Mairangi Bay School

Our Kaitiaki Garden

Our Why and Our How

Mairangi Bay School

Guide produced by Mairangi Bay School

Mairangi Bay School

June 2025

He waka eke noa –
A waka we are all in together

Contents

Our Why

Creating our very own Mairangi Bay Kaitiaki sensory garden that includes a chicken coop, bees, a butterfly house, and a pond offers numerous benefits to student learning, school values and wellbeing for all.

Benefits to Student Learning

Below highlights the benefits of the Kaitiaki garden to student learning outcomes and connection to the current New Zealand Curriculum.

Principles:

- **Cultural Diversity**: The garden can incorporate plants and practices that reflect the diverse cultures within New Zealand.
- **Community Engagement**: Involving the local community in the garden fosters a sense of belonging and partnership.

Values:

- **Ecological Sustainability**: Emphasises the importance of caring for the environment, a core value in the New Zealand Curriculum.
- **Respect**: Teaching students to respect nature and living creatures.

Key Competencies:

- **Thinking**: Engaging in problem-solving and creative thinking to manage the garden.
- **Using Language, Symbols, and Texts**: Interpreting scientific data and communicating findings.
- **Managing Self**: Taking initiative and responsibility for garden-related tasks.
- **Relating to Others**: Collaborative efforts and respecting differing viewpoints.
- **Participating and Contributing**: Active involvement in school and community projects.

Learning Areas:

- **Science**: In-depth exploration of living things, their environments, and biological processes.
- **Technology**: Designing plans and implementing projects to support the implementation of the garden
- **Social Sciences**: Understanding human impact on the environment and exploring ways to live sustainably.
- **Health and Physical Education**: Promoting healthy living through active participation and learning about nutritious food sources.
- English: Develops an environment then enhances all senses for creative writing.

Hands-On Learning Experiences

Science Education: Students can learn about biology, ecology, and environmental science by observing the life cycles of chickens, bees, butterflies, and pond organisms. **Mathematics**: Managing the Kaitiaki garden provides opportunities to apply mathematical concepts such as measuring spaces, calculating growth rates, and managing resources. **Agricultural Studies**: Understanding the basics of animal care, beekeeping, and horticulture.

Interdisciplinary Learning and **Environmental Studies**: The garden serves as a living laboratory for studying ecosystems, biodiversity, and sustainability practices. **Health Education**: Students learn about nutrition and the importance of fresh produce, incorporating the garden's yield into our Garden to Table programme.

Enhancement of Critical Thinking and Problem-Solving:

Students develop critical thinking skills by planning, maintaining, and troubleshooting garden-related issues. Problem-solving opportunities arise as students encounter real-world challenges, such as pest management and seasonal planting. Integrating a kaitiaki garden with elements such as a chicken coop, bees, a butterfly house, and a pond can also enhance the Māori value of kaitiakitanga, as well as the school values of kindness, respect, and resilience.

Enhancing the Māori Value of Kaitiakitanga

Kaitiakitanga is the Māori concept of guardianship and stewardship, particularly of the natural environment. It embodies the responsibility of caring for and protecting the environment for future generations.

Environmental Stewardship: **Caring for nature** allows students to take on the role of guardians, actively participating in the care and maintenance of plants, animals, and their habitats. **Sustainability Practices** helps students learn sustainable practices such as composting, recycling, and water conservation, which are integral to kaitiakitanga.

Cultural Connection: Incorporating native Māori plants (rongoā) used in traditional medicine connects students with Māori culture and traditional ecological knowledge. Naming garden elements and describing processes in **Te Reo Māori** reinforces language use and cultural significance.

Holistic Understanding: **Ecosystem awareness**: Understanding the interconnectedness of all living things in the garden fosters a holistic view of ecosystems, reflecting the Māori worldview of interdependence. Observing **life**

cycles in the garden (e.g., plants, insects, chickens) teaches students about natural rhythms and the importance of each role within an ecosystem.

Enhancing Our School Values

How can the Kaitiaki garden enhance our school values of kindness respect and resilience?

Kindness – Atawhai

Empathy and Compassion:

- **Animal Care**: Students develop empathy by caring for chickens and observing their needs, fostering kindness towards animals.
- **Plant Care**: Tending to plants and understanding their requirements teaches students to nurture living things.

Peer Support:

- **Collaboration**: Working together in the garden encourages students to help each other, promoting a culture of kindness and mutual support.

Community Outreach:

- **Sharing Harvest**: Sharing garden produce with the school community or local food banks instills a sense of generosity and kindness.

Respect – Whakaute

Respect for Nature:

- **Biodiversity Appreciation**: Learning about different species and their roles in the garden ecosystem fosters respect for all forms of life.
- **Environmental Impact**: Understanding human impact on the environment encourages students to act responsibly and respectfully towards nature.

Cultural Respect:

- **Māori Traditions**: Engaging with Māori practices and knowledge in the garden setting teaches students to respect and honour cultural heritage.
- **Inclusivity**: Respecting diverse cultural perspectives on gardening and environmental care.

Respect for Each Other:

- **Shared Responsibility**: Collaborating on garden projects teaches students to respect each other's contributions and viewpoints.
- **Conflict Resolution**: Resolving disagreements about garden tasks respectfully promotes positive social interactions.

Resilience – Manawanui

Problem-Solving Skills:

- **Gardening Challenges**: Facing and overcoming pests, weather conditions, and plant diseases builds resilience and adaptability.
- **Creative Solutions**: Encouraging innovative thinking to solve garden-related problems fosters a resilient mindset.

Persistence:

- **Long-Term Projects**: Gardening requires patience and dedication. Seeing the results of long-term efforts teaches students the value of persistence.
- **Failure and Success**: Experiencing successes and failures in gardening helps students learn to cope with setbacks and continue striving towards their goals.

Physical and Mental Resilience:

- **Outdoor Activity**: Engaging in physical gardening activities builds physical strength and resilience.
- **Mental Fortitude**: Spending time in nature and working through garden challenges promotes mental resilience and a positive mindset.

Benefits to Student Wellness

Mental Health and Emotional Wellbeing:

- **Stress Reduction**: Interacting with nature and animals has been shown to reduce stress and anxiety levels.
- **Mindfulness and Relaxation**: Sensory gardens provide a peaceful environment for mindfulness activities and relaxation.

Physical Health:

- **Exercise**: Gardening activities involve physical exercise, promoting physical health and fitness.
- **Fresh Air and Sunshine**: Outdoor activities increase exposure to natural light and fresh air, contributing to overall physical wellbeing.

Social and Emotional Skills:

- **Collaboration and Teamwork**: Working together on garden projects fosters teamwork and cooperation.
- **Responsibility and Empathy**: Caring for living creatures and plants teaches responsibility and empathy.

In Summary

A kaitiaki sensory garden provides an educational experience that enhances student learning across various disciplines, promotes physical and mental wellbeing, and aligns seamlessly with the New Zealand Curriculum's principles, values, key competencies, and learning areas. This holistic approach to education fosters a deeper connection to the environment, encourages sustainable practices, and nurtures a sense of responsibility and community among students. A kaitiaki garden also integrates the Māori value of kaitiakitanga by fostering environmental stewardship, cultural connection, and a holistic understanding of ecosystems. It enhances school values of kindness, respect, and resilience by teaching empathy, promoting respect for nature and people, and building problem-solving and coping skills. This approach not only enriches students' educational experiences but also supports their overall wellbeing and character development as we seek to "learn together to create a better tomorrow".

Connecting to our strategic plan 2026-2028

Kaitiaki Garden concept was approved as part of the Garden to Table programme and opportunity to develop our physical learning environment, local curriculum, foster partnerships across our community, improve wellbeing for all and build rich learning opportunities. This project aligns perfectly with all four Strategic Goals 2026-2028, and a true asset to our school and community.

Kaitiaki Garden – Health and Safety

Animals kept in schools should have a specifically named and appropriately experienced person who is always responsible for the welfare and husbandry of the animals, and who ensures that a suitable environment is provided which satisfies the animals physical, health and behavioural needs.
It is a good idea to consult with neighbours advising them of the Kaitiaki, purpose and what animals you intend to keep.

The Gardens

- ☐ The perimeter of the gardens should be fenced and gated.
- ☐ The gates should be self-closing.
- ☐ Health and safety should be considered when creating structures, paths etc to eliminate injury.
    - In general, Health and Safety practices used within the school should also apply to the Kaitiaki Gardens with an additional emphasis on animal and student welfare.
- ☐ Signage will be an important part of the concept which could include:
    - "No feeding animals unless permission is given by the person in charge"
    - "No picking up of animals unless permission is given by the teacher in charge"
    - "The BOT will not be responsible for any injuries which may occur after school hours
    - "Please wash hands before and after handling the animals"
    - "No paddling in the pond"
    - "No cruelty or chasing of animal's
- ☐ Animals should be locked in their animal houses after school hours.

Pond

- ☐ When constructing the pond slope the sides so that it makes it easy to get out if somebody falls in.
- ☐ Perhaps cover the pond with wire mesh.
- ☐ Plants, bushes are good to grow around the pool as this creates additional learning due to insects etc
- ☐ A low fence also around the pond will help keep children out.
- ☐ Water quality if not kept clean can transmit disease to humans
- ☐ Create a Risk Assessment

Chickens

- ☐ **Auckland City Council regulations** – You can keep up to six chickens on a property smaller than 2000 square meters.
    - 12 Chickens if over 2000 square meters.
    - No restriction if larger than 4000 square meters.
- ☐ You cannot keep roosters
- ☐ The school will be responsible for making sure that chickens are:
    - Not a nuisance eg noise to neighbours
    - Hygiene problems
- ☐ The chicken coop should be: (preferably built with untreated timber as treated contains cyanide)
    - Enclosed rainproof
    - Approx 60 centimeters minimum height
    - Should have a roost perch for each chicken
    - A nesting area
    - Surface for scratching and pecking
- ☐ Cleaning – line floors nesting boxes with straw or untreated wood chips
    - (Treated timber contains cyanide)
- ☐ Chickens can carry diseases, and some humans can be allergic to chickens

Bees

- ☐ You are required to register your apiary with the Ministry for Primary Industries (MPI)
- ☐ Food and water, nectar and pollen are important for bee nutrition
- ☐ Beware of neighbours when placing the hive or hives
- ☐ Bees normally excrement within 500m radius of the hive so this can be a nuisance to neighbours, excrement in washing etc.
- ☐ Advise neighbours that they are bees otherwise you may find an exterminator on your doorstep
- ☐ Encourage bees to fly above head height by planting trees, a hedge or putting the hives close to a fence close to the hive entrance. This will encourage them to fly higher
- ☐ Some humans can have allergies to pollen or excrement

Keeping of bees in the Kaitiaki Garden

Here is a more detailed breakdown of the key aspects to consider:

Safety

Managed Access:

Student access to the beehives should be strictly controlled and supervised by a staff member experienced in beekeeping. Beezthingz will manage the hire and provide:

- Regular inspections
- Disease Inspection
- Registration
- Emergency response
- Phone assistance
- Provide education lessions for students, staff and whānau

Training:

All students accessing the hives must receive thorough training on safety procedures, including handling bees, using protective equipment, and understanding potential risks from qualified Beezthingz bee keepers.

.

Allergy Awareness:

Students with known allergies to bees or bee products must declare this in writing, and consent forms should be obtained from parents/ caregivers before students handle bees.

Secure Enclosure:

The beehive(s) should be located within a secure enclosure, inaccessible to the general student population and public.

Emergency Procedures:

A plan for handling bee stings, including the location of an Epi pen (if applicable), should be in place and clearly communicated.

Incident Reporting:

Serious incidents involving the bees or hives must be reported to the school's senior leadership with an incident report.

Education and Awareness

Curriculum Integration:

The beekeeping project should be integrated into the school curriculum, providing students with hands-on learning opportunities about bee biology, ecology, and the importance of pollination.

Educational Resources:

Beezthingz will enhance students' understanding of bees and their role in the ecosystem.

Public Awareness:

The school community should be informed about the presence of beehives through signage and other communication methods.

Community Engagement:

Encourage students to share their knowledge and promote bee-friendly practices within the wider school community.

Compliance and Best Practices

Local Council Regulations:

The school should register the apiary with the relevant local council and ensure compliance with all relevant regulations, including those related to public spaces.

MPI Regulations:

Adhere to the Ministry for Primary Industries (MPI) regulations for beekeeping, including requirements for hive registration and disease management.

Responsible Beekeeping:

Follow responsible beekeeping standards, including maintaining the hives in accordance with standard New Zealand beekeeping practices.

Disease Management:

Implement procedures for monitoring and managing bee diseases, such as American Foulbrood, and report any suspected cases to the appropriate authorities.

Annual Running Costs

The chickens – THE CHOOK YARD	Cost per year
Chicken Coop Maintenance	$50
Chicken Run - Wood Shavings per bag per term	$27.95 x 4 = $112
Mulch – Donated	$0
20kg Denver Golden Yolk Layer Pallets x 2	$37.95 x 4= $76
Chicken 5kg Oyster Grit per term	$15 x 4 = $60
Vets	$50
Basic First Aid Products	$20
Sanitiser Station	$30
Average cost for four birds per year	$550 approx.

The Bees	Cost per year
Hive Hire ($49 per month – cost covered by hone sales)	$0
Bees – Managed by Beezthingz	$0
Beekeeper - Beezthingz	$0
Ongoing Maintenance - Beezthingz	$0
Average cost for bees per year	$0 approx.

The pond	Cost per year
Plants - donated	$0
Frogs/ Tadpoles - donated	$0
Annual Maintenance	$50
Average cost for pond per year	$50 approx.

The Bird Avery/ Butterfly House	Cost per year
Canaries	$0
Annual Maintenance	$50
Food	$100
Average cost for Avery per year	$50 approx.
Total running costs for the Kaitiaki Garden per year (Chicken, bees, pond, butterflies)	$750 approx. per year

Hazards	Who is at risk?	Existing Control Measures	Further action required, if any	Action by whom?	Action by when?	Completed
Zoonotic disease Contact with chicken faeces via shoes, housing, equipment and handling the birds.	Pupils Staff/Supervisors Visitors	☐ Pupils are given hygiene and safety briefings before working with the birds. They are reminded not to touch their faces or put anything in their mouths while working with the chickens and they are required to wash their hands immediately afterwards. They are reminded not to kiss the chickens. ☐ Pupils are not permitted to eat and drink in the ☐ chicken areas. ☐ Hand-washing signage is in place to remind anyone who has touched the hens or their housing/ equipment to wash their hands. ☐ Hand gel may be used for immediate visible contamination, but additional handwashing remains compulsory. ☐ Fresh cuts and grazes are covered before working with the birds. ☐ Pupils are required to wear outdoor shoes and use a disinfectant mat when entering the chicken run or areas where the hens' free range to ensure that chicken droppings are not brought into the building. ☐ Pupils with compromised immune systems are not permitted to work with the chickens. ☐ The chicken house and run/ free ranging area is kept suitably clean with the hen house, perches and equipment disinfected on a regular schedule. ☐ Pupils are not permitted to play in areas where chicken waste is disposed of, for example around compost heaps.	☐ Sanitiser gel is available immediately outside the chicken area ☐ Year 6 monitors to ensure all pupils that touch chickens use the sanitiser	**All staff**	**Current**	Yes

Allergic reactions and respiratory problems Contact with feathers, straw or bedding materials, inhalation of products such as diatomaceous earth	Pupils Staff/Supervisors Visitors	☐ Pupils with known allergies are not permitted to carry out potentially risky tasks such as adding bedding to the hen house. ☐ Pupils are reminded in their hygiene and safety briefing to let a member of staff know if they feel unwell at any point during or after working with the birds ☐ When mite dusting the house, pupils are required to wear dust masks and pupils with known respiratory problems are not permitted to take part in this activity. ☐ A low dust bedding will be used for the hen house.		**All staff**	**Current**	Yes
Injuries from the chickens Scratches and pecks	Pupils Staff/ Supervisors Visitors	☐ Pupils are briefed on working safely with the hens, including proper animal handling procedures. They are reminded not to hold the chickens in front of their faces or to push their fingers through the bars of the run. ☐ Claws are trimmed if necessary ☐ Husbandry tasks such as claw and wing clipping are carried out by staff if necessary. ☐ Any birds that are consistently aggressive towards the children will be re-homed		**All staff**	**Current**	Yes

Injuries from chicken housing and equipment Scratches, cuts, splinters, bruises.	Pupil Staff/ Supervisors	☐ The chicken house and run are checked on a regular schedule for maintenance issues. ☐ Lightweight feeders, drinkers and appropriately sized tools are used. ☐ Pupils are briefed on safe tool use. ☐ Pupils are not permitted to ride in wheelbarrows. Pupils are not permitted to carry heavy items such as bedding bales.		**All staff**	**Current**	Yes
Illness or injury from contact with chicken health care products	Pupils Staff/ Supervisors	☐ All chicken cleaning and health care products are stored safely in accordance with COSHH regulations. ☐ Pupils are only permitted to use low-risk products such as hen house disinfectant or mite powder, wearing gloves if necessary		**All staff**	**Current**	Yes
Allergy's reaction, Skin irritation, poisoning		☐ Fresh cuts and grazes are covered before working with health care products. ☐ Any chicken medications must be mixed and administered and stored with strict supervision by staff. ☐ Pupils are required to wash their hands immediately upon completion of cleaning/ health care tasks		**All staff**	**Current**	Yes

Hazard / Risk	Who is at risk?	How can the hazards cause harm?	Normal Control Measures	Are Normal Control Measures *Y/N/NA*	
				In Place	Adequate
Slippery /poorly defined pond edges / banks Pond location Inadvertent access Lack of supervision	Pupils Young children (under-fives), children with special needs, visitors Trespassers	Slips, trips and falls Cuts and abrasions Drowning Injuries / access occur unnoticed	Design: ☐ Edges of the pond clearly visible, no steep or slippery banks ☐ Deeper zone positioned away from the edges where access is not possible ☐ The depth should be kept as shallow as possible Maximum depth of pond; infants 60 cm, junior 75cm and secondary 100cm. ☐ The pond is regularly maintained to ensure that the perimeter does not become obscured and that the area around the pond does not deteriorate. ☐ If possible, the pond should be located so that it is visible from nearby school buildings. ☐ Slip / tripping hazards eliminated from the surrounding area	Yes	Yes

			☐ Edges that are open for access for pond dipping should be gently sloping, or flat and well defined ☐ For smaller ponds, steel, rigid mesh fixed over the top of the pond. (Must be firmly secured and regularly checked for signs of deterioration) ☐ Appropriate level of supervision in place considering age of pupils and any special needs ☐ Appropriate warning signs posted if applicable (‘No unaccompanied children', ‘deep water' etc) ☐ Ponds in primary schools fenced to (1.1m high min) with lockable gate to deter unsupervised entry		
Pond dipping / pond use by **pupils**		Injury from nets Slips, trips and falls Cuts and abrasions	☐ Instruction to children regarding use and behaviour ☐ Good visibility for leaders to supervise and monitor whole area used ☐ Avoid use of glass ☐ Young people dipping are spaced well apart ☐ Appropriate clothing for conditions (including hats and suncream where necessary)	Yes	Yes

Hygiene		Infection / disease Weils disease Poisoning (blue-green algae)	☐ Adequate provision for hand washing is readily available. ☐ Provide paper towels rather than communal hand towels. ☐ Do not allow children to touch any part of their face with their hands before their hands are washed. ☐ Younger pupils should be seen washing their hands. ☐ Cuts / abrasions covered with waterproof plaster ☐ No eating in the pond area ☐ Prevent access to the area by cats/dogs, check always made of the area to remove (hygienically) any faeces before children enter the area. ☐ Any algal scum should be removed, avoiding skin contact. Pupils should be supervised carefully so that they have no opportunity to eat any parts of the plants growing in or around the pond.	Yes	Yes