

BEE FRIENDS PROGRAMME



2020/21



Tahi

At one with nature.

Bee Friends Programme

Tahi, naturally

Tahi NZ is a privately-owned nature reserve and Manuka honey producer based in Pataua North. Tahi covers 315 hectares of award winning replanted and regenerating native forest, reintroduced wetland areas, and a vast network of walking tracks and pathways. We have over 3,000 beehives located around the Whangarei district that are serviced by a team of dedicated beekeepers. We process our own honey in a purpose-built honey extraction and jarring facility at Tahi; it is then sold nationally and exported to over 23 countries globally.

The 4Cs

We strive to achieve the highest standards in sustainability by balancing conservation, community, culture and commerce – or what we call the 4Cs.

The 4Cs philosophy guides everything we do, with 100% of our profits staying in the community. We have been recognised by the United Nations twice for being a business that is helping to address the 17 Sustainable Development Goals (www.un.org/sustainabledevelopment/sustainable-development-goals).



Expression of Interest

If your school is interested in becoming part of Tahi's Bee Friends programme, please complete the enclosed Expression of Interest form and return it to us – admin@tahinz.com or post to 1824 Pataua North Road, RD5, Whangarei 0175. We will then get in contact to discuss further details. If you have any questions and require further information, please ring Helen Sinclair on 436 0082.

We have a very limited number of spaces available for schools to join our programme in September 2020 and additional spaces will be available if your school would like to become involved in September 2021. Please indicate your timing preference on the attached Expression of Interest form.

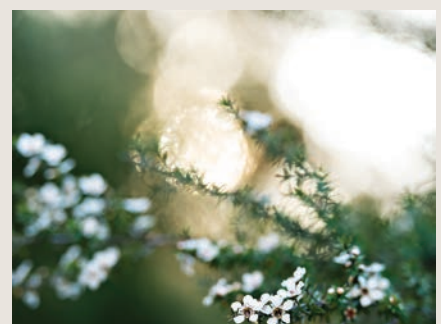
Sustainably minded

We are also extremely proud to have won awards for our environmental work, wetland conservation and dune restoration at the Tahi property. In 2018 we were a highly commended finalist for the Restoring Nature category of the NZ Sustainable Business Network awards.

Bees in Schools

As part of this environmental work Tahi is delighted to introduce to you our Bee Friends programme. This initiative sees us partner with local schools to educate and raise awareness of the importance of bees and beekeeping to students.

We have been running this programme for 2 years and currently have beehives in 4 primary schools in the Whangarei area. Tahi would now like to offer this programme to other schools that may wish to incorporate it into their curriculum. Attached is a brief outline of this initiative.



Programme Overview

(Unit Plan) of Bee Friends
Programme Season September – April

New Zealand Curriculum Achievement Objectives:

<p>SCIENCE: <i>Levels 1 -2</i> Living World</p> <p>Students will: extend their experiences and personal explanations of the natural world through exploration, play, asking questions, and discussing simple models.</p>	<p>SCIENCE: <i>Levels 1 -2</i> Living World</p> <p>Students will: recognise that all living things have certain requirements so they can stay alive.</p>	<p>SCIENCE: <i>Levels 1 -2</i> Living World</p> <p>Students will: recognise that living things are suited to their particular habitat.</p>
<p>SCIENCE: <i>Levels 1 -2</i> Planet Earth & Beyond</p> <p>Students will: describe how natural features are changed and resources affected by natural events and human actions.</p>	<p>SOCIAL SCIENCE: <i>Level 2</i></p> <p>Students will: Understand that people have social, cultural and economic roles, rights and responsibilities.</p>	<p>SOCIAL SCIENCE: <i>Level 2</i></p> <p>Students will: Understand how places influence people and people influence places.</p>
<p>TECHNOLOGY: <i>Level 2</i> Nature of Technology</p> <p>Students will: understand that technology both reflects and changes society and the environment and increases people's capability.</p>	<p>SPEAKING: <i>Level 2</i> Ideas</p> <p>Students will: form and express ideas and information with reasonable clarity, often drawing on personal experience and knowledge.</p>	<p>HEALTH & PE: <i>Level 2</i> Ideas</p> <p>Students will: describe their stages of growth and their development needs and demonstrate increasing responsibility for self-care.</p>
<p>HEALTH & PE: <i>Level 2</i> Ideas</p> <p>Students will: identify risk and use safe practices in a range of contexts.</p>	<p>HEALTH & PE: <i>Level 2</i> Ideas</p> <p>Students will: express their ideas, needs, wants and feelings appropriately and listen sensitively to other people and affirm them.</p>	<p>HEALTH & PE: <i>Level 2</i> Ideas</p> <p>Students will: contribute to and use simple guidelines and practices that promote physically and socially healthy classrooms, schools and local environments.</p>

Overall Learning Objectives

Children will be able to:



Understand the importance of managing a hive



Identify key conditions of a hive



Identify ways to maintain hive health



Identify ways to improve hive health



Know how a hive is managed over a season



Know how to keep safe around hives



Specific Learning Objectives

These will be covered throughout the year when appropriate and relevant to the learning when the hive is opened. e.g.

- Queen bee is seen, beekeeper discusses queen bee life cycle and role
- Nursing bees are seen, beekeeper discusses worker bee life cycle and roles
- A bee doing a wiggly dance is seen, beekeeper discusses bee communication



Beehive Safety

Children will be able to:

- Behave appropriately around a beehive
- Identify the main points of caution around a hive (bees, smoker, prizing open the hive, weight of hive parts)
- Explain why we do/don't do certain things (move slowly, stand away from entrance, stay calm, don't wave arms around)

Beekeeping Equipment and Hive parts

Children will be able to:

- Name beekeeper's equipment (suits, smoker, hive tool)
- Name the parts of the hive (frame, supers, brood box, excluder, feeder, base board, hive mat, cover, escape board, propolis mat)
- Know how a hive is set up

Bee Anatomy

Children will be able to:

- Name the parts of a bee (antennae, stinger, wax glands, proboscis)
- Know the function of the various parts (pollen sacks for collecting pollen)
- Explain the difference between a queen, drone and worker bee



Worker Bee Life Cycle and Roles

Children will be able to:

- Know the main stages within the life cycle (egg, larva, pupa, adult bee)
- Know the roles the worker bee progresses through (cleaner, undertaker, nurse, builder, temperature, controller, guard, forager)

Queen Bee Life Cycle and Roles

Children will be able to:

- Identify the queen in the hive
- Explain how the queen is made
- Know the role the queen has in the hive
- Explain how beekeepers breed queens
- Explain the mating ritual

Drone Bee Life Cycle and Roles

Children will be able to:

- Identify a drone in the hive
- Explain how a drone is made
- Know the role the drone plays



Honey

Children will be able to:

- Understand how honey is made
- Explain the uses of honey in the hive



Propolis

Children will be able to:

- Explain how propolis is made
- Know the uses of propolis in the hive



Beehive Health

Children will be able to:

- Explain varroa mite impact on hive, how to treat it
- Explain AFB impact on hive, how to treat it
- Explain ant impact, how to treat it
- Explain queen death/weakness, how to manage them



Environmental Impacts

Children will be able to:

- Explain how weather impacts bee food source (nectar)
- Identify and explain how pollution and poisons impact on bee wellbeing
- Explain how loss of habitat impacts on bee wellbeing
- Explain the optimum environment for bee wellbeing



Equipment Used

- Bee suits
- Gloves
- Smoker
- Lighter
- Sacking/lighting material
- Hive tool



Teaching Aids

- Camera - to take photos throughout hive sessions, to film the first and last hive opening session to illustrate student progression
- Tablet - to utilise Tahi's beekeeping app to note the hive status - strengths and weaknesses - and follow up needs



Activities

- Worksheets on topics covered in field
- Additional information and extension worksheets
- Useful website list
- PowerPoint lesson plans on specific learning objectives (coming soon during the new year)

Beekeeping Agreement

Tahi will provide:

- A trained beekeeper, who will come and visit your school fortnightly to educate 2 groups of 5 students;
- 10 beekeeping suits with the Tahi logo (that will be replaced every 5 years) and 10 sets of gloves;
- 2 beehives (with frames and bees) which will be branded Tahi and will remain the property of Tahi Estate Ltd;
- The honey, once harvested into 20L pails, will be returned for the school's use, plus 1 block of beeswax (approx. 3kg).

The school will provide:

- 2 groups of 5 students who would like to learn about beekeeping;
- 1 teacher to supervise the children while our beekeeper is on site;
- A site on or close to the school grounds to house the two beehives;
- A classroom to use on the scheduled in-class sessions (3 per year).

The school will be responsible for:

- Washing and caring for the 10 beekeeping suits prior to each visit;
- Any repairs to, or replacement of, damaged suits.

The beekeeper will spend 30 minutes once a fortnight with each group of 5 students (one group, directly followed by the 2nd group). This would start in Term 3 (at the beginning of September) and continue throughout Term 4 (October to December) and Term 1 (February to April). The beehives are removed from the school premises for Term 2 to be 'wintered down' and returned again in Term 3 (August).



Health & Safety responsibilities:

The school is responsible for ensuring that the students chosen to participate in this programme are not allergic to bee venom. Tahi cannot be held responsible in the event of any bee stings.

The Tahi beekeeper will provide Health & Safety training to minimise the possibility of any bee stings.

Honey for the school:

The honey harvested from the hives will be extracted by Tahi at no cost to the school and will be given back to the school in 20L pails for the school to use and distribute as they wish. Alternatively, the school may choose to sell the honey to Tahi at market rate.

Things to consider:

The hive site at your school needs to be carefully considered to be suitable for both the bees and the humans around them!

- North facing
- All day sun
- Sheltered from the wind
- Clear flight path, no houses or other building too close by (bees do poo and it's not ideal to get it on windows or the neighbour's washing!)
- Within walking distance of the school

The same students should be involved for the entire three Term programme.

Tahi Bee Friends Programme

In School Year Outline 2020/2021

(dates to be confirmed)

TERM THREE 2020	AUG	Site prep, deliver hives
	31 AUG - 4 SEP	Lesson 1 In-class session - intro, learning intentions for season, learning outcomes - video, safety around beehives, bring in beekeeping equipment, brainstorm what students already know, write up questions they already have, name and discuss equipment (use visuals), bee wellbeing - discuss what wellbeing is for us, pets, bees - their hives and their foraging environment, ecology, intro hive site forms, select camera operator, check sheet writer and 3 helpers
	14 - 18 SEP	Lesson 2 In-field session - first opening of hive, first video and hive form
	OCT	Spring Holidays - 26th Sept to 11th Oct 2020
TERM FOUR 2020	12 - 16 OCT	Lesson 3 In-field session - monitor hives, students take more responsibility, fill in hive forms
	27 - 30 OCT	Lesson 4 In-field session - monitor hives, students take more responsibility, fill in hive forms
	9 - 13 NOV	Lesson 5 In-field session - monitor hives, students take more responsibility, possibly add boxes, fill in hive forms
	23 - 27 NOV	Lesson 6 In-field session - monitor hives, students take more responsibility, possibly add boxes, fill in hive forms
	7 - 11 DEC	Lesson 7 In-field session - monitor hives, students take more responsibility, possibly add boxes, fill in hive forms
	JAN	Summer Holidays - 19th December 2020 to 31st January 2021
TERM ONE 2021	1 - 5 FEB	Lesson 8 In-field session - harvest honey, monitor hives, fill in hive forms
	15 - 19 FEB	Lesson 9 LAST In-field session - harvest honey if not already done, monitor hives, last video, wintering down prep Q&A
	1 - 5 MAR	Lesson 10 In-class session - wintering down process, hive health over winter
	15 - 19 MAR	Lesson 11 Field trip to Tahi and Honey House tour
	29 MAR - 2 APR	Lesson 12 In-class session - debrief - what have students learnt, fill out feedback sheet individually or as a class, watch first and last videos taken of students, discuss label competition, Q&A
	APRIL	Easter Holidays - 2nd April to 6th April 2021
T2	MAY - JULY	Hives wintered down
	JULY	Winter Holidays - 10th July to 25th July 2021
TERM THREE 2021	AUG	Site prep, deliver hives
	30 AUG - 3 SEP	Lesson 1 In-class session - intro, learning intentions for season, learning outcomes - video, safety around beehives, bring in beekeeping equipment, brainstorm what students already know, write up questions they already have, name and discuss equipment (use visuals), bee wellbeing - discuss what wellbeing is for us, pets, bees - their hives and their foraging environment, ecology, intro hive site forms, select camera operator, check sheet writer and 3 helpers
	13 - 17 SEP	Lesson 2 In-field session - first opening of hive, first video and hive form
	OCT	Spring Holidays - 2nd Oct to 17th Oct 2021
TERM FOUR 2021	18 - 22 OCT	Lesson 3 In-field session - monitor hives, students take more responsibility, fill in hive forms
	1 - 5 NOV	Lesson 4 In-field session - monitor hives, students take more responsibility, fill in hive forms
	15 - 19 NOV	Lesson 5 In-field session - monitor hives, students take more responsibility, possibly add boxes, fill in hive forms
	29 NOV - 3 DEC	Lesson 6 In-field session - monitor hives, students take more responsibility, possibly add boxes, fill in hive forms
	13 - 17 DEC	Lesson 7 In-field session - monitor hives, students take more responsibility, possibly add boxes, fill in hive forms
	JAN	Summer Holidays - 18th December 2021 to 31st January 2022

Expression of Interest



Yes!

We are interested in becoming part of the Tahi **Bee Friends** Programme.

Name of School: _____

Contact name: _____

Position at school: _____

Address: _____

Email: _____

Phone: _____

Year level/s of students: _____

Timing preference (please tick):

☐ September 2020 ☐ September 2021

Please return no later than Monday, 24th February 2020

*(We will do our best to accommodate all interested schools,
however completion of this form does not guarantee a place in the programme.)*

**Tahi NZ, 1824 Pataua North Road,
RD5, Whangarei 0175**

Ph: +64 9 436 0082
admin@tahinz.com
tahinz.com

Tahi



100%
FULL
CIRCLE

100% OF PROFITS GO BACK INTO CONSERVATION, COMMUNITY AND CULTURE



UNIQUE MANUKA FACTOR
HONEY ASSOCIATION



WE USE PAPER, PLASTICS
AND MATERIALS THAT ARE
ENVIRONMENTALLY FRIENDLY.

TAHI 1824 PATAUA NORTH RD, RD 5, WHANGAREI 0175, NEW ZEALAND

E admin@tahinz.com P +64 (9) 436 0082

f tahi new zealand @tahinewzealand #TahiNZ

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