




## Cross Curriculum Priorities ... 2020



Continuing our school wide STEM project in the bushland in 2020, including a focus on beetles.



**Welcome** to the Term 1, 2020 edition of news from the Cross Curriculum Leader. The WA Curriculum identifies three Cross Curriculum Priorities (CCPs):

-  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 and Mathematics (STEM), Geography, The Arts, Health and Physical Education.

This newsletter gives you a taste of the 2020 learning adventures and summarises the achievements of 2019.



## Innovative Bushland STEM project

The whole school bushland STEM (Science, Technologies, Engineering, Mathematics) project was the major focus for 2019. Numerous incursions related to the bushland project were conducted throughout the year to support classroom STEM, Arts and Literacy. This work was used to create the interpretive signage for the bushland. Here are examples of the students' art work, showing Native Wisteria and the Jarrah Tree, that went on the signs. The bushland trail was officially opened on Friday 30 August.



**Wandjoo**  
Welcome to Coolbinia's Bush Trail

**Koorla (Native Wisteria)**

Along our bush track you will sometimes see a trail of purple, the 'happy wanderer', meandering through the bush. These purple pea flowers belong to *Hardenbergia comptoniana*, also known as Koorla or Native Wisteria. Flowering occurs from Makuru to Kambarang (July to October). When the seeds are mature the dry, pea-like pods open explosively with a loud crack, throwing the seeds many metres away. You can hear these exploding pods on hot summer days. You will find Native Wisteria growing in nearly every bushland around Perth on the Swan Coastal Plain. It grows near to the coast anywhere between Geraldton and Albany. It likes open Jarrah forest and sandy or gravelly soils and it needs part to full sun to flower well. Noongar people used the strong flexible stems of the Koorla to build shelters and make twine or rope.

Research conducted by Year 6, Rm 11, Art in Year 4, Room 8 (2019).

**Minga (Insect - Native Ladybird)**

Ladybirds are insects. There are over 100 ladybird species native to Australia. Many different species of ladybirds were found in our school grounds and bushland, such as *Harmonia conformis*. The photos taken with our digital microscope show some of the ladybirds we found. The spots on the back of ladybirds act as a defense mechanism to avoid predators. The spots come in different shapes and numbers. Other markings and spots help to identify the species of ladybird. Some species have no spots at all, as illustrated in the photos.

A ladybird undergoes a complete metamorphosis through its life cycle: egg-larva-pupa-young ladybird-adult ladybird, as shown in the photos of specimens collected by the children. Ladybirds are carnivorous and eat up to 60 aphids per day and will also eat a variety of other harmful insects and larvae. For example, ladybirds eat scales, mealy bugs, leaf hoppers, and mites, as well as pollen and nectar. Ladybirds are an excellent biological alternative to chemical pesticides.

Research conducted by Pre-Primary in ELCA, Year 2 Room 4 and Year 3 Room 5 (2019).

**QR code Koorla**      **QR code Minga**

Logos: City of Stirling, Department of Biodiversity, Conservation and Attractions, Department of Communities, Cadets WA, RIVER RANGERS, Junior Landcare, Department of Local Government, Sport and Cultural Industries, PALS, Jane Goodall's Roots & Shoots, Millennium Xcel.



This bushland STEM project was showcased at the STEM Innovation Expo in Term 4, 2019, resulting in more community contacts for the 2020 bushland investigations.

This year we will be continuing our work in the bushland with activities in a range of learning areas, such as:

STEM – School Wide – Beetles

STEM – Early Childhood – Mia-mia investigations and bird nest boxes

Digital Technologies – Upper Primary – 360 photography and soil microbes

Literacy – Upper Primary – Bushland book

## Eco Footprint

### 1. Biodiversity Action:

#### Tree Planting

Every year all classes are involved in tree planting in our bushland and school grounds. This is scheduled to happen in July this year. In 2019 over 300 trees and seedlings were planted.



#### Stephanie Alexander Kitchen Garden Program

Our Stephanie Alexander Kitchen gardens flourished during 2019. This program will continue in 2020, with new garden initiatives by our Year 5s next term.

Last year students harvested and processed lilly pilli fruit and olives. We look forward to a new group of students engaging in this activity again.







### River Rangers

Coolbinia Primary is a River Rangers school. All classes are involved in this environmental and citizenship program, on a graduated scale in terms of funding allocated, with a large proportion of the funding going to learning experiences for our senior students.

#### Our Students at Uni!

Last year our year 6 River Rangers visited three universities for a variety of learning activities:

- Curtin Uni for chemical and forensic science
- Murdoch Uni for biological and chemical science
- UWA for STEM

Due to the benefits of attending these learning experiences the 2020 program will include these opportunities.



### Kids Teaching Kids Conference

In Term 3, 2019, our Year 6 students presented environmental education workshops at the *Kids Teaching Kids Conference*. They conducted two workshops with students from primary and high schools across the south-west of WA. Their workshop topics addressed water quality and tree survival. We are planning to participate in the 2020 *Teaching Kids Conference*.



#### School yard safari

The highly successful school yard safari program, which was conducted by Roots & Shoots members during 2019 was the cause of great excitement during Wednesday lunchtimes. Over 50 students attended the weekly sessions, collecting as many Arthropods as they could find across the school grounds. The students classified their discoveries each session and used digital microscopy to examine their 'finds' in detail, then release them.

The most common insect found was ... surprise! ... ladybirds, showing all the stages of their life cycle. This demonstrated the students' high level of engagement with their biological science focus on ladybirds.



Due to our focus on Beetles in 2020, we will be searching for these mini beasts during our Roots & Shoots lunchtime investigations. Last year less than 10 beetles were found, but I'm confident we can blow this finding away with sensational discoveries in the coming months.

Other Roots & Shoots activities will involve refreshing the hanging baskets, wheelbarrow gardens and native bee hotels.

## 2. WasteWise:

We are continuing our recycling initiatives this year:

- 🗑 batteries
- 🗑 old toothbrushes & oral care items (no cardboard toothpaste boxes)
- 🗑 mobile phones
- 🗑 plastic bread bag clips
- 🗑 old writing implements
- 🗑 old pairs of glasses
- 🗑 ink cartridges
- 🗑 paper and cardboard (include cardboard toothpaste boxes here)
- 🗑 plastic bottles
- 🗑 plastic bottle tops
- 🗑 aluminium cans
- 🗑 coffee pods

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

Our school also recycles:

- 🗑 food waste by worm farming and composting

The two Year 5 classes manage the WasteWise program. Watch this space for exciting new developments in 2020!

Students learn about the benefits of worm farming and care of worms ...





### 3. WaterWise:

Proud to be a  
**Waterwise  
School**

Perth Catchment Model

2020 heralds our 10<sup>th</sup> anniversary as an active Waterwise School. This is a huge achievement ... congratulations to all Coolbinians for all the efforts over the years.

Year 3 students are our Water Warriors. They use rainwater for watering the gardens and hanging baskets, as well as topping up the bird baths and frog habitat pond. They also monitor taps for leaks.

As an active Waterwise School we have representation on the Water Corporation's Teachers Reference Group. Education is the key for water saving at home. Visit [watercorporation.com.au/save-water](http://watercorporation.com.au/save-water) and [watercorporation.com.au/whatsyourwaterstory](http://watercorporation.com.au/whatsyourwaterstory) to find out how you can save water.

### 4. EnergySmart:

Since September 2012 the school has been recording how much power has been generated by our solar power system, as well as how many tonnes of CO2 have been saved from being released into the atmosphere. Please see Dr Lewis if you would like further information.

We continue to monitor our electricity usage and implement actions to reduce our school electricity costs. Students learn how they can contribute to this aim.



The first EnergySmart event this year will be Earth Hour later this term. Watch the School Bulletin for further details.

### 5. Your Move:

Coolbinia PS is a Platinum level school in Your Move (TravelSmart). Congratulations to all Your Move (YM) supporters!

Year 4 students will be organising a YM event each term. They will prepare posters and promote our special YM events. Raffle tickets, stickers and other prizes will be distributed to children coming to school in a YM way.

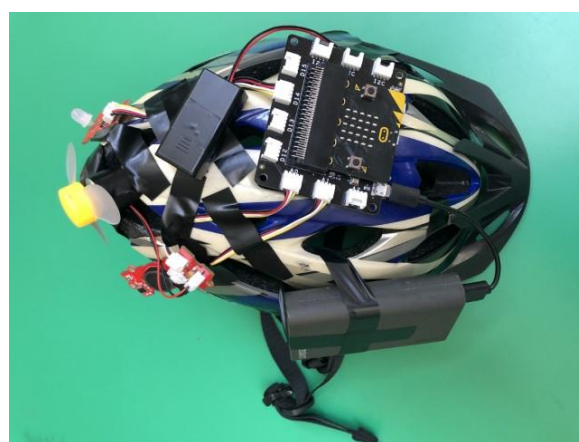


A significant aspect of Your Move last year was participation in a 2-day Your Move Conference in Term 4. Brainstorming at this conference resulted in vital contributions to the First Lego League (FLL) robotics competition. Both our FLL teams investigated Your Move themes – having green zones around schools where cars can't drive and designing a bike helmet that frightened swooping magpies away.



### Winning magpie deterrent helmet design

In the Regional FLL competition both Coolbinia teams were highly commended, coming 1<sup>st</sup> and 2<sup>nd</sup> in the Innovative Solution project, out of 19 teams. The helmet team was awarded a place to proceed to the National – West FLL competition at Curtin University on Saturday 14<sup>th</sup> December. At this event our Coolbinia Mechanics came 1<sup>st</sup> with their helmet design, against 48 teams. This is a huge achievement and congratulations abound to all participating students, staff, parents and community supporters. We plan to continue this innovative work in Digital Technologies, using micro:bits like those on the helmet.



## Social Handprint

### 1. Student Wellbeing:

The Positive Behaviour Support (PBS) program is our school-wide approach to creating a safe, positive learning environment.

Our core values are:

- Character
- Respect
- Responsibility
- Strive

PBS therefore contributes to the wellbeing of our children.

Our school also provides students with many opportunities to foster wellbeing through a range of clubs and community activities, like sharing with the residents of Acacia Care.



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

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

## **2. Aboriginal Cultures:**

An aspect of our engagement with the Aboriginal and Torres Strait Islander Cultures and Histories Cross Curriculum Priority was demonstrated throughout 2019 by Noongar artists and educators working in our school. Please see details below. This approach will continue in 2020.

## **3. Cultural & Social Diversity:**

Throughout 2019 students were engaged in cultural and social activities that promote understanding and caring. For example, Harmony Day featured many stalls to raise money for clean water. Also, Year 6 students organised a whole school fundraiser for special needs students in Sri Lanka.

Harmony Day celebrations in 2020 will feature Indonesian puppetry, with more activities being planned throughout the year to foster multicultural understanding and cooperation.

## **4. Community Partnerships:**

Community partnerships are a feature of life at Coolbinia Primary. For instance, we have a partnership with the South East Regional Centre for Urban Landcare that provides native trees and shrubs for planting and biological science workshops. We also have a strong partnership with the United Nations Association of Australia (WA) with their Global Citizenship Schools program.

For example, late last year two Year 6 students represented an assembly item about the social justice message they had learnt through engagement with a United Nations event. They programmed Robbie the Mechanoid to interview them, so they could share their new understandings.



## **5. Economics & Built Environment:**

### **A Shady Deal from our Year 6s!**

#### **New Shadehouse Installed**

Last year the Year 6 River Rangers funded the purchase of a new shadehouse as their gift to the school. This year's Mentors will care for the plants in the shadehouse and see them at our



fortnightly assembly stalls.



## Aboriginal Cultures and Histories

### Yirra Yaakin Performance in 2020

A new dimension to our Earth and Space Science and HASS studies will be provided by the Yirra Yaakin Theatre Company performance of *Bilya Kaatijin* (which means 'fresh water knowledge' in Noongar). This show is the fourth and final story in Yirra Yaakin's Kaatijin series for young people.

The photos are from the 2019 performance that told the story of the constellations from an Aboriginal perspective. Our children were highly engaged.



### PALS Grant

Each year our school applies to be awarded 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.

We will be applying for the 2020 PALS grant, with a focus on 'student engagement and community participation'. The grant will enable students to work with Noongar educators as part of their Bushland STEM investigations.



### The Arts in our Bushland STEM project

In 2019, Esther Mc Dowell, our Artist-in-Residence for the bushland project, worked with five classes to create paintings of flora and fauna in our bushland. This opportunity was funded by the 2019 PALS grant. Here are some of the stunning art works created by our students:



### NAIDOC Week Grant

The school was successful in being awarded a NAIDOC Week grant again last year. This enabled an official Welcome to Country and Smoking Ceremony to be conducted at the opening of the bush trail on 30<sup>th</sup> August 2019.



### Official Opening of the Bush Trail



# Australia's Engagement with Asia

## Sustainable Development Goals

The key context for the Asian Cross Curriculum Priority has been based on the United Nation's Sustainable Development Goals (SDGs):



Coolbinia Primary School supports the achievement of these goals by having active membership with the One World Centre and the United Nations Association of Australia WA Global Schools Project, as well as the actions we take to address the various sustainability issues outlined in the SDGs.

Also, our school demonstrates ongoing commitment to sustainability action, through our work to contribute to:

- ✚ Global Goal 13 (Climate action) through our initiatives on our carbon emissions reduction plan.

Further actions based on other goals include for example:

- ✚ Global Goal 3 (Good health and wellbeing) through participation in the Yolanda Frank Art Award and school based 'wellbeing' programs.
- ✚ Global Goal 5 (Gender equality) by participating in the *Tomorrow's Citizen Leaders – Local to Global*, conference at Parliament House and taking subsequent action to address this student concern.
- ✚ Global Goal 6 (Clean water and sanitation) by fundraising for wells overseas.
- ✚ Global Goal 13 (Climate Action) see Sensational Bake Sale article below.
- ✚ Global Goal 15 (Life on land) through our planting and care of wildlife programs.
- ✚ Global Goal 16 (Peace, justice and strong institutions) by participating in NAIDOC Week, a Red Cross incursion called "In search of safety" and other fundraising and caring projects.

## Sensational Bake Sale

The Year 5 United Nations Climate Action group conducted a bake sale in 2019 to raise funds to purchase solar lantern kits. These kits were constructed by Year 5 students and sent overseas to countries in need. The solar lanterns replaced polluting kerosene lanterns. This will not only reduce carbon emissions, but also improve the health of the people using the



solar lanterns as they will be able to breathe clean air inside their homes.

As you can see from the photos, the children produced an awesome spread, from fruit kebabs, to cakes, biscuits and jam. The school community strongly supported this initiative as indicated by the queues to purchase. All items were sold and this raised \$242.70. Sincere thanks to the students involved in organising the stall and their parents for supporting this climate action project.



Our work on the Global Goals over the last year resulted in Coolbinia Primary being awarded the 2019 Sustainability Challenge Awards from the United Nations Association of WA, Global Citizenship Schools program.



Many thanks to everyone for supporting the numerous cross curriculum initiatives. Your contributions make a difference to each other and to the sustainability of our planet. Thank you.

All the very best for the year ahead, full of many STEM adventures!

Sincerely  
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6 February 2020