

# Te Puna Taiao

*How can our outdoor spaces provide meaningful interactions for tamariki and communities?*

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## KEY POINTS

- Tamariki spend the majority of their childhood within an educational environment.
- Redesigning these spaces, and using them differently, can greatly affect the wellbeing of tamariki.
- Collaborative approaches to reimagining, transforming, and better using outdoor educational spaces can enhance partnerships between education providers and mana whenua.
- Culturally grounded outdoor space design can be a lever to enhance teaching and learning interactions that contribute to a child's confidence, sense of identity, and resilience.
- Outdoor spaces, and how they are designed and used, can support a more holistic picture of wellbeing for tamariki and their whānau.

The connection between the environment and our individual wellbeing can be seen through our indigenous histories, traditional ways of living, and understanding of health benefits of living in balance with our land, water, and sky. Educational settings can be reimagined and transformed to better use outdoor spaces and build the wellbeing of our tamariki and their whānau. This article shares learnings from five communities that have been on a journey to understand how to redesign and use their educational spaces differently so that their students, and the wider communities they serve, can experience improved wellbeing.

Ko te wai te toto o te whenua  
Ko te whenua te oranga o te tangata  
*The water is the blood of the land  
The land sustains people*  
(Reremoana Pitau, 2021)

## Introduction

The connection between the taiao and individual wellbeing has been well explored in literature, pūrākau, waiata, and karakia (Apiata, 2016; Heke, 2016; Porter & Ratima, 2014). As educators, we are becoming more attuned to the interconnection between our students' physical, mental, intellectual, spiritual and cultural wellbeing (Ministry of Education, 2013). Supported by strategies such as Ka Hikitia (Ministry of Education, 2013) and the Child and Youth Wellbeing Strategy (Department of the Prime Minister and Cabinet, 2020), and the Te Hiringa Tamariki wellbeing model (Unicef / Mō Ngā Tamariki Katoa, n.d.), now more than ever we need to understand and implement those holistic approaches that will unlock the cultural, social, physical, emotional, and educational potential of our tamariki. This article shares learnings from five educational provider communities (see Table 1) as they embarked on a journey to transform and better use their outdoor spaces to improve outcomes for their tamariki.

## Existing expectations for educational providers

The current educational landscape in Aotearoa New Zealand is characterised both by diverse students and communities, and by historical disparities in achievement (Education Review Office, 2016). The New Zealand education system continues to serve certain groups of students less well than others. As such, equity and excellence have shifted to the

forefront of expectations for schools across Aotearoa (Education Review Office, 2016). Partnerships with Māori communities towards educational pathways that can support academic achievement and also enhance and enrich a child's sense of belonging, identity, language and culture have been shown to be pivotal to life-long vitality for all Māori learners (Porter & Ratima, 2014).

## The opportunity

For most tamariki, from the early years of their life, and especially from the age of five, a high proportion of their time is spent at an education provider. This environment is therefore one that becomes critically influential on their early development.

How can outdoor spaces can be used to positively influence a child's wellbeing along with that of their whānau and the wider school collective?

As part of our responsibility to Te Tiriti o Waitangi, and to ensure equitable benefits for ākonga Māori, we looked to indigenous knowledges for solutions that are grown from, and for, the land. By looking through an ao Māori lens we wanted to show how educational providers' outdoor environments can provide enhanced opportunities for learning, connection, and cultural enrichment.

## Current research

Educational spaces in Aotearoa (particularly from primary level up) often have a big open grassed field; a concreted area, often for sports; playground equipment, often plastic, sometimes wooden; and flowers and shrubs bordering fences or classrooms.

By contrast, early childhood education centres in Aotearoa usually have a more interesting and enriched outdoor environment, often commensurate with the relative financial position of the provider.

Aside from perhaps improved playground equipment, or the addition of shade sails for sun protection, many of our school grounds look almost the same as they did a hundred years ago.

Internationally, programs such as the Green Schoolyards America (2022), the Children and Nature Network (2022), and the OASIS project in Paris (Urban Innovative Actions, 2022), recognise the benefits of transforming existing spaces to better address both the global challenges of climate change and biodiversity crises, and the local and community level benefits of improved wellbeing for children and their families (Chawla et al., 2014; Stevenson et al., 2020). Insights from these initiatives hold potential benefits for New Zealand schools and communities, but they fail to highlight the importance of the cultural context of a school. The unique and extensive cultural landscape of Aotearoa provides a wonderful opportunity to grow a similar approach that may be even more effective if grounded in indigenous knowledge.

In the last couple of decades, we have seen a massive shift in the design, layout and use of the indoor environments at schools in Aotearoa and internationally (Fletcher et al., 2020; French et al., 2020). By contrast, the development, design, and funding of New Zealand’s outdoor environments, has received much less attention. School property funding constraints have required money to be prioritised for buildings and their maintenance (Ministry of Education, 2015). This is slowly changing.

The objectives of our research project were to:

1. understand what communities are seeking to achieve through transformed outdoor spaces
2. understand how outdoor spaces can be used to maximise wellbeing of tamariki
3. learn how educational providers can integrate te taiao, wellbeing, tamariki, whānau, cultural identity, and teaching and learning
4. discover what the characteristics are of a transferable model for enrichment and better use of outdoor spaces.

### Te Puna Taiao Charitable Trust

Established in 2018, Te Puna Taiao Charitable Trust supports communities to make their educational environments more inclusive, reduce inequity in education, create the next generation of kaitiaki, and improve the lives of tamariki and their whānau through enriched, culturally connected natural spaces. Te Puna Taiao provides communities with guidance on collaborative ways to use outdoor spaces to bring community aspirations of wellbeing to life. The kaupapa of the trust rests in a vision of healthy, resilient tamariki and communities through transformed outdoor spaces. Te Puna Taiao uses a three-phase process: reimagine, transform, and better use. We also advocate for policy and funding change to better acknowledge the important role that an educational setting’s outdoor spaces can have for their ākonga, kaimahi and hapori.

## Methods

The five educational provider communities in this study were selected because of the researchers’ existing relationships with the provider, or through word-of-mouth connections made while undertaking this rangahau, or both.

Individual and group semistructured interviews were conducted with key members of the communities and included kaiako, principals, board of trustee members, and whānau members. The interviews were framed around the four research objectives, and we asked participants to consider both their hopes and aspirations for the future, and their experiences with the Te Puna Taiao kaupapa to date. Expert stakeholders were also interviewed, and these participants brought perspectives from community education, health, and iwi and hapū leadership.

TABLE 1. FIVE EDUCATION PROVIDERS THAT PARTICIPATED IN THE RESEARCH

Name	School information <sup>1</sup>	Participants (in interviews and/or wānanga)
<b>State School 1</b>	Urban Roll = 358 75 % Māori students Contributing School (Years 1–6) English medium, some students in Māori medium	Principal Teachers
<b>State School 2</b>	Semi-urban Roll = 152 54.6% Māori, 17% Samoan, 8.5 % Tongan, 14 % Cook Island Māori, 3% other Pacific peoples, and 3% Pākehā. Full primary (Years 1–8) English medium, some students in Pacific medium	Principal Teachers Governance Whānau members
<b>Kura Kaupapa Māori</b>	Semi-urban Roll = 63 100% Māori students Full primary (Years 1–8, plus Wharekura Years 9–13) Māori medium	Kaiako Tumuaki Governance Whānau/hapū members
<b>Special Character School</b>	Rural Roll = 290 100 % Māori students Full primary (Years 1–8) English medium, some students in Māori medium	Kaiako Kaimahi
<b>Kōhanga Reo</b>	Urban Roll = 40 maximum Licensed for all ages (under 2 yrs and over 2 yrs)	Kaiako Whānau members Lead kaiako Governance

<sup>1</sup> July 2021 information

## CO-CREATING WITH WHĀNAU AND FANAU



FIGURE 1. STATE SCHOOL 1 BEFORE TRANSFORMATION (L) AND AFTER TRANSFORMATION (R)



FIGURE 2. STATE SCHOOL 2 BEFORE TRANSFORMATION (L) AND AFTER TRANSFORMATION (R)

The degree of progress with the physical transformation of the provider’s outdoor spaces was largely dependent on the resources, both human and financial, available to support the transformation. Those two schools that were able to transform their physical spaces in full were supported intensively for a 2-year period by Te Puna Taiao Charitable Trust.

### Findings

#### The potential of outdoor spaces

“Ko au te whenua, ko te whenua ko au”

Whānau offered the most important perspective in this rangahau—the mothers, fathers, nannies, koros, uncles, aunties, and kaumātua. Sometimes, as teachers, we can be

distracted by the many demands on our time and energy. In this research we minimised the noise of those demands for a second and allowed the voices of whānau to be heard loud and clear.

We asked our research participants what they hoped their tamariki would experience if outdoor spaces at their education provider were “improved” and used differently. Their voices expressed aspirations that can be grouped across the three kaupapa below. Please note that as these participants come from different communities and whakapapa to different hapū and iwi, their perspectives represent their own experiences, and while there are commonalities, the context from which their kōrero comes from will differ.



Our challenge to educators is to approach this Findings section with the following questions in mind:

“What can I do in my practice that can help that dream become a reality?”

“Who can support me to do this with integrity?”

Within each theme we present “Whakatinanahia” or implementation suggestions around how to bring these aspirations to life.

## 1. Connection

How we connect to Papatūānuku—our interaction with her.

All participants’ kōrero had the prevalent notion of connection to the natural world and to each other. Whether that was expressed through the idea of whakapapa to Papatūānuku and Ranginui, or through the concepts of kaitiakitanga, sustainability, and environmental awareness, there was a strong recognition that our outdoor environment and our relationship with it was fundamental to wellbeing. Educational providers’ outdoor environments were recognised as places that provide opportunities for all to strengthen that connection.

These whakaaro are echoed by research that shows grounding ideas and design in indigenous ways of being can also ground people in their cultural identity, leading to improved health outcomes (Apiata, 2016; Heke, 2016; Love et al., 2017; Simpson, 2014).



### WHAKATINANAHIA (IMPLEMENTATION)

- Include maara kai in your outdoor environment.
- Prioritise natural materials in outdoor space design (over plastic, concrete).
- Work with the shape and geography of your environment – what type of rākau would originally have grown in your environment? How does the topography of your outdoor space work – where is there easy access to water?
- Maximise the existing natural environment – what trees are already established? Can existing plantings be developed further?

How we connect to our atua and our tūpuna—how they lived, their stories, the history of the land

Participants identified the outdoor spaces as a conduit to connection to their whakapapa—that is, remembering and revitalising the ways that their ancestors lived in harmony with the natural environment.



This type of connection served three important purposes to participants for the tamariki. First, to connect with, and develop their own understanding of, traditional relationships between te ira tangata—people—and te taiao—environment. As our participants noted, for Māori the taiao was not just ‘where’ they lived, but it informed ‘how’ they lived. Reading the environment was considered by participants to be an important part of being Māori.



## CO-CREATING WITH WHĀNAU AND FANAU

Secondly, participants identified that connection to tūpuna allowed tamariki to stand strong and proud in who they are—their whakapapa, and their links to each other through their maunga, awa, marae, hapū, and iwi. This sense of pride was linked to their potential for the future—that by standing strong in their identity they would walk forward with purpose and a sense of safety.

Thirdly, many kaiako participants commented on the opportunity created for reimagining the way that learning is planned, constructed, and delivered. By revitalising the practices and knowledge of their tūpuna and integrating these into their curriculum, participants identified the potential for richer and more meaningful learning experiences.

Outdoor spaces were identified as places where local, hapū, and iwi stories could be represented, and where Māori language and imagery could be interwoven into physical spaces as learning tools.



### WHAKATINANAHA (IMPLEMENTATION)

It is critically important to develop and establish caring and reciprocal relationships with hapū and iwi in your rohe, and to get their input and guidance into any cultural narratives within your space.

- Consider what stories or themes are already present in your buildings and/or outdoor spaces and can be highlighted.

- Incorporate (with guidance from mana whenua) other local stories, imagery, names, into your outdoor space design.
- Collaborate with local artists, carvers, and storytellers who can contribute to your space.
- What themes can you design your outdoor spaces around? For example, ngā atua Māori, local kaitiaki, and geographical features such as maunga, awa, roto, and moana.
- School values – how can they be reflected in your spaces?
- Review your curriculum and identify opportunities to integrate local knowledge. Consider how your outdoor space can support those learning opportunities. E.g., is there significance of a particular rākau or type of rongoā you could incorporate into your gardens? Is there a significant practice or event that occurred within your rohe, such as flax harvesting, tuna migration? How can you incorporate this into your curriculum and spaces?

### How we connect with each other—working together, playing together, learning together

Many participants mentioned outdoor spaces as a catalyst for whanaungatanga and collaboration, and many kaiako participants linked them to improved language development.

We found that it is critically important to include whānau, hapū, and iwi in the meaningful collaborative design of outdoor spaces. Reimagining, transforming, and better using outdoor space can be a catalyst to relationships of care and connectedness. Participants had mostly been involved in the early stages of this process and recognised the value of a collaborative approach.

This approach was further recognised by participants as enabling the authentic development of space design, curriculum integration, and place-based learning opportunities for tamariki.

Finally, many participants recognised this type of co-design process as one which can empower all parties involved, creating a sense of belonging to the kaupapa, the educational provider, and to the legacy that is created for generations to come.





**WHAKATINANAHA (IMPLEMENTATION)**

- Include quiet spaces for introspection, reflection, karakia
- Include/retain wide open spaces for teamwork and sports, places where kids can burn off energy (e.g., rugby field, bike track, hills, playground equipment)
- Include challenging spaces with equipment or material that requires groups of students to work together (e.g. obstacle courses, balance beams, seesaws, flying fox)
- Include wānanga spaces where groups can sit and talk, learn together (outdoor seating, tables for working on, areas for different sized groups)
- Whānau, hapū and iwi must be included in all phases of the approach. Find out their aspirations for their tamariki and whānau.
- Run regular wānanga during the reimagine phase to incorporate whakaaro of all stakeholders.
- Be guided by mana whenua – particularly around cultural narratives, reo Māori, and how they want their stories to be incorporated, both in the spaces and in your curriculum.
- Be patient! These relationships take time.
- Reciprocate – how can you give back to those who contribute their time, energy, expertise and ideas?
- Stay in touch – how can you ensure that these relationships are maintained and grown over time?

with inclusivity in mind, were identified by participants as assets in learning.



Participants shared kōrero that identified this collaborative, kaupapa Māori approach as having potential to impact at a societal level, reprioritising Māori ways of being so that whānau can stand strong and validated on their own whenua and in their homes. From this perspective, transformation of space and practice at an educational provider can filter care out to our communities in a way that shifts the ‘norm’ and recognises other ways of being.



**2. Care**

**Care for one another—building compassionate individuals, practising manaakitanga**

For many participants, connectedness and care—and manaakitanga—can be built when tamariki are empowered through their taiao: growing kai for one another, feeling valued, taking care of other living things.

Outdoor spaces that encourage a connection to taha wairua, and provision for tamariki to be still, reflective and calm, were also linked by both participants and researchers to developing well-rounded individuals with a capacity for care and aroha. Spaces and experiences that enable tamariki to show courage, to engage with each other in mana-enhancing ways, and that are designed



**Care for Papatūānuku—kaitiakitanga, sustainability, climate change**

Participants extended the concept of care to our natural environment, often connecting it with kaitiakitanga. They saw the value in creating spaces where tamariki could safely understand the ideas of sustainability, begin to understand the impacts of climate change and biodiversity loss, and start to develop their own solutions and ways to move forward in a world which needs us all to care more.

The idea of mauri was mentioned by several participants, and the opportunity for tamariki to understand this concept was one that was valued.

Participants also highlighted the importance of understanding how things grow, the lifecycle of living things, how food is produced and the impact that learning can have on a child's propensity for care and for being environmental leaders for the future.



Participants identified that an enriched, diverse, and culturally connected outdoor environment would promote discovery—enabling tamariki to ask questions and be innovative in their play and learning. Examples were shared of whole classes engaging in games together, while other spaces were more conducive to play that focused on smaller, more intimate examples of creativity.

Participants also began reflecting on their current spaces and thinking about how they could be used differently, without too much transformation, to invite creativity.

The inherent creativity in our tamariki was shared through examples of the power of play and imagination, and how this type of creativity, when supported within a cultural context, can contribute to confidence and belonging.

#### WHAKATINANAHA (IMPLEMENTATION)

- Include tamariki in your design and transformation process – when they have ownership and buy-in, their sense of pride will increase and they will see that their contribution is valued.
- How can future cohorts of tamariki contribute to the legacy of the space?
- Include tamariki in how you use your spaces differently – can they be responsible for particular areas e.g. of maara kai? Can some classes/tamariki be responsible for the rongōā garden?
- How can your teaching curriculum build in learning opportunities grounded in care both for one another and for the environment? Does your school practice Parakore/Zero Waste?
- Is there an opportunity for composting, worm farms?
- Design your local curriculum around the seasons – when can tamariki learn about planting? And harvesting?
- Can your school environment reflect the wider environment in your rohe? Can you start learning conversations in school in mini ngahere/moana/awa and then take them out into the real ngahere/moana/awa?
- How does your school environment include all tamariki and their whānau? Is your papa takaro and other spaces accessible by children with disabilities?
- Include sight, sound, touch, smell, taste, so that all tamariki can experience different things.



### Courage to try new things, to challenge existing things

Outdoor spaces provide opportunities to build confidence, and they also encourage bravery and risk-taking. Many participants highlighted the need for physically challenging spaces where tamariki can begin to understand their limits and potential. Challenge was linked to

### 3. Creativity

The third theme that emerged from our research was creativity. All participants shared examples of how they could see their tamariki developing the capability to be explorers, to use their imagination, and to experience happiness and fun.



resilience, and the importance of failing as a natural part of learning.

In the face of recent and ongoing challenges within society, outdoor spaces provide places where hope and happiness can thrive. Uncertainties posed by the COVID-19 pandemic, the continued local and global impacts of climate change, and other societal challenges such as increasing political polarisation all create stress in our lives. A strong theme that emerged from our research was the importance of our outdoor spaces in education settings to provide happiness, enjoyment, fun and ‘shared ground’. This opportunity for hope to thrive is one that should be nurtured, not only for our tamariki but for all of our communities.

#### WHAKATINANAHIA (IMPLEMENTATION)

- Include different types of spaces where different types of creativity can be nurtured – can you create a performance space where tamariki can sing, dance, perform?
- Include connections to different natural aspects – such as a butterfly garden, or a garden lots of different coloured flowering plants, or scents, a herb garden, a rongoā garden. These aspects can contribute to the creativity of tamariki for lots of different kaupapa – mahi maara, mahi kai, mahi toi.
- Include sculptural aspects in your design, and think about how tamariki can be involved in each part of the process.
- Include artistic aspects throughout your spaces – murals, whakairo, tukutuku.
- Create opportunities for your tamariki and community to contribute to these sculptural and artistic aspects.
- Include physically challenging components – are there safe trees to climb? Can you include obstacle courses? A natural rock-climbing wall? Tunnels, balance beams, ropes.
- Include FUN things – loose parts for play-based learning, sand pits, water features, colourful murals, playground equipment that your tamariki will love (some examples are slides, swings, flying fox).
- Think about your own kids – what do they LOVE doing outside? How can you incorporate these aspects?



## Recommendations

### How can we achieve these aspirations?

The Te Puna Taiao three-phase process has been used with participating communities to different extents, and it provides a meaningful pathway for co-design and collaborative capability building. The reimagine, transform and better use journey guides a community towards opportunities to contribute to an enriched outdoor educational environment coupled with establishing ongoing partnerships and relationships of respect, care, and reciprocity with whānau, hapū, iwi, and the wider community.



From participant voice, coupled with their experiences within the Te Puna Taiao kaupapa to date, we have the following recommendations for educators to use alongside the Whakatinanahia suggestions above.

#### i. *Leadership*

Participants highlighted a need for good long-term leadership within the educational provider and its community. Some also identified that external support to undertake a journey was crucial, given educators’ workloads.

#### ii. *Collaboration and relationship with mana whenua and the community*

In all three phases, there is the opportunity to collaborate, wānanga, and share ideas with all stakeholders—including kaiako, whānau, hapū, iwi, community groups, other educational providers, and local residents. Engagement with hapū and/or iwi early on in the process is critical—walking the journey alongside each other will ensure that any transformation or future use of the outdoor spaces is done in a way that reflects the aspirations of mana whenua. Engagement should be guided by shared values, such as manaakitanga, tauutuutu, ako, wānanga, and kaitiakitanga. By engaging in respectful ways, with humility and gratitude, all participants will feel a more meaningful connection to the spaces and the educational provider.

#### iii. *Integration of multiple domains (education, health, community, culture)*



Participants brought a much more holistic view of wellbeing for their tamariki, which was not limited to health, or to improved learning skills.

iv. *System change and wider support*

One of the very clear messages that our participants gave us was the need for a change in funding, policy and support to enable and empower educational providers and their communities to reimagine, transform, and better use their outdoor spaces. The participating communities' journeys differed as their access to funding for transformation varied widely.

v. *Embrace and document the process*

While an end goal of a beautiful, culturally connected, enriched outdoor space is an obvious tangible *outcome* from this type of journey, one of our recommendations is to embrace and be mindful of the *process*. Educational providers can document their journey as a way of communicating and sharing with their community, and also to celebrate the milestones they achieve along the way.



## Conclusion

Our tamariki spend a large amount of their time in educational spaces, at important developmental phases in their lives. The benefits of a holistic approach to education include a greater sense of connectedness to identity, resilience, creativity, and innovation, and socially and environmentally conscious young people. Te Puna Taiao, as an approach to outdoor spaces, allows educators, alongside their whānau and communities, to think about

and use differently their taiao. By utilising a collaborative, culturally grounded process of reimagining, transforming and better using outdoor spaces, educational providers can contribute to improved outcomes for their tamariki. Te Puna Taiao provides some guidance and key elements of this approach that communities can integrate into their own practice, helping them on the journey to healthy, well, and thriving young people and whānau.

## Acknowledgements

This kaupapa would not have been possible without communities who were willing to share their journey with us. I am grateful to all the kura, kohanga and schools that have had the courage to rethink how they do things and to share their own reflections and learnings with me. I am grateful for the vision and commitment of my colleague Erin Green, and for the opportunity to be part of this kaupapa that has the potential to create tangible changes for our tamariki and their whānau. It is with Erin that I experience a true bicultural partnership. To Harata Day for providing the ongoing support and guidance, and for bringing years of educational and reo expertise into this project—ngā mihi tino nui. I also acknowledge Dr Mihi Ratima—who has provided academic support throughout this research journey and whose expertise has enabled us to give mana to the voices of our participants. Finally, we would like to thank the Health Research Council of New Zealand for funding our project through the Ngā Kanohi Kitea grant. This work will contribute to the ongoing work that education providers, educators, and their communities do to continually seek ways to meet the needs of our tamariki.

## Glossary

Definitions taken from *Te Aka* online Māori dictionary and/or the authors' understanding.

ako	everyone positioned as learners
kaitiakitanga	guardianship, stewardship. Our obligation and collective responsibility to protect and sustain the natural world for generations to come.

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kaupapa	topic, policy, matter for discussion, plan, purpose, scheme, proposal, agenda, subject, programme, theme, issue, initiative	taha wairua	spirit, soul—spirit of a person which exists beyond death. It is the non-physical spirit, distinct from the body and the mauri
maara kai	vegetable garden	taiao	world, Earth, natural world, environment, nature, country
mahi maara	gardening, or mahi kai—growing and preparing food	tautuutu	reciprocity, the giving and receiving of knowledge
mahi toi	art/craft	te ira tangata	the human element
mana whenua	territorial rights, power from the land, authority over land or territory, jurisdiction over land or territory—power associated with possession and occupation of tribal land. The tribe's history and legends are based in the lands they have occupied over generations and the land provides the sustenance for the people and to provide hospitality for guests.	tuna	eel of various species, including the longfin eel ( <i>Anguilla dieffenbachii</i> ) and shortfin eel ( <i>Anguilla australis</i> )
manaakitanga	hospitality, kindness, generosity, support—the process of showing respect, generosity, and care for others. Care for one another and the kaupapa.	wānanga	opportunities to make sense of ideas together
mauri	life principle, life force, vital essence, special nature, a material symbol of a life principle, source of emotions – the essential quality and vitality of a being or entity	whakapapa	genealogy, genealogical table, lineage, descent
ngā atua Māori	the Māori deities—ancestors with continuing influence—although often translated as 'god' and now also used for the Christian God, this is a misconception of the real meaning. Many Māori trace their ancestry from atua in their whakapapa and they are regarded as ancestors with influence over particular domains. These atua also were a way of rationalising and perceiving the world. Normally invisible, atua may have visible representations.	whakatinanahia	to make manifest, implement, embody, realise
ngahere	bush, forest		
Papatūānuku	Earth, Earth mother, and wife of Ranginui—all living things originate from them		
rākau	tree, stick, timber, wood, spar, mast, plant—not normally used before the names of trees or plants		
rangahau	to seek, search out, pursue, research, investigate		
Ranginui	atua of the sky and husband of Papatūānuku, from which union originates all living things		
rongoā	remedy, medicine, drug, cure, medication, treatment, solution (to a problem), tonic		

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▶ Ko Wharepūhanga te maunga  
Ko Waikato te awa  
Ko Ngāti Raukawa te iwi  
Ko Ngāti Huri te hapū  
Ko Pikitū te marae

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