.com.au/save-water and watercorporation.com.au/whatsyourwaterstory to find out how you can save water.

Proud to be a
**Waterwise
School**



Energising to be EnergySmart

Our 73 solar panels on the school roof continue to reduce our electricity costs and carbon footprint. Whole school daily actions to reduce electricity are also being implemented, contributing to our EnergySmart goals.



On 27 June our solar power system had generated 95290kWh and saved 89897kg of CO₂ from being released into the atmosphere since 13 September 2012. We will continue to monitor our electricity usage this term and implement actions to reduce our school electricity costs. During our Science Week students will learn how they can contribute to this aim.

Term 3 will involve a major focus on being EnergySmart as our science curriculum focus is: Physical Sciences. Watch out for new initiatives at school in this field of study ...

Make it ... 'Your Move'!

TravelSmart has been re-branded by the Dept of Transport to: Your Move!

Our special Your Move event last term was on Friday 19 May. This date aligns with the national Walk Safely to School Day.

Our Year 5 Your Move organising team encouraged everyone to come to school by walking or riding a bike or scooter. As a result of their promotional efforts there was a 30% increase in walking and a 2% increase in cycling that day.

Raffle tickets were given to all students who participated in the event. There were 20 great raffle prizes won, like \$50 gift vouchers, umbrellas, as well as bike helmets, pumps, locks and bells.

Thanks and congratulations to our Room 12 'Your Move' team. You did a great job!

Please continue to support Your Move this term. Every Friday is a Fume Free Friday and on Friday 1st September we will be celebrating World Car Fee Day.



Bike safety for littlies

During the first two weeks of this term the school is conducting *Cycle Safe* incursions for Kindy – Year 3 students. These sessions, on 20th and 25th July, will highlight road safety issues for our young children.

Cross Curriculum links for Eco Footprint Actions:

All Learning Areas, the General Capabilities and Cross Curriculum Priorities.

Dr Jane inspires Coolbinia Roots & Shoots

What a thrill! Coolbinia Roots & Shoots members met with Dr Jane Goodall at Perth Zoo last term. Dr Jane told her inspirational life story, met with some of our club members and signed our school banner. After the formalities, the children enjoyed visiting the animals.



World Environment Day Awards in
house gas emissions by 360 tonnes
partnerships, including close collabo

Jane Goodall.

Roots and Shoots Coordinator, Coolbinia Primary School





Coolbinia Roots & Shoots members standing in front of our peace pole at Perth Zoo.

Roots and Shoots is a voluntary lunchtime club for children from Years 1-6. Members help out in the school gardens and bushland - planting, weeding, making recycled wheelbarrows into display beds, preparing fruit fly traps, supporting local animals by making homes for them ... and lots more.

Cross Curriculum links for Roots & Shoots:

Science, The Arts, Literacy, the General Capabilities and Sustainability Cross Curriculum Priority.

Sincerely

Dr Elaine Lewis

Cross Curriculum Coordinator

River Rangers Coordinator

Roots and Shoots Coordinator

Part time role: located in the Kwobadarn on Tuesdays & Wednesdays

Elaine.Lewis@education.wa.edu.au

17 July 2017