EDUCATION KIT









The Story Behind the Book



What is a Tiny Forest



Amazing Tiny Forest Facts



Lesson Plans:

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5 Amazing Native Bee Facts



Education Kit

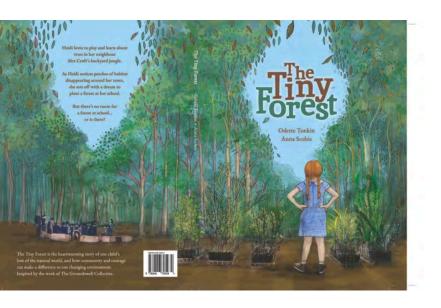
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EDUCATION KIT

The Story Behind the Book

TEACHERS NOTES





The Tiny Forest is an inspiring picture book for young readers that combines storytelling and visual drawing to encourage environmental awareness, community action and a love of nature. Through the character of Heidi, students will explore themes of biodiversity, habitat restoration, and the power of collective action. The book's narrative is designed to be hopeful, empowering children to see how small steps can lead to meaningful changes in their communities and the world.

This series of lesson plans aligns with the NSW Education Curriculum across multiple key learning areas, including Geography, Science, PDHPE, and Creative Arts. Each lesson is designed to engage students creatively and thoughtfully with concepts of environmental stewardship, using discussions, hands-on activities, and reflection.

The activities in these lesson plans are flexible, allowing for adaptation to suit different learning levels and classroom contexts. From creating tiny habitats to exploring character development through illustration, students will learn about the importance of caring for the natural world in ways that are fun, imaginative, and deeply impactful. This book can also be a valuable resource for schools involved in sustainability programs or environmental initiatives, fostering a long-lasting appreciation for nature among young learners.

THE GROUNDSWELL COLLECTIVE

THE GROUNDSWELL COLLECTIVE IS A LAKE MACQUARIE BASED NOT-FOR-PROFIT ORGANISATION THAT SUPPORTS SCHOOLS AND OTHER LANDHOLDERS TO MAKE MEANINGFUL ENVIRONMENTAL AND SOCIAL IMPACT WITH TINY FORESTS!

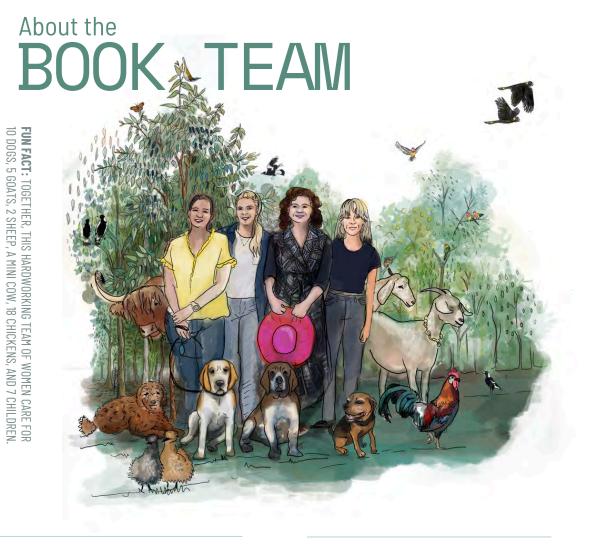
With several tiny forests already planted by school communities within the Lake Macquarie and Hunter region, we can see how these compact, self-sustaining forests bring nature to urban spaces where it's needed most. A tiny forest is more than just a planting of trees; it's a thriving miniecosystem roughly the size of a tennis court that provides habitats for native wildlife, improves wellbeing, and helps mitigate climate change. Based on a planting method developed by Dr Akira Miyawaki in the 1970s, tiny forests include diverse native species planted densely in enriched soil, ensuring rapid growth and high biodiversity.

In 2024, students from St Paul's Primary School in Gateshead, NSW and Teralba Public School, NSW, worked together with The Groundswell Collective to plant their own tiny forests. These areas now serve as outdoor classrooms, providing students and teachers with the opportunity to explore lessons in biodiversity, sustainability, and climate action while monitoring the environmental benefits of their forest over time. Each forest design reflects local culture and includes unique features, like First Nations story poles, sculptures, and native flora.

We'd love to work with your school to create a tiny forest, inspiring future generations to become stewards of their environment. Alongside each project, The Groundswell gifts a copy of *The Tiny Forest*, a beautifully illustrated book that brings these ideas to life, showing young readers the power of community action. If you are interested in exploring these possibilities, reach out to us to learn more about bringing a tiny forest to your school.

Together, let's grow a greener future for our school communities.





ANNA NOON

The Groundswell Collective

Anna is a social worker turned climate activist, who uses her knowledge and skills to engage communities and inspire positive behaviour change through handson sustainability projects such as building Tiny Forests. Anna is the driving force behind *The Tiny Forest* children's book.

ANNA SCOBIE

Book Illustrator / Educator

Anna is an artist and museum educator deeply inspired by nature and the power of creativity. She connects community through art, teaching, and pollinator workshops. Anna illustrated *The Tiny Forest* and nurtures her own tiny forest at her home, sharing its beauty and lessons with others.

ODETTE TONKIN

Author

Odette is a freelance writer and journalist. She has written for publications like Australian Geographic and Swell magazine, was the editor of Outsider magazine and is the author of *The Tiny Forest*, a children's picture book about the power of environmental champions and community.

NONI BOSS

Book Designer / Graphic Designer

Noni is a graphic designer with 17 years experience in the design industry and is the founder of the creative studio, SuckerPunch Design. She has worked with companies like Scholastic and designed for a diverse range of clients across various projects. Noni designed *The Tiny Forest* book, which reflects her dedication to meaningful design.

what is a

TINY FOREST

A TINY FOREST IS LIKE A MINI VERSION OF A REAL FOREST, ABOUT AS BIG AS A TENNIS COURT! IT'S PACKED FILLED WITH NATIVE TREES AND SHURBS AND IS GROWN IN IMPROVED, LOOSE SOIL.

These forests are small, but they work just like big ones, making homes for animals and helping the environment.

The concept of the tiny forest was started in the 1970s by a Japanese botanist named Akira Miyawaki. That's why they're often referred to as a "Miyawaki forests." There are now over 3,500 tiny forests around the world, with more being planted every day—including in Australia!

Tiny forests grow really fast—10 times faster than traditional planting methods—and are much thicker and full of life. These mini-forests are great for bringing nature back to busy cities and helping the land recover quickly.

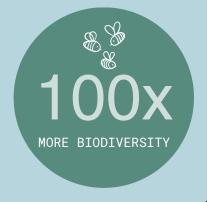


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Amazing

TINY FOREST FACTS



BIODIVERSITY HOTSPOTS

Tiny forests may be small, but they're bursting with life! Birds, butterflies, insects, and even small animals can live there. These tiny forests create safe spaces for wildlife to move around in busy towns and cities.



CARBON CAPTURE

Tiny forests help fight climate change by absorbing carbon dioxide and giving us back fresh oxygen.



COOLING EFFECT

Tiny forests help cool down hot city areas. They give shade and reduce the "heat island" effect, where cities can get much warmer than nature areas.



COMMUNITY CONNECTIONS

Planting tiny forests brings people together. It's a fun way to work as a team, learn to care for our planet, and make spaces where people can relax and play.



LIVING CLASSROOM

Tiny forests are like outdoor classrooms! Kids can explore, learn about nature, and see how plants and animals live together.



FUTURE FORESTS

Planting a tiny forest is a simple and powerful way to help the planet. Every tiny forest we plant today will grow into a special place that benefits future generations!

GROWING TOGETHER





EARLY STAGE 1 (KINDERGARTEN)

Curriculum Areas: Geography (People Live in Places), Science (Living World)
Outcomes: Geography (People Live in Places): GEe-1, GEe-2 Science (Living World): STe-8NE, STe-4LW-ST



LEARNING OUTCOME

Students will learn about local habitats, identify the basic needs of plants and animals, and explore ways they can care for their environment.



MATERIALS

- Copy of The Tiny Forest book
- Recycled materials (egg cartons, cardboard, paper scraps)
- Outdoor space for a nature walk



ASSESSMENT

Observe students' participation in the discussion and engagement in creating their habitat boxes.

Assess their understanding of basic plant and animal needs based on their habitat creations.



EXTENSION IDEA







Introduction and Read Aloud (15 minutes)

• Read *The Tiny Forest*, focusing on Heidi's discovery of habitat loss and her dream to create a green space.

Discussion Questions (10 minutes)

- Why do plants and animals need a place to live?
- How did Heidi's community help her create a forest?
- How can we help animals and plants in our own community?

ACTIVITY: DESIGN A TINY HABITAT (20 MINUTES)

- Using recycled materials, students create small "habitat boxes" representing a home for an animal or plant.
- Encourage students to think about what each habitat needs, such as sunlight, shelter, food and water.

Extension Activity (10 minutes)

- Take a short nature walk around the school to observe different habitats.
 Ask students to point out where animals might live and discuss how we can help keep these spaces healthy.
- If possible, invite a local environmental expert, such as a ranger, ecologist or conservationist, to discuss how small urban habitats support biodiversity.



EARLY STAGE 1 (KINDERGARTEN)

GROWING TOGETHER

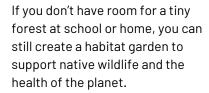


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Choose local, native plants

conditions and offer the best food and shelter options for local wildlife.

ground covers, grasses, shrubs and trees. Trees provide shade and nesting sites, while shrubs and ground layers offer habitat for smaller creatures.

CREATE YOUR OWN

Native plants are best suited to local

Think diversity and layers

Mimic a natural forest by including



Year-round food

Select a variety of plants that produce flowers, fruits, seeds and nuts at various times of the year to provide constant food sources for pollinators and wildlife.

Add water and natural features

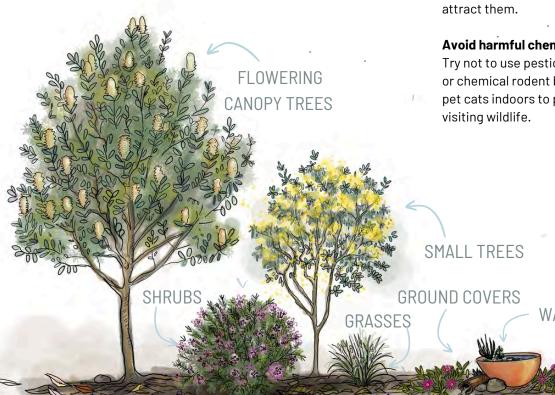
Incorporate water sources like bird baths or ponds and add rocks, leaf litter and logs to form hiding and sunny spots for wildlife.

Do your research

Learn about the needs of local, native insects, bees, frogs, birds and lizards and tailor your garden to

Avoid harmful chemicals

Try not to use pesticides, herbicides or chemical rodent baits and keep pet cats indoors to protect local





BIODIVERSITY & SECTION OF THE SECTIO





STAGE 2 (YEARS 3-4)

Curriculum Areas: Science (Living World), Geography (Sustainability)

Outcomes: Science (Living World): ST2-4LW-S, ST2-11LW-S

Geography (Sustainability): GE2-2, GE2-3



LEARNING OUTCOME

Students will examine local biodiversity, understand the role of native plants, and explore how tiny forests support diverse ecosystems.



MATERIALS

- Copy of The Tiny Forest book
- Access to research resources (books, internet)
- Recycled Craft materials for creating a tiny forest diorama



ASSESSMENT

Assess students' understanding through their diorama creations, focusing on how well they represent relationships within an ecosystem.

Observe students' participation in group research and discussions, evaluating their ability to identify the importance of biodiversity and sustainability.



EXTENSION IDEA

REATING A TINY ECOSYSTI N A BOTTLE







Introduction and Read Aloud (15 minutes)

- Begin by reading The Tiny Forest, focusing on how tiny forests help different species and support biodiversity.
- Discuss why biodiversity is important and how tiny forests provide habitats for plants and animals in urban areas.

Research Activity (20 minutes)

- Divide students into small groups and assign each group a native Australian plant or animal species (e.g., Banksia, sugar glider, blue-tongue lizard).
- Have each group research their assigned species, focusing on its habitat needs, role in the ecosystem, and how tiny forests might support its survival.

DESIGN A TINY FOREST ECOSYSTEM (30 MINUTES)

- Each group creates a tiny forest diorama using a shoebox or poster, including the pictures or drawing of native plants and animals they researched.
- Encourage students to label parts of their tiny forest ecosystem, showing the connection between plants animals, and the environment.
- Have each group explain why each element they included is important for the ecosystem's health.

Discussion Questions (10 minutes)

- Why do you think having many different types of plants and animals (biodiversity) in a small area, like a tiny forest, is important for the environment?
- What would happen if we didn't have spaces like tiny forests in cities? How would this impact plants, animals, and even people?

STAGE 2 (YEARS 3-4)

BIODIVERSITY & TINY FORESTS







CREATING A TERRARIUM IS
A FUN, EASY WAY TO BRING
A MINI ECOSYSTEM INDOORS!
A SIMPLE GUIDE IN FIVE STEPS:

1. Pick a Clear Container

Choose any clear container with enough room for plants. Closed containers keep humidity in; open ones work well for succulents.

2. Create Drainage

Add a 2-3 cm layer of small stones at the bottom to help with drainage.

3. Add Charcoal

Sprinkle a bit of activated charcoal to keep the terrarium fresh.

4. Layer Soil and Plants

Add potting soil and gently press your plants into place.

5. Decorate and Lightly Water

Add moss, old shells, and pebbles. Lightly mist the soil, and place in indirect light.

WHAT YOU NEED

• Clear container (with or without a lid)

DRAINAGE

- Small stones or pebbles (for drainage)
- Activated charcoal (optional, keeps it fresh)
- Potting soil (appropriate for your plant type)
- Plants (small ones like succulents, ferns, indoor or moss)
- Decorative items (moss, pebbles, mini figurines optional)
- Spray bottle (for light watering)



CREATING CHARACTER

THROUGH ILLUSTRATION

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STAGE 2 (YEARS 3-4)

Curriculum Areas: Creative Arts (Visual Arts), English (Visual Literacy)

Outcomes: Visual Arts: VAS2.1, VAS2.2, VAS2.3

English: EN2-10C, EN2-2A, EN2-1A



LEARNING OUTCOME



MATERIALS

Students will analyse how illustrations convey a character's personality and apply these techniques by creating their own character inspired by nature.

- Copy of The Tiny Forest book
- Drawing paper
- HB Pencils
- Colouring materials



ASSESSMENT

Assess students' illustrations for creativity, attention to detail, and how effectively they used visual elements to represent their character's personality. Evaluate students' written descriptions for insight into how their character's traits reflect an appreciation of nature.



EXTENSION IDEA

FOR FURTHER EXPLORATION, STUDENTS CAN CREATE A SHORT STORY OR POSTER FEATURING THEIR NATURE HERO, DEVELOPING BOTH VISUAL AND NARRATIVE STORYTELLING SKILLS.





Character Study (15 minutes)

- Read or show selected illustrations of Heidi from *The Tiny Forest*.
- Lead a discussion on how Heidi's personality and love for nature are shown through her appearance, actions, and expression.

Discussion Questions (10 minutes)

- How do the illustrator's choices (colours, clothing, expressions) show us what kind of person Heidi is?
- What details make her look curious, caring, or adventurous?
- How does the background or setting help us learn more about her?

ACTIVITY: CREATE YOUR OWN NATURE HERO (25 MINUTES)

Invite students to design their own character inspired by nature:

- Encourage them to focus on details that show the character's personality, such as clothing, facial expressions, and setting.
- Students then write a short description of their character, explaining how their design reflects a love for nature.

Extension Activity (10 minutes)

- Arrange a "Gallery Walk" where students display their characters around the room.
- Allow students to view each other's work and share their character's story and personality with classmates

STAGE 2 (YEARS 3-4)

CREATING CHARACTER THROUGH ILLUSTRATION



NATURE WATERCOLOUR SPECIMEN ART





EARLY STAGE 1 (KINDERGARTEN) STAGE 1 (YEARS 1-2) STAGE 2 (YEARS 3-4)

Curriculum Areas: Creative Arts (Visual Arts),

Outcomes: Visual Arts: VAS1.1, VAS1.2, VAS2.1, VAS2.2



LEARNING OUTCOME

Students will observe and represent natural specimens, using watercolour to creatively capture shapes, textures, and colours from nature.



MATERIALS

- Magnifying glasses (optional)
- Drawing paper (thicker watercolour paper if available)
- 2B Pencils
- Watercolour paints and brushes
- Water cups and paper towels
- Natural specimens (flowers, leaves, small twigs, rocks, etc., collected with guidance)



ASSESSMENT

Observe students' participation in collecting and observing specimens, their ability to represent these specimens in their sketches, and their use of watercolour techniques.

- Discuss with students what they enjoyed or found challenging about capturing nature in their artwork.



EXTENSION IDEA

STUDENTS CAN CREATE A "NATURE ART
JOURNAL" WHERE THEY WEEKLY COLLECT AND
DRAW DIFFERENT NATURAL ITEMS OVER TIME,
ENHANCING THEIR OBSERVATION SKILLS AND
UNDERSTANDING OF LOCAL PLANT LIFE.





Introduction (10 minutes)

- Begin with a brief discussion about the beauty and diversity of nature. Read *The Tiny Forest* book.
- Ask the students if they've ever looked closely at a leaf, flower, or rock. Have they ever collected nature treasures like Heidi? Explain that today, they'll be nature artists, using natural specimens as inspiration for their art.

Nature Walk and Specimen Collection (10 minutes)

 Take students on a short nature walk around the school grounds or designated area to collect natural specimens. Encourage them to observe and collect small items like leaves, flowers, and rocks. Emphasise respecting nature by not picking live plants or disturbing any animals.

ACTIVITY: WATERCOLOUR STUDIES (25 MINUTES)

Observation and Drawing (10 minutes)

In the classroom, have students examine their specimens closely. They can use a magnifying glass to notice small details. With pencils, students should lightly sketch their chosen specimen on the drawing paper, focusing on shape, texture, and any interesting patterns.

Watercolour Painting (10 minutes)

Trace the line drawing with waterproof black sharpie. Then introduce watercolours and demonstrate basic techniques, like blending colours and creating light and dark shades by using more or less water. Encourage students to carefully add colour to their drawings, letting them experiment with capturing the colours and textures they observed in their specimens.

Reflection and Sharing (5 minutes)

Have students gather in a circle and invite them to share their artwork with the class.

EARLY STAGE 1 (KINDERGARTEN) STAGE 1 (YEARS 1-2) STAGE 2 (YEARS 3-4)

NATURE WATERCOLOUR SPECIMEN ART





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STAGE 1 (YEARS 1-2)

Curriculum Areas: Personal Development, Health, and Physical Education (PDHPE),

Geography (People and Places) **Outcomes:** PDHPE: PD1-1, PD1-10

Geography (People and Places): GE1-1, GE1-2



LEARNING OUTCOME



MATERIALS

Students will develop an understanding of community and their roles in contributing to positive change within it.

- Copy of The Tiny Forest book
- Magazines
- Coloured pencils
- Craft supplies for vision boards



ASSESSMENT

Evaluate each group's vision board for ideas on environmental action.

Observe students' understanding of community roles during the clean-up or planting activity.



EXTENSION IDEA

ORGANISE A SCHOOL ACTION DAY: INVITE THE COMMUNITY TO CLEAN UP OR PLANT AT THE SCHOOL.







Introduction and Read Aloud (15 minutes)

• Read *The Tiny Forest*, focusing on how Heidi's actions helped her community and the environment.

Discussion Questions (10 minutes)

- How did Heidi's actions help her community and the environment?
- What changes would students like to see in their own community?

COMMUNITY VISION BOARD (25 MINUTES)

- In small groups, students create a "vision board" with images and words showing what they want to see in their community.
- Encourage students to include specific ways they can help, such as recycling, planting flowers, or picking up litter.

Extension Activity (10 minutes)

 Organise a "mini-action day" where students help clean up an area of the school or plant a small garden. Create a poster to invite parents or community members to join.

STAGE 1 (YEARS 1-2)

COMMUNITY

CHANGE MAKERS

BEE BED & BREAKFAST





EARLY STAGE 1 (KINDERGARTEN

Curriculum Areas: Science (Living World), Geography (People Live in Places) **Outcomes:** Science (Living World): SCLS1: Recognises that living things have basic needs, including air, food, and water. SCLS2: Observes and describes the features of familiar living things. Geography (People Live in Places): GELS1: Identifies ways in which people care for and sustain the environment.



LEARNING OUTCOME



MATERIALS

Students will learn about native Australian bees, understand their role in pollination, and explore how planting a tiny forest can provide a safe habitat for these and other local species.

- Pictures of native Australian bees (like the blue-banded bee or stingless bee)
- Recycled materials for creating "beefriendly" habitats (tin, bamboo, lantana)
- Small native plants for a class planting area (or seeds to plant at home)



ASSESSMENT

Observe students' understanding during discussions on the role of bees in supporting plant growth and habitats.

Assess their participation and creativity in building a bee-friendly habitat (bee hotel) and planting activity.



EXTENSION IDEA

CREATE A SEED BOMB TO GROW FLOWERS AT SCHOOL OR HOME







Introduction and Read Aloud (15 minutes)

- Begin by reading The Tiny Forest, focusing on how tiny forests support different animals, including bees and other pollinators.
- Briefly discuss why bees are important for helping plants grow through pollination and how tiny forests can be a safe home for them.

Discussion Questions (10 minutes)

- Why are bees important to plants, and how do they help tiny forests grow?
- How can planting a tiny forest help Australian native bees and other animals?
- What can we do to help bees find food and a safe place to live?

BUILD A BEE-FRIENDLY HABITAT (20 MINUTES)

- Create a bee bed using recycled and natural materials including tin, clay and stems. Students create small "bee habitats" where bees could nest.
- Encourage students to think about what else bees need, such as flowers for breakfast and water to drink.

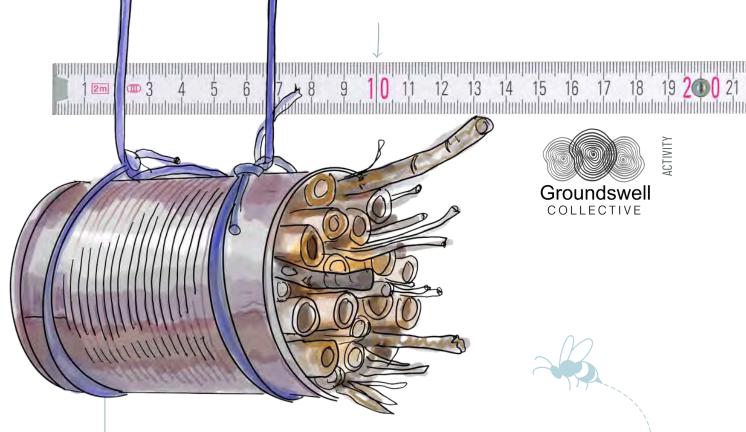
Planting a Pollinator Garden (25 minutes)

- If possible, guide students in planting small native plants in an outdoor area to create a tiny forest space.
- Alternatively, have each student roll a seed bomb to take home and grow, contributing to bee habitats in their own gardens.

STAGE 1 (YEARS 1-2)

BEE BED & BREAKFAST





WHAT YOU NEED

- Recycled tin can (e.g., soup or food can)
- Uncoated paper or bamboo straws
- Bamboo cut to 10cm or longer
- Clay

Method:

1. Fill the open end with uncoated paper straws or bamboo lengths or twigs with pithy stems (ensure the they fit snugly inside).

2. Secure the tin can to a fence post or under an eve in a sheltered, protected spot.



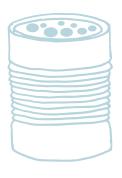
WHY BEES NEED A 10CM NEST

Solitary native bees, like the blue-banded or leafcutter bee, need nests that are about 10cm long. This allows the female bee to create multiple brood cells inside, where she stores nectar and pollen for her eggs. The 10cm length is ideal for allowing enough space for several eggs, and the bees will hatch and grow in the nest until they emerge as adults.

Mudbrick Mansion for Solitary Bees

- 1. Cut small blocks of clay
- 2. Fill the tins with a clay soil mix (without stones) or use pottery clay.
- 3. Use a tool (back of a paint brush to make 6-7mm holes in the clay while it's still slightly damp.
- 4. Let the clay dry completely, then place them in a sheltered area.

HOW TO MAKE A BEE HOTEL





- Mixing bowl
- Water
- Bee Friendly seeds

Method:

- 1. Mix 10 parts soil with 1 part flour.
- 2. Slowly add water and stir until the mixture is sticky like dough.
- 3. Roll the mixture into small balls (about golf ball size).
- 4. Place bee friendly seeds in a tray.
- 5. Roll your seed balls in the seeds until fully covered.
- 6. Let them dry for 1-2 days.
- 7. Once dry, they're ready take them home to plant in your garden or a pot of potting mix!



COSMOS

Groundswell

COLLECTIVE

SUNFLOWER

HOW TO MAK A SEED BAL



NATIVE BEE FACTS

1700

TYPES OF BEES

Australia is home to over 1,700 species of native bees, with many unique colours and sizes!



STINGLESS BEES

Some native Australian bees, like the sugarbag bee, don't have stingers, making them safe for people to watch closely.



SUPER POLLINATORS

Bees help plants grow by moving pollen from one flower to another. This process, called pollination, helps fruits, vegetables, and seeds grow.



TINY BUT MIGHTY

Native bees are often small, and some are as tiny as 2 millimetres (like the masked bee), but they are very important to nature.



BLUE-BANDED BEES

One of Australia's unique native bees, the blue-banded bee, has striking blue stripes and buzzes loudly when it flies.



LONE BEES

Unlike honeybees, most native Australian bees are solitary, meaning they live alone rather than in big hives.



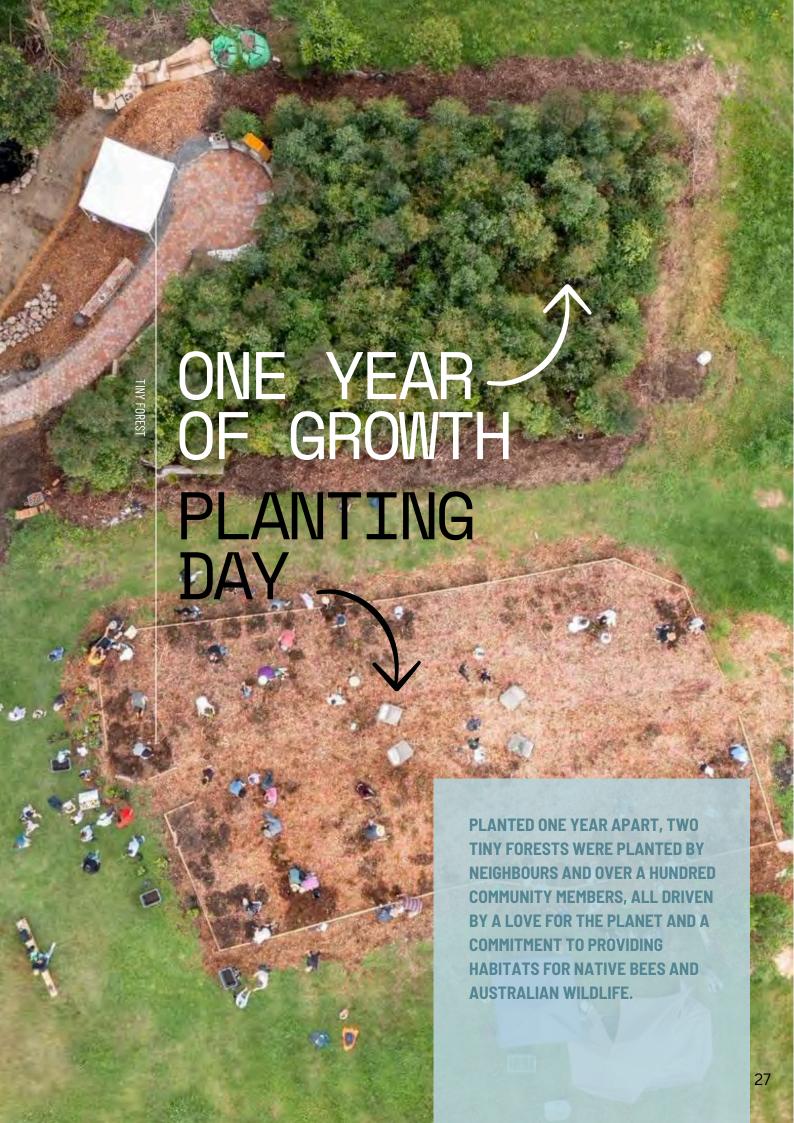
LIVING IN NESTS, NOT HIVES

Native bees build nests in small holes in the ground, tree trunks, or hollow branches. Each female bee makes her own nest.



NATIVE BEES LOVE NATIVE PLANTS

Native bees prefer the flowers of Australian plants like eucalyptus, bottlebrush, and grevillea, which give them the best food





To support future Groundswell Collective tiny forests, visit:

THEGROUNDSWELL.ORG.AU/