

TEACHING NOTES

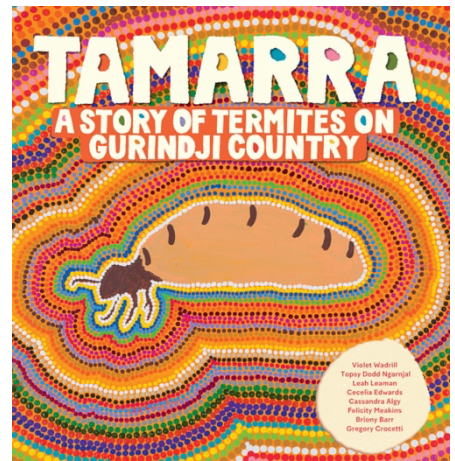
Tamarra

A Story of Termites on Gurindji Country

Violet Wadrill, Topsy Dodd Ngarnjal, Leah Leaman, Cecelia Edwards, Cassandra Algy, Felicity Meakins, Briony Barr and Gregory Crocetti

Teacher notes by Gregory Crocetti

Recommended for ages 7–12, year levels 2–7.



SYNOPSIS

Tamarra: A Story of Termites on Gurindji Country is a fascinating book that takes readers inside the life of termites through Indigenous Knowledge, Western Science, storytelling and art.

Created as a collaboration between over 30 First Nations and non-Indigenous contributors, the story and artworks explore how termites and their mounds connect different parts of Country, from tiny Gurindji babies and their loving grandmothers, to spiky spinifex grasses growing in the hot sun.

Written in traditional Gurindji, Gurindji Kriol and English (with a QR code linked to the audio), *Tamarra* is a truly original story with beautiful artwork that takes readers on an educational and cultural journey through Gurindji Country.

ABOUT THE AUTHORS/ILLUSTRATORS

The co-creators of *Tamarra* are a diverse group of Gurindji and non-Indigenous people. For over four months in 2021, they came together at Kalkaringi (NT) on Gurindji Country to explore a shared interest in termites and with a curiosity about how they could create a new kind of storybook together.

The Gurindji artists and storytellers who led the project are Violet Wadrill, Topsy Dodd Ngarnjal and Leah Leaman. They are cultural custodians and members of Karungkarni Art, which is the local arts centre. Gurindji students from Kalkaringi School participated through workshops and art-making. Key non-Indigenous contributors were language workers Cecelia Edwards and Cassandra Algy, linguist Professor Felicity Meakins, who has worked with the Gurindji community for over twenty years, and artist Briony Barr and microbiologist Dr Gregory Crocetti, who collaborate as Scale Free Network.

A full breakdown of the contributors is below:

WORDS

Violet Wadrill
Topsy Dodd Ngarnjal
Leah Leaman
Cecelia Edwards
Cassandra Algy
Felicity Meakins
Briony Barr
Gregory Crocetti

Violet Wadrill
Rosemary Johnson
Serena Donald
Leah Leaman
Pauline Ryan
Roberta Winbye
Magdalene Winbye
Margaret Winbye
Mary Smiler
Rosie Smiler
Joanne Stevens
Rachel Rennie
Lucy Tanami
Cassandra Algy

Caroline Jimmy
Martina Mandijerry
Cecelia Edwards
Sophia Donnelly Patterson
Tara Long
Merrilyn Frith
Narelle Morris
Theresa Yibwoin
Brenda L Croft
Briony Barr
Penny Smith
Jacqui Young
Gregory Crocetti
Kalkaringi School Students

ARTWORK AND PHOTOGRAPHS

Topsy Dodd Ngarnjal



ABOUT THE BOOK

- The main narrative of the book centres around the use of termite mounds by the Gurindji People in bush medicine.
- This book takes readers from the microscopic worlds of bacteria and plant fibres to the vast landscapes of the spinifex grasslands covering much of central and northern Australian continent.
- The story is spread across 6 chapters: Baby; Spinifex; Tamarra (Termite Mound); Gut; Raintime and Future Generations.
- Each page of the story contains 2–3 sentences in two languages: English and either Gurindji (to express traditional knowledge) and Gurindji Kriol (to express non-Indigenous knowledge).
- Every page of the story is also accompanied by a 'Did You Know?' bubble containing cultural and scientific information behind the story.
- Each page of the story is illustrated with an artwork painted by Gurindji and non-Indigenous artists, sometimes working collaboratively. The artworks combine the dot-painting style with illustrations of bush medicine, Gurindji Country, termite mounds, plants and other elements of the story.
- The back section of the book includes extra information about Gurindji language, history and creative process and collaborators who co-created the story and artworks.

KEY CURRICULUM AREAS

Learning areas: English; Humanities and Social Sciences (Geography); Science; The Arts

General capabilities: Literacy; Personal and Social Capability; Ethical Understanding; Critical and Creative Thinking; Intercultural Understanding

The following activities are designed to suit school year levels 2–7 but may be adapted to different learning ranges and ability levels.

THEMES

Theme 1: Medicine is practised differently by different cultures:

- Gurindji babies are treated with termite mound by their grandmothers to help strengthen their skeletons and close their skull plates
- This bush medicine practice also helps maintain cultural connections with Country (pp. 7–23)

Theme 2: Country nurtures (reciprocal) relationships between humans, other animals, plants and bacteria, which rely on each other to survive:

- Arid and semi-arid (desert) ecosystems (such as spinifex grasslands) contain rich biodiversity
- Termites rely on spinifex grass as their main source of food (pp. 25–33), and rely on bacteria in their gut to digest the grass (pp. 51–57)
- The Gurindji People use termite mounds as an important part of their bush medicine
- Termites form a central part of the food web in central and northern Australia (pp.47, 64–65)

Theme 3: Termites are social insects with different roles and stages of their life cycle:

- Different groups of spinifex termites (e.g. workers, soldiers, reproductives) work together as a family to form huge mounds (pp. 33–49, 59–69)



COMPREHENSION

Before reading

- Looking at the title and cover artwork, what do you think this book is about?
- What do you already know about termites?
- What do you already know about bush medicine or bush foods?
- Where do you think Gurindji Country might be?
- Do you know what the name of the Country your school is located on?

After reading

- Hand students a piece of paper and ask them to write at least one question, interest or feeling in response to the story
 - Place these anonymously into a box and use these as prompts for discussion

Other suggested questions

- **How do you think differently about termites after reading this book?**
- Where is Gurindji Country? Can you find Kalkarindji on a map?
- What are two different ways Gurindji People use termites and termite mounds? (e.g. eggs and karu kamparnup)
- What are two different uses of plants by Gurindji People? (e.g. in medicine, spinifex glue for axes, making a spear, digging stick or a coolamon)
- The language Gurindji is one of around 400 First Nations languages. You can practise pronouncing these words using the audio on the website.
 - Can you find the Gurindji words for:
 - 'termite mound' on page 8
 - 'fire' on page 16
 - 'child' or 'baby' on page 19 and 72
- The language Gurindji Kriol is one of Australia's newest languages. It was included in the Australian census for the first time in 2011. The language evolved on cattle stations over the last 40 years from traditional Gurindji mixing with a Pidgin English now known as Kriol. Some of the Gurindji Kriol words used in *Tamarra* contain English-sounding words which are from Kriol. How many can you find?
 - Can you find the Kriol words for:
 - 'family' on page 48
 - 'rain' on page 63
 - 'Country' on page 68
- Why do you think the creators decided to write some sections of the story in traditional Gurindji and other sections in Gurindji Kriol?
- The guts of all animals (including humans) contain hundreds of different kinds of bacteria and other microbes:
 - Read pages 51–57 and ask students how bacteria living in termite guts help them to live and survive? (e.g. break down food to make energy and protein for the termite, and help them make 'poo glue' to build strong walls of the termite mound)



- How do they think the trillions of bacteria living in our own gut (i.e., our large intestine) help humans? (e.g. help break down our food and provide us with energy)
- Like termites, bacteria are often assumed to be bad and described as ‘germs’, even though most of them are good. Has this book made you think differently about good and bad germs?

WRITING ACTIVITIES

- Find out the name of the Country where your school or home is located. What can you find out about how local First Nations people have traditionally used native plants and insects on this Country. Write a **report** (this could also be a video, podcast, poster, etc.) about what you discover. If there is not enough information about First Nations people in your local area then try researching other nearby groups.
- Ask students to imagine they are one of the termites and write a **short story** about a day or a week in the life of that termite. Use emotive language to convey how the characters might be feeling and behaving, as if they were able to have feelings and behave in a similar way to humans.
 - Are they a hard worker or a brave defender?
 - Are they the huge queen, laying eggs every few seconds and too big to leave her royal chamber?
 - Who are their friends?
 - What adventures might they go on and what challenges might they face?
 - Remember, the workers and defender termites are deaf and blind, and must rely on vibrations and smells to navigate and stay away from danger!
- Most people think all termites are a pest insect that must be exterminated, mostly because of the damage some wood-eating termites do to timber homes. We have now learned that not all termites eat wood and can play an important environmental and cultural role.
 - Ask students to imagine what kinds of problems would if all termites were removed?
 - Write a letter from spinifex termites trying to persuade people not to kill them.
- After watching the video “[Termites Digest Wood Thanks To Microbes](#)”, ask students to **write a story** from the perspective of a bacterium living in a termite gut. What might it feel like to live in a termite gut? What happens when the termite you are living in poops and you get eaten by another termite?
- Ask students to write a **review** about *Tamarra: A Story of Termites on Gurindji Country*, or to make a podcast recording recounting the story. This might also work as an oral presentation to the class supported by an illustrated poster.
- Ask students to write a short **research report based on termites**. This could involve the cultural significance of termites as a food source in different parts of the world, the different types and diets of termites around the world or different folktales or creation stories from around the world that feature termites.

CREATIVE ACTIVITIES

- **Create a diagram depicting the timeline** of the Gurindji People’s experiences with kartiya (non-indigenous people) in Australia, leading up to the present. Find images to help visualise the timeline and add photographs and drawings to help illustrate it.
- **Make sculptures of termites** using plasticine or clay. Try using tiny sticks to create legs and antennae. You could make examples of all the main termites in a family (king, queen, defender, worker, alate). What other materials can you use to sculpt a termite? Expand on the termite sculpture activity by



making a diorama featuring other parts of the ecosystem on Gurindji Country such as spinifex plants, eucalypt trees, rocks and other animals such as echidna, lizards and different birds.

- Research the weather patterns in the Northern Territory, in and around towns of Kalkaringi and Daguragu. **Make an artwork** inspired by what you find. It could be about the colours of the different seasons, changing temperatures over the year, winds and where they come from, storm clouds or rain fall.
- **Draw and design your own life-size termite mound:** The mounds of spinifex termites can contain a million termites! Ask students to design their own termite mound. Encourage them to think about the layout of the colony and how it might be designed to suit the needs of the termites, adding in chambers for the different types of termites and their various activities (e.g. storing food and water, feeding, cleaning, laying eggs, nurseries for young, etc.) together with tunnels to nearby habitat (e.g. spinifex grasses). Work together to draw lots and lots of termites everywhere. Students could also then attempt to build a mound using materials such as cardboard tubes, egg cartons, popsicle sticks and glue.
- **Create your own picture book:** In groups of two, ask students to write and illustrate a picture book, imagined from the perspective of a worker termite (e.g. collecting food, gathering water, building tunnels, repairing the mound, feeding other termites etc). Students could work together to write the story and illustrate it, or one student writes and the other illustrates. Encourage students to think about different mediums when creating the pictures for their book. Will they use pencils, felt tip pens, crayons, paint, collage or a mix of all mediums?
- **Create an animated video:** Ask students to create an animated video about the importance and benefits of termites and their mounds on Gurindji Country.
- **Non-fiction report:** Ask students to choose a termite predator they might like to research. Typical predators of spinifex termites include ants, lizards, frogs, birds, spiders, bilbies and echidna. Students should then create a presentation on their chosen animal. This can be a poster, a series of illustrations, or collages of images students have cut and pasted to a poster, a written journal or a podcast. They should consider questions such as:
 - When did this animal evolve?
 - How is it classified?
 - What can you find out about its anatomy?
 - What is the main habitat for this animal? Do they migrate?
 - What is their life cycle or breeding cycles?
 - What is their position in food chain?
 - Are termites an important part of their diet?
 - Is the animal threatened by any human activity (e.g. land clearing, cattle grazing) or other threats (e.g. disease, or feral predators like cats) and are there any conservation efforts to maintain numbers of this animal in the wild?
- **Food Web Diagram:** Ask students to work in groups to create a diagram depicting the food web around a termite mound, including termites, ants, spiders, frogs, lizards, birds and mammals. Students can present this diagram as a poster containing a collage of images or a series of illustrations. (*This could also be a group activity led by the teacher*). Ask students to consider what might happen if different one or more parts of this food web disappeared?
- **Termite Role Play:** Divide students into groups and assign each group a role, such as the queen (mother), soldiers (defender) or workers. Then, have them act out a day in the life of a termite colony. Encourage students to think about the social structure of termite colonies and how different roles contribute to the success of the colony.



RELATED READING

Books

Freedom Day

Written by Thomas Mayo and Rosie Smiler
Illustrated by Samantha Campbell

The First Scientists

Written by Corey Tutt
Illustrated by Blak Douglas

Our Friends the Termites

Pat Lowe

Finding Our Heart

Written by Thomas Mayo
Illustrated by Blak Douglas

Nema and the Xenos: A Story of Soil Cycles

Written by Ailsa Wild, Briony Barr and Gregory Crocetti
Illustrated by Aviva Reed

Websites

Karu Kamparnup: Treating Babies with Antbed (ICTV)

<https://ictv.com.au/video/item/5007?p=1>

Vincent Lingiari the Leader (ABC Education)

<https://www.abc.net.au/education/digibooks/vincent-lingiari-the-leader/101854150>

Paul Kelly explains creation of From Little Things Big Things Grow on Gurindji country (ABC News)

<https://www.abc.net.au/news/2022-08-29/paul-kelly-explains-creation-of-from-little-things/14036146>

Timeline of the station walk off and Gurindji land handback (ABC News)

<https://www.abc.net.au/news/2016-08-18/timeline-of-wave-hill-land-rights/7760300>

These Termites Turn Your House Into a Palace of Poop (KQED/PBS – Deep Look)

<https://www.kqed.org/science/1065215/these-termites-turn-your-house-into-a-palace-of-poop>

Flying Termites Take a Dangerous Journey to a New Life (KQED/PBS – Deep Look)

<https://www.kqed.org/science/1978298/flying-termites-take-a-dangerous-journey-to-a-new-life>

Termites Digest Wood Thanks To Microbes (PBS Digital Studios)

<https://www.pbs.org/video/termites-digest-wood-thanks-to-microbes-hj3aq5/>

