

BEEES AND FLOWERS.

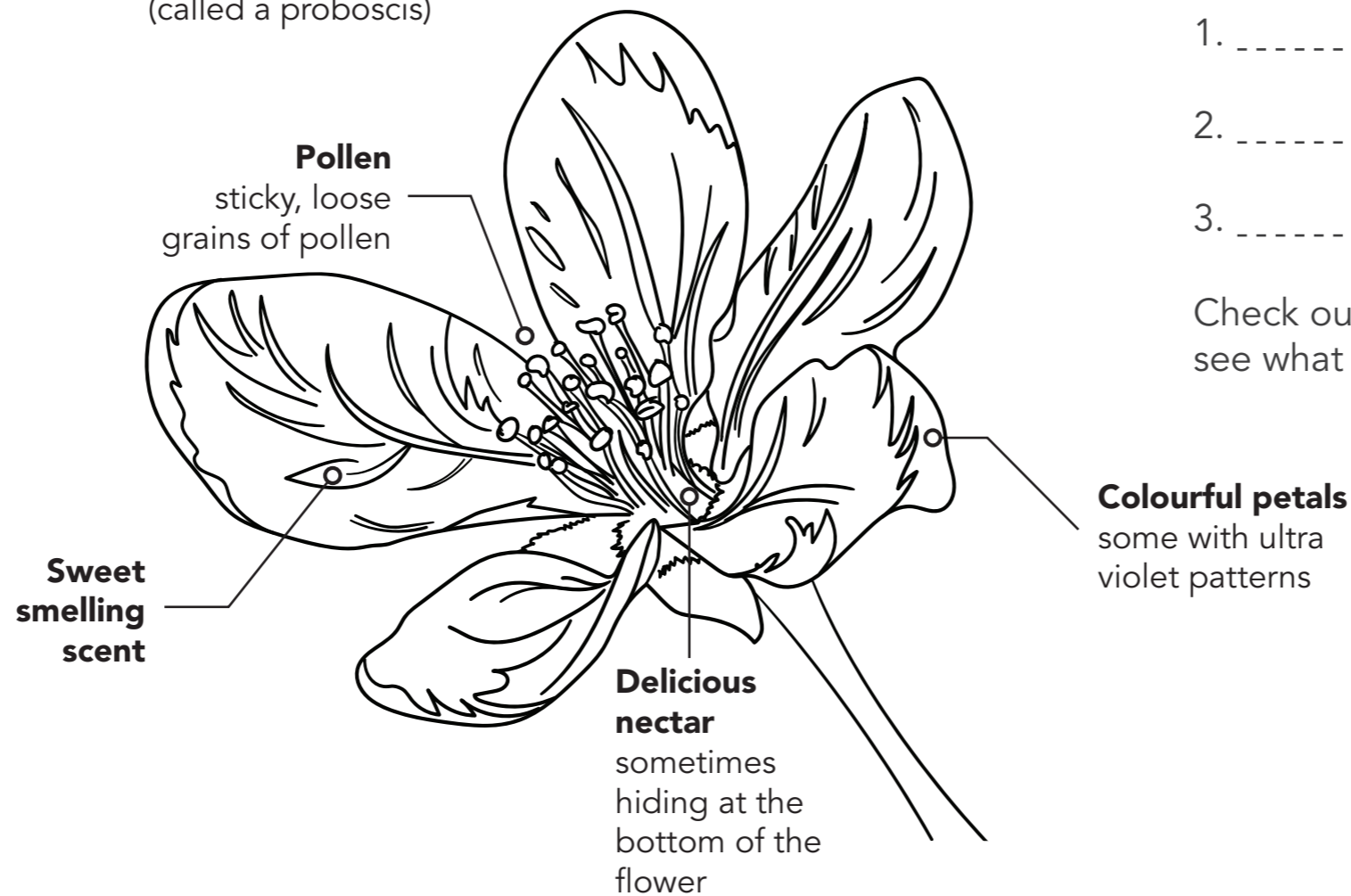
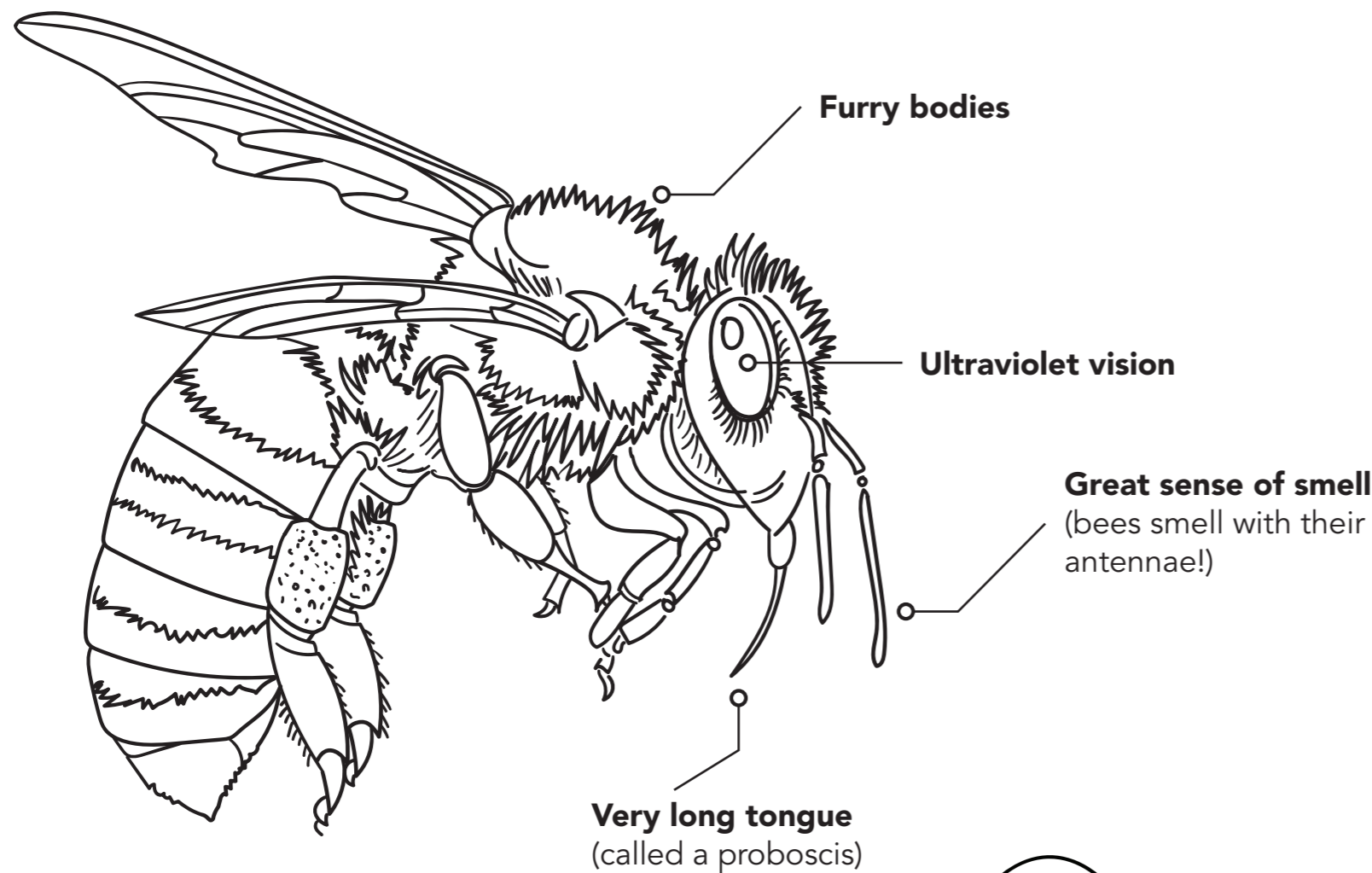
Made for each other

Bees need flowers as they eat pollen and nectar produced by flowers. Plants need bees to spread their pollen from one flower to another. By spreading pollen, plants can grow fruit and seeds.

Look at the pictures. Can you see three reasons why bees and flowers are made for each other?

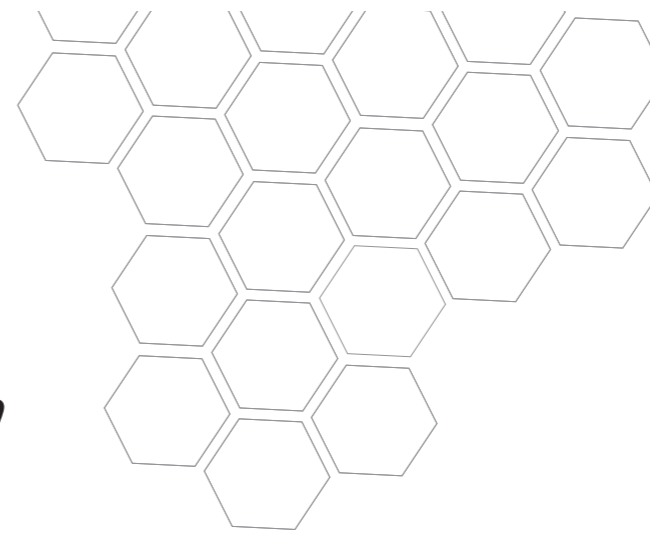
1.
2.
3.

Check out www.apinz.org.nz/bee-aware-month to see what makes bees and flowers a great match!



Flowers also attract other pollinators like butterflies, birds, flies and even bats!

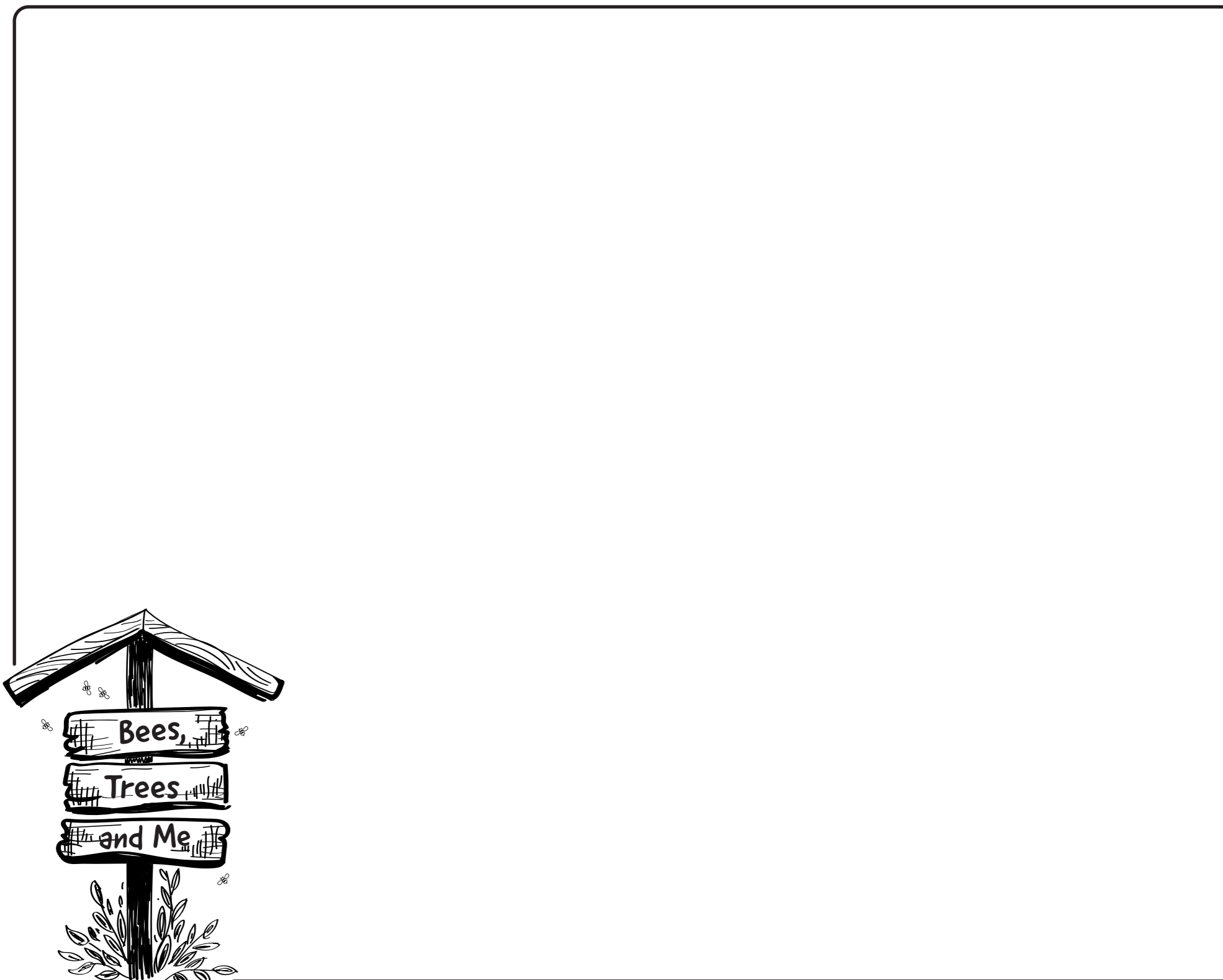




BEE AWARE MONTH

Art Competition 2021

Draw, paint, or make a collage with the title: 'Bees, Trees and Me'



Send your entry to:

BAM Art Competition 2021
c/o Apiculture New Zealand
PO Box 10-414
Wellington 6140

or email to:

info@apinz.org.nz

Thanks to Arataki Honey, Egmont Honey, Awapuni Nurseries and Apiculture NZ there are 12 fantastic prize packs to be won!

The top 12 artworks will be made into a calendar to be sold by Apiculture New Zealand with all profits going to our Bee Health Research and Education Fund.

All entries must be in by Thursday 30 September. Winners will be notified on Tuesday 19 October 2021.

Name:

Age:

School:

Parent/Teacher contact email:

.....

Terms and conditions: The BAM Art Competition is open to residents of New Zealand aged between 3 to 13 years of age.

Two winners will be selected from five categories: 3-4 years, 5-6 years, 7-8 years, 9-10 years, 11-13 years.

The judges' decisions are final and no discussion will be entered into. By entering this competition, you agree to your artwork being used by Apiculture NZ in promoting bee health and education.

FEED THE BEEES.

(by planting trees)

Plant clusters of the same plant type to attract bees into your garden.

Plant for each season, so bees can feed all year round.

Provide a saucer of clean water for bees to drink from. Add pebbles or sticks for bees to stand on.



New Zealand is lucky to have a large bee population with around 850,000 registered hives (and many thousands of bees in each hive).

Apiculture NZ wants to keep our bee population healthy, so we are asking Kiwis to Feed the Bees by planting bee-friendly trees and plants this Bee Aware Month.

Bees need nectar, pollen and water to thrive. By growing a diverse range of plants for bees, you are helping to build a strong, resilient bee population.

USEFUL LINKS AND RESOURCES

Apiculture New Zealand

apinz.org.nz



Bee Aware Month

apinz.org.nz/bee-aware-month-2021



Trees for Bees Research Trust

treesforbeesnz.org.nz



FEED THE BEEES.

FEED THE BEES NEW ZEALAND.

By planting for bees you are providing nature's tiniest superheroes with the nutrition they need to put up a strong fight against the many threats they face - pests, diseases, climate change and habitat loss.

Some plants are better sources of pollen and nectar for bees than others. Other plants produce pollen and nectar at critical times of the year when there is little else available for bees to feed on.

We have highlighted a few best bee plants in this brochure but there are many more!

**THIS SEPTEMBER,
PLANT FOR THE BEES!**

TOP PERFORMERS

ROSEMARY

This bee favourite is nearly always in flower, offering bees food all year round.



HARAKEKE (FLAX)

With protein-packed pollen and flowers sometimes overflowing with nectar, this is a bee super food.



PIP FRUIT TREES

In spring, pear, apple, crab apple and quince trees are covered in blossoms providing a feast for bees.



SUNFLOWERS

These garden favourites produce nectar and pollen over many weeks - the flower that keeps on giving.



ROCK ROSES

The large flowers of the rock rose are like a big bowl of pollen for bees!



CITRUS TREES

Lemons, limes, grapefruit and orange trees are irresistible to bees and produce lots of nectar.



TOP TIPS FOR BEE-FRIENDLY PLANTING

- 1 Plant for each season so bees can feed all year.
- 2 Plant clusters of the same plant type to attract bees into your garden.
- 3 Choose plants with single flowers - flowers with one set of petals - as these are easier for bees to feed from.
- 4 Provide a saucer of clean water for bees. Put a few pebbles or sticks in the water so the bees have something to stand on.
- 5 Never use pesticides in your garden when plants are flowering.

OTHER GREAT BEE PLANTS.

Basil, zinnia, cornflower, koromiko, rewarewa, cabbage tree, lavender, kiwifruit, phacelia, camellia, thyme, chives, pumpkin, echinacea, salvia and more...

8
Waru

Climate Change Champion

Kaitaunaki huringa āhuarangi



You're a
Climate Change Champion

HOW TO BE A HERO:
 Reduce emissions by walking or riding your bike.
 Streaming uses a lot of energy. Move content offline to re-watch it.

Facebook, Twitter, Instagram icons
 @epagovtnz

7
Whitu

HOW TO BE A HERO:
 Never put chemicals down storm water drains.
 Wear safety gear like gloves if the label tells you to.

Facebook, Twitter, Instagram icons
 @epagovtnz

6
Ono

Chemical Safety Warrior

Toa haumaru matū



You're a

1
Tahi

Waste Buster

Kaiārai para



HOW TO BE A HERO:
 Turn leftover food into compost.
 Reduce, reuse, and recycle. Anything from clothes to cartons.

Facebook, Twitter, Instagram icons
 @epagovtnz

5
Rima

Insect Guardian

Kaitiaki ngāngara

HOW TO BE A HERO:
 Plant bee-friendly plants like lavender.
 Let your lawn grow, bees love clover.

Facebook, Twitter, Instagram icons
 @epagovtnz



4
Whā

3
Toru

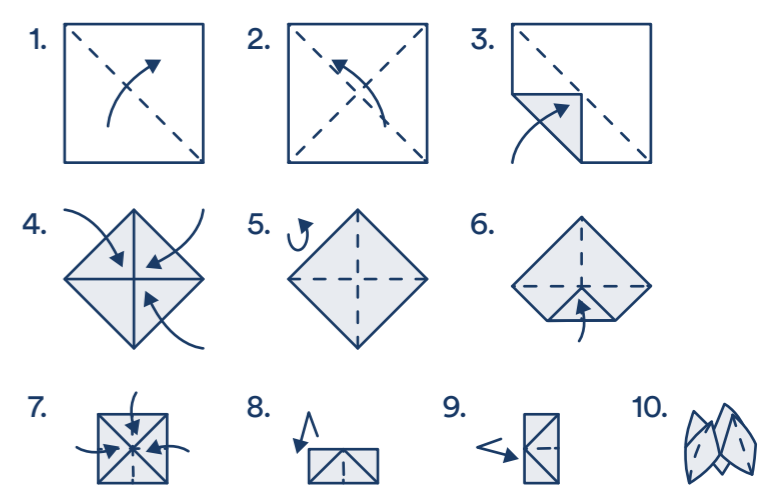
← Tear along this line

Which Enviro Hero will you be?

We can all make small changes to create safer homes and safer environments in Aotearoa New Zealand.

Want to know where to get started? Find out what kind of hero for the environment you can be, with our Enviro Hero fortune teller!

How to fold:



How to play:

1. Play this game with a partner. One person is the Fortune Teller, and the other is the Enviro Hero.
2. The Enviro Hero picks a colour.
3. The Fortune Teller spells out the colour, switching between opening fortune teller one way and the other, for each letter. "R - E - D!"
4. The Enviro Hero picks a number.
5. The Fortune Teller counts from 1 to the number that the Enviro Hero picked, opening the fortune teller the same way as Step 3.
6. The Enviro Hero picks another number.
7. The Fortune Teller opens the flap that this number is on, and reads the description.

For more tips, go to epa.govt.nz/saferhomes

Facebook, Twitter, Instagram icons @epagovtnz

Printed on eco-friendly, recycled paper.

BEE FRIENDLY GARDENING



www.treesforbeesnz.org

Ministry for Primary Industries
Manatū Ahu Matua
Sustainable Farming Fund



Figure 1. Honey bee collecting purple pollen in Hydrangea

WHY GARDEN TO HELP BEES

Planting flowers for bees is a time honoured tradition especially now when bees need our help. We need our bees to pollinate our crops and pastures for our own food supply and honey bees give us the best natural sweetener, delicious honey.

Honey bees, bumble bees and native bees all depend on pollen for protein and nectar for carbohydrates. Habitat loss has destroyed much of the bee's food supply and pesticides threaten their health and survival. Threats from increasing pests like the devastating varroa parasite and many new diseases have more serious consequences when honey bees are starving, malnourished or poisoned.

Planting plenty of flowers for bees gives bee health a big boost. Gardeners play a significant role in helping bees because they can plant a diversity of flowers that bloom in each of the seasons throughout the year. The biggest shortages are in autumn and early spring when not many flowers are available and bees need pollen and nectar the most. Gardeners can create a high diversity of plant species with abundant pollen and copious nectar to make a big difference for all bees.

Here are some great bee plants to start with and more plants are listed in the references on the following page and on our websites.

The plants listed here are suggestions and are in addition to those listed in the Urban Trees for Bees brochure and other sources. The symbol * = native plant.

Heights are the maximum or the range for each species group; consult Nursery catalogues for specifics.



FLOWERING TREES

- * Pukatea (*Laurelia novae-zelandiae*) Spring 30 m
- * Tarata (*Pittosporum eugenioides*) Spring 12 m
- * Tawari (*Ixerbia brexiodes*) Spring 17 m
- Alders (*Alnus spp.*) Spring or Autumn 20 - 30 m
- Chestnuts (*Castanea spp.*) Early summer 15 m
- Flowering ash (*Fraxinus spp.*) Spring 5 - 8 m
- Fried egg plant (*Gordonia spp.*) Autumn 3 - 5 m
- Linden (*Tilia cordata*) Early Summer 24 m
- Magnolias (*Magnolia spp.*) Spring 12 m
- Maples (*Acer spp.*) Spring 2 - 25 m
- Michelia (*Michelia spp.*) Autumn to Spring 2 - 20 m
- Strawberry plant (*Arbutus unedo*) Autumn 8 m
- Tulip Tree (*Liriodendron tulipifera*) Spring 36 m
- Wattles (*Acacia spp.*) Autumn, Winter, Spring 5-30m



Figure 2. Bumblebee collecting nectar in Hydrangea. The yellow pollen is from another plant.

FLOWERING SHRUBS

- * Coprosma (*Coprosma spp.*) Spring, Autumn 2 - 6 m
- * Five Finger (*Pseudopanax arboreus*) Winter - Spring 6 m
- * Korokio (*Corokia cotoneaster*) Spring 2 - 4 m
- * Olearia (*Olearia spp.*) Spring, Summer or Autumn 7 m
- * Putaputaweta (*Carpodetus serratus*) Spring - Summer 6 - 10 m
- * Wineberry (*Aristotelia serrata*) Spring, Summer 6 - 10 m
- Honey Myrtles (*Melaleuca spp.*) Spring - Summer 2 - 12 m
- Japonica (*Chaenomeles spp.*) Winter - Spring 3 m
- Mexican Orange Blossom (*Choisya spp.*) Spring - Autumn 3 m
- Roses with single flws only, (*Rosa*) Spring, Summer 3 - 6 m
- Serviceberry (*Amelanchier spp.*) Early Spring 12 m
- Strawberry plant (*Arbutus unedo*) Autumn 6-8m
- Tagasaste (*Chamaecytisus proliferus*) Winter - Spring 7 m
- Tupelo (*Nyssa spp.*) Spring 15 m
- Viburnum (*Viburnum spp.*) Autumn 1-4 m
- Wintersweet (*Chimonanthus praecox*) Winter 3 m

BEE FRIENDLY GARDENING

TIPS ON HOW TO GARDEN FOR BEES

1. Plant each plant species in large patches or groupings (at least one square meter but preferably more) so that the bees can find the flowers. To make foraging on a plant worthwhile for the bees there has to be a sufficient area of bloom.
2. Plant simple flowers with lots of pollen and nectar that are easy for bees to access. Many highly bred flowers such as doubles and triples may look gorgeous but they do not have enough pollen or nectar for bees to access. Flowers with long tubes containing nectar hidden at the bottom are inaccessible to honey bees if the tube is longer than 7 mm. Some flowers are toxic to bees such as rhododendron, azalea, and karaka.
3. Make your garden a safe haven for bees and other pollinators by avoiding pesticide use especially when the plants are in flower and during the day time when the bees are flying.
4. Purchase plants with no systemic pesticides (e.g., neonicotinoids) because these chemicals get into all parts of the plant so the worker bees, the brood, and the queen will be eating contaminated pollen and nectar which harms the bees. You may need to use cuttings or grow seeds to avoid plants with systemic pesticides from nurseries.
5. Water is essential for cooling the interior of the hive by evaporation, so make sure there are safe shallow water sources with clean unpolluted water and a landing area such as rocks or a floating cork or stick of wood so that the bees do not drown. Honey bee colonies live in man-made hives and can fly several km to forage. But for other bees, such as bumble bees and native bees nest sites are needed closer to the flowers.
6. Avoid planting weedy species that will spread in your own garden or into vulnerable habitats in your area. Consult your Regional or District Council.

Figure 3: Flower bud opening on Tulip Tree (*Liriodendron tulipifera*)



PERENNIALS AND ANNUALS

- * Clematis (*Clematis spp.*) Spring – Summer Woody Climber
- * NZ Jasmine (*Parsonsia heterophylla*) Spring – Summer Climber
- * Rengarenga lilly (*Arthropodium cirratum*) Spring – Summer 1 m
- California Lilac (*Ceanothus spp.*) Spring 3.6 m
- Figwort (*Scrophularia spp.*) Late Spring 1.8 m
- Goldenrod (*Solidago spp.*) Autumn 50 cm
- Meadowfoam (*Limnanthes spp.*) Spring 30 cm
- Sainfoin (*Onobrychis viciifolia*) Late spring 75 cm
- Sedum (*Sedum spp.*) Summer – Autumn 50 cm
- Sweetclover (*Melilotus spp.*) Late spring 1.5 m
- Wallflower (*Cheiranthus/Erysimum*) Spring – Winter 30 cm



Figure 4: Honey bee collecting pollen on Cork Tree (*Phellodendron sp.*)

KITCHEN AND HERBS

- Blackberry (*Rubus spp.*) Spring, Summer 3.7 m
- Chestnut edible (*Castanea sativa*) Spring – Summer 10 m
- Giant Hyssop (*Agastache spp.*) Summer 1.8 m
- Hazelnut (*Corylus avellana*) Winter – Spring 4 m
- Hyssop (*Hyssopus officinalis*) Summer 60 cm
- Oregano (*Origanum spp.*) Summer 60 cm
- Pineapple Sage (*Salvia elegans*) Winter – Spring 1.5 m
- Passionfruit (*Passiflora edulis*) Spring Woody Climber
- Quince (*Cydonia oblonga*) Spring 4 m
- Thyme (*Thymus spp.*) Summer 20 cm

BOOKS

- Frey K. and LeBuhn G. 2016. *The Bee-Friendly Garden*. Ten Speed Press New York, USA. 213 pp.
- Leech M. 2012 *Bee Friendly (Planting Guide)*. RIRDC. Canberra, Australia. This is a FREE PDF to download.
- The Xerces Society. 2016. *100 Plants to Feed the Bees*. Storey Publishing, MA, USA.

LINKS

- <http://pollinator.org/guides>
- <https://www.kingsseeds.co.nz>
- <https://www.southernwoods.co.nz/uploads/content/files/Info26-PlantingforBees.pdf>
- <http://www.treecrops.org.nz/tree-information/bees/>
- <https://xerces.org/pollinator-conservation/gardens/>

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