

Bujari Gamarruwa! - Welcome!

Acknowledgement of Country

We acknowledge the custodians that make up this country we call **Wa'ran** (Sydney) who have cared for and cultivated the plants included in this resource for tens of thousands of years. We pay respect to the Elders both past and present, acknowledging them as the custodians of knowledge of this place and its natural resources.

From the writers of these resources:

We are UTS Faculty of Education students, non Indigenous Australians and wrote this as a way to learn more about our country, its living Indigenous culture and methodologies to share this information with students in a respectful and engaging way. Thank you to D'harawal educator Shannon Foster who guided us in the writing of this resource and to UTS ART for creating the Waraburra Nura garden and website!

Methodologies for incorporating Indigenous Knowledges into classrooms:

When using this resource we encourage you to acknowledge that the information is derived from D'harawal women Fran Bodkin and Shannon Foster. This information has been shared with us to share with you to share with your students. We encourage you to go through the resources, hear from Fran speak about individual plants on the website and share your interests from the information we've provided. Where possible share Fran's voice with your students, we want to encourage you to use Indigenous voices whenever possible.

We suggest you approach this resource with humility, respect and curiosity! Its Ok to feel uncomfortable, in fact, get comfortable with feeling uncomfortable! We felt uncomfortable but we asked for help and are sharing our research with you.

If talking about Indigenous culture is new or daunting to you, we encourage you to learn with your students, when questions come up that you are unable to answer utilise the opportunity to research and learn alongside your students. Your local Aboriginal Land Council, Indigenous Seniors and families in your community can be rich resources of knowledge and stories.

Using the resources and website:

On the resources page of the www.waraburranura.com website you will find a series of documents that compliment the activities for each stage including:

1. How to build your own garden (we encourage this!)
2. A list of Sydney plants
3. A list of words and translations from Wa'ran (Sydney) that relate to nature

Each resource from Early Stage 1 to Stage 3 includes activities and their NSW curriculum outcomes.

Enjoy!

- Lara, Kate, Taylor, Arianna 2018

Stage 2 - Waraburra Nura - Indigenous medicinal plants, Sydney region.

Plants	Outcomes	Activities	Language	Resources
All plants	<p>Mindfulness/ Visual Arts</p> <p>VAS2.1 Represents the qualities of experiences and things that are interesting or beautiful by choosing among aspects of subject matter</p>	<p><u>Mindfulness Garden</u></p> <ul style="list-style-type: none"> As a daily mindfulness activity, students can go out into the garden and complete a variety of activities including: drawing, writings stories, songs, poems in their journals; reading a book; listening to music; practicing yoga and deep listening etc. Students can create an individual or class '<i>Mindfulness Garden Book</i>'- combining all of their entries together. 	<p>Ngara - Listen, hear, think Yuridyuwa - Sit near Wuruna - Go outside Duba - The ground Guwing – Sun Gana - Smell</p>	<p>Mindfulness journals Garden Pencils Pencils</p>
All plants	<p>Science</p> <p>ST2-4WS investigates their questions and predictions by analysing collected data, suggesting explanations for their findings, and communicating and reflecting on the processes undertaken</p> <p>ST2-5WT applies a design process and uses a range of tools, equipment, materials and techniques to produce solutions that address specific design criteria</p>	<p><u>Leaf Investigation</u></p> <p>Students:</p> <ul style="list-style-type: none"> Choose a plant from school garden, local park/ nursery or home backyard and record observations. i.e. plant/leaf texture, shape, smell, size, colour, insects nearby/on it etc. Take close-up photos of the plant/ leaves- including different angles and insert them into their workbooks. Students can also conduct a leaf rubbing as additional information. <p><i>Extension activity:</i></p> <p>Students:</p> <ul style="list-style-type: none"> Identify Indigenous plants within the school environment/ at home/ local park/nursery. Encourage students to write down questions when examining the plant e.g. medicinal purposes, nourishment /food etc., research it, then record their findings in their workbooks. Students can visit the <i>Waraburra Nura</i> website for more information on native plants. 	<p>Gana – Smell Ngala – Look Wuruna - Go outside</p>	<p>Camera/ phone Notebook Pencils Technological devices Science workbooks <i>Waraburra Nura</i> website Glue stick</p>

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		<p><i>Workbook notes can include:</i></p> <ul style="list-style-type: none"> • Below each photograph- students write the plant's name, and any additional information. They can also glue in their leaf rubbings and annotate its structure. • Students can also list the materials used, places they visited, who/where they received information from and what they learnt/ enjoyed. 		
<p>Science</p> <p>ST2-4WS investigates their questions and predictions by analysing collected data, suggesting explanations for their findings, and communicating and reflecting on the processes undertaken</p> <p>GE2-3 examines differing perceptions about the management of places and environments</p>	<p><u>Plant Categorisation</u></p> <p>Students:</p> <ul style="list-style-type: none"> • Cut out a variety of different plants from magazines, local newspapers, catalogues etc. • Decide on how they categorise/classify the plants i.e. sorting them into similar shapes, sizes, colour, smells, alphabetical order, native etc. • Can play a game with their peers by swapping their work and getting them to guess how they categorised each plant. • Paste their work in science workbooks- identifying if any of the plants are native. • Class visits garden to see if any of their plants are there and considers/suggests if the plants in the garden have been categorised in any way/ what plants are native and introduced. • Class reflection/discussion on the similarities and differences between Western and Indigenous ways of classifying and categorising plants. A Venn diagram can be utilised- assisting students to compare and contrast. <p><i>Incursion Opportunity:</i></p> <ul style="list-style-type: none"> • Contact local land council or Indigenous community members to share their knowledge with students about cultural practices in classifying/categorising native plants. 	<p>Gana – Smell Ngala – Look Wuruna - Go outside Ngara- Listen, hear, think Yuridyuwa- Sit near Duba- The ground</p>	<p>Variety of plant images Australian Magazines, newspapers, catalogues, Scissors Science workbooks</p>	

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<p>Acacia Linifolia</p>	<p>Science/Geography</p> <p>ST2-10LW describes that living things have life cycles, can be distinguished from non-living things and grouped, based on their observable features</p> <p>ST2-5WT applies a design process and uses a range of tools, equipment, materials and techniques to produce solutions that address specific design criteria</p> <p>GE2-1 examines features and characteristics of places and environments</p>	<p><u>Life Cycle of a Plant</u></p> <p>Students:</p> <ul style="list-style-type: none"> • Visit garden to examine plants and their flowers. • Identify and discuss differences between living things and non-living things. • Ask them to consider: <i>What purpose/ importance plants and flowers might have in nature?</i> Share, discuss and record opinions in their workbooks. • Discuss the lifecycle of a plant- can show students a YouTube video. Provide students with an activity sheet to label the parts of a plant. <p><i>Experiment opportunity:</i></p> <ul style="list-style-type: none"> • Ask students: <i>What do plants need in order to survive? Do they need water to survive? Why?</i> • Conduct a 5-10-week experiment on effects of the Acacia Linifolia (full dependent on sun) in different environments. <i>View appendix 1 below.</i> <ul style="list-style-type: none"> ○ This can include experiments with plants in the dark, not watering them; watering them daily or once a week; and/or creating a mini greenhouse for the plant to grow in. To do this, place soil in foam cups with seedlings in the centre. • Record weekly results in a table, then share and discuss. • Students then research: • <i>What are optimal conditions for the plants? What plants need more/ less water? Why?</i> 	<p>Ngara - Listen, hear, think Yuridyuwa - Sit near Wuruna - Go outside Djirang - Leaves of trees Guwing- Sun Gura- Wind Mumarri mumarra- Fruit</p>	<p>Garden Science workbooks Pencils Internet</p> <p>Acacia Linifolia seedlings foam cups with holes soil experiment plant table</p>
<p>All plants</p>	<p>English</p> <p>EN2-10C thinks imaginatively, creatively and interpretively about information, ideas and texts</p>	<p><u>Imaginative Writing</u></p> <ul style="list-style-type: none"> • As a class, create a word-wall consisting of native plants. Students can use <i>Waraburra Nura</i> website for further information. • Take students out to the garden with notepads, encouraging them to use their senses (touch, hear, 	<p>Mumarri mumarra – Fruit Ngurra - Bird's nest Murrayagong – Spider</p> <p>Wadi – Wood</p>	<p>Word-wall Garden Notepads <i>Waraburra Nura</i> website Writing books <i>D'harawal: Dreaming Stories</i></p>

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	<p>when responding to and composing texts</p>	<p>sight and smell) to examine the plants, leaves, soil. Students record their findings.</p> <ul style="list-style-type: none"> Students then create an imaginative writing on what their life would be like as an insect living in that garden, using the information from their note books to guide them. <p><i>Extensions activities/ tasks:</i></p> <ul style="list-style-type: none"> After editing their work, students can present their imaginative writings in a short-story format, and draw pictures reflective of their story. To further student understanding of native plants, they can listen to Fran's voice recordings about each plant on the <i>Waraburra Nura</i> website http://waraburranura.com/plants/ <p><i>Additional classroom resources:</i></p> <ul style="list-style-type: none"> Word-walls including: key words in local Indigenous language and Indigenous seasons around Australia Map of Indigenous culture Frances Bodkin's <i>D'harawal: Dreaming Stories</i> and <i>D'harawal: Climate and Natural Resources</i> 	<p>Nura - Place or Country</p> <p>arra - Eucalyptus, gum-tree Yuridyuwa - Sit near Bada – eat Ngununy – food Dji – Tea urudyara – Butterfly Dawarang – Shield Djirang - Leaves of trees Gana duga Gana – Smell Duga - Forest or thick wood about a watercourse Gilbanung - Grasshopper Guganagina – Kookaburra Gura – Wind Ngalga - Look</p>	<p><i>D'harawal: Climate and Natural Resources</i></p>
<p>Plants chosen by presenter</p>	<p>Geography/Science</p> <p>GE2-2 describes the ways people, places and environments interact</p> <p>ST2-10LW describes that living things have life cycles, can be distinguished from non-living things and grouped, based on their observable features</p>	<p><u>Investigating Medicinal Benefits of Plants</u></p> <p><i>Incursion opportunity:</i></p> <ul style="list-style-type: none"> Talk to local Indigenous community or land council to educate students on: how to identify if a plant/ flower is safe to consume/ put on your skin, through using cultural methods as well as informing students the medicinal properties that can be drawn from native plants. In their workbooks, students record experiences, tips, strategies including healing/ medicinal properties and food that can be collected from plants. Students can then present this information on a poster. 	<p>Bada - eat</p> <p>Ngununy – food</p> <p>Dji – Tea</p> <p>Djirang - Leaves of trees</p>	<p>Science workbooks Garden</p>

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<p>All plants</p>	<p>Visual Arts</p> <p>VAS2.4 Identifies connections between subject matter in artworks and what they refer to, and appreciates the use of particular techniques</p>	<p><u>Leaf Rubbing</u></p> <p>Students:</p> <ul style="list-style-type: none"> Carefully collect a variety of leaves from the garden. Use an A3 sheet of paper and place leaves underneath it. Flip the crayons on their side and begin rolling over each leaf with a different colour. May need to vary how much pressure to apply in order for it to show dark outlines. Can draw pictures that are symbolic of the leaf; or label key features of the leaf; its medicinal properties; poems etc. Artworks can be displayed around the classroom or put into a 'Class Artbook'. 	<p>Djirang - Leaves of trees Ngalga – Look Duba - The ground Wuruna - Go outside Ngara - Listen, hear, think</p>	<p>Variety of garden leaves A3 paper Crayons</p>
<p>Plants chosen by students</p>	<p>English</p> <p>EN2-7B identifies and uses language forms and features in their own writing appropriate to a range of purposes, audience and contexts</p> <p>EN2-9B uses effective and accurate sentence structure, grammatical features, punctuation conventions and vocabulary relevant to the type of text when responding to and composing texts</p>	<p><u>Garden Poems</u></p> <ul style="list-style-type: none"> Students can write poems based on a specific plant. This may include its: lifecycle, structure/ parts, sensory descriptions etc. Poem types may include: haiku, acrostic, rhyming, shape, nonsense, narrative etc. <p><i>Tip:</i></p> <ul style="list-style-type: none"> To support student vocabulary- use science workbooks and word-walls. 	<p>Mumarri mumarra – Fruit Ngurra - Bird's nest Marrayagong - Spider Nura - Place or Country Bada – eat Ngununy - food Dji – Tea Burudyara – Butterfly Djirang - Leaves of trees Gana duga Gana – Smell Gilbanung - Grasshopper</p> <p>Gura – Wind</p>	<p>Writing books Science workbooks Word-walls</p>

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<p>All plants</p>	<p>Maths</p> <p>MA2-1WM uses appropriate terminology to describe, and symbols to represent, mathematical ideas</p> <p>MA2-2WM selects and uses appropriate mental or written strategies, or technology, to solve problems</p> <p>MA2-10MG measures, records, compares and estimates areas using square centimetres and square metres</p>	<p><u>Garden Map</u></p> <p>Students:</p> <ul style="list-style-type: none"> • Create a garden map, including plants native to their local area. • Ensure that students are aware of space requirements for each plant. • Take students outside to view area of potential garden- and draw their ideas on art paper. • Can then draw refined ideas on graphic paper. 	<p>Ngala – Look Ngara - Listen, hear, think Duba - The ground Wuruna - Go outside Wadi – Wood Nura - Place or Country Yuridyuwa - Sit near</p>	<p>Art paper Math books or graphic paper Pencils</p>
	<p>Science/ Maths</p> <p>A2-1WM uses appropriate terminology to describe, and symbols to represent, mathematical ideas</p> <p>MA2-2WM selects and uses appropriate mental or written strategies, or technology, to solve problems</p> <p>MA2-10MG measures, records, compares and estimates areas using square centimetres and square metres</p>	<p><u>Human Ruler</u></p> <ul style="list-style-type: none"> • When measuring the space of the garden or when planting seeds, students can use nonstandard measurements i.e. using their hands/ arms/ feet as measurement guides. • Students can draw a map of the garden in their maths books, recording their nonstandard measurements on each side of the quadrant. 	<p>Ngala – Look Ngara - Listen, hear, think Duba - The ground Wuruna - Go outside Wadi – Wood Nura - Place or Country Yuridyuwa - Sit near</p>	<p>Garden Math books Pencils</p>

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<p>Grevillea Laurifolia</p> <p>Telopea Speciosissima</p>	<p>English</p> <p>EN2-7B identifies and uses language forms and features in their own writing appropriate to a range of purposes, audiences and contexts</p> <p>EN2-2A plans, composes and reviews a range of texts that are more demanding in terms of topic, audience and language</p> <p>EN2-9B uses effective and accurate sentence structure, grammatical features, punctuation conventions and vocabulary relevant to the type of text when responding to and composing texts</p>	<p><u>Informative Garden Text</u></p> <p>Students:</p> <ul style="list-style-type: none"> • Create an informative text on either the Grevillea Laurifolia or Telopea Speciosissima plants. • Informative text content may include: • The plant's history i.e. how old it is, its origin, different/ similar plant types; medical benefits/ food; key features- optimal conditions to grow in e.g. soil, temperature, season, surround plants, how it makes its own food; life cycle; and environmental benefits etc. 	<p>Bada – eat</p> <p>Ngununy – food</p> <p>Dji – Tea</p> <p>Djirang - Leaves of trees</p> <p>Gana - Smell Guwing - Sun</p> <p>Gura – Wind</p> <p>Ngara - Listen, hear, think</p> <p>Duba- The ground</p>	<p>Writing books</p> <p>Internet</p>
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<p>Dianella Revoluta</p> <p>Acacia Linifolia</p> <p>Grevillea Laurifolia</p> <p>Telopea Speciosissima</p>	<p>Science/ Visual Arts</p> <p>ST2-5WT applies a design process and uses a range of tools, equipment, materials and techniques to produce solutions that address specific design criteria</p> <p>VAS2.2 Uses the forms to suggest the qualities of subject matter.</p>	<p><u>Plant Models</u></p> <p>Students:</p> <ul style="list-style-type: none"> Choose 1 of 4 flower plants to construct- Dianella Revoluta Acacia Linifolia, Grevillea Laurifolia or Telopea Speciosissima native plants to build, using resources such as pipe cleaners, tissue paper, buttons, paddle pop sticks, cardboard, string, texters, playdough, foam, PVA glue, stickers, and decorative beads etc. Are encouraged to draw a simple design before constructing their plant. Can write the plant's native and colloquial name on label stickers and also label the parts of the plant etc. <p><i>Tip:</i></p> <ul style="list-style-type: none"> Students can present to the class what plant they made. Display their work around the classroom. 	<p>Djirang - Leaves of trees</p> <p>Burudyara – Butterfly</p> <p>Guwing – Sun</p> <p>Mumarri mumarra – Fruit</p> <p>Marrayagong - Spider</p>	<p>Art paper</p> <p>Craft resources (see Plant Model activity)</p>
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Appendix 1: Plant Experiment Table

Plant type	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Aspects to measure										
Time of day measured										
Location of plant										
Height										
Visual description										
Proximity to other natives										