

# *Te Whāriki: He whāriki mātauranga mō ngā mokopuna Aotearoa*

Mana aotūroa/Exploration  
Do you let me fly?



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Mātauranga

**Unuhia te pō, te pō whiri mārama  
Tomokia te aō, te aō whatu tāngata  
Tātai ki runga, tātai ki raro, tātai aho rau  
Haumi e, hui e, tāiki e!**

From confusion comes understanding  
From understanding comes unity  
We are interwoven, we are interconnected  
Together as one!

Justin Roberts

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*“Ko te whakatipuranga tēnei o te mana rangahau, me ngā mātauranga katoa e pā ki te aotūroa me te taiao”*  
*The child learns through active exploration of the environment*

# Kaupapa - to strengthen curriculum implementation

- Setting the scene
- Deepening kaiako understandings of Exploration/Mana aotūroa
- Supporting children's developing Exploration/Mana aotūroa
- Considerations for kaiako and leadership

# Challenge to the sector

**A rich curriculum for every child**

**A focus on learning that matters here**

**Affirmation of identity, language and culture**

**Parents and whānau engaged in their child's learning**

**Personalised pathways to school and kura**

# Making sense of Exploration/Mana aotūroa?

**Mana aotūroa** - Children see themselves as explorers, able to connect with and care for their own and wider worlds

**Exploration** - Children are critical thinkers, problem solvers and explorers.

*(Te Whāriki p. 46)*

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# Exploration/Mana aotūroa links to kaupapa whakahaere

## Empowerment | Whakamana

*Early childhood curriculum empowers the child to learn and grow.*

*Mā te whāriki e whakatō te kaha ki roto i te mokopuna, ki te ako, kia pakari ai tana tipu.*



## Holistic development | Kotahitanga

*Early childhood curriculum reflects the holistic way children learn and grow.*

*Mā te whāriki e whakaata te kotahitanga o ngā whakahaere katoa mō te ako a te mokopuna, mō te tipu o te mokopuna.*



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# How might kaiako understand Mana aotūroa/Exploration?

STRAND	GOALS	LEARNING OUTCOMES
Exploration Mana aotūroa	Children experience an environment where:	Over time and with guidance and encouragement, children become increasingly capable of:
	» Their play is valued as meaningful learning and the importance of spontaneous play is recognised	» Playing, imagining, inventing and experimenting   te whakaaro me te tūhurahura i te pūtaiao
	» They gain confidence in and control of their bodies	» Moving confidently and challenging themselves physically   te wero ā-tinana
	» They learn strategies for active exploration, thinking and reasoning	» Using a range of strategies for reasoning and problem solving   te hīraurau hopanga
	» They develop working theories for making sense of the natural, social, physical and material worlds	» Making sense of their worlds by generating and refining working theories   te rangahau me te mātauranga

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## Exploration Mana aotūroa

### Children experience an environment where:

- » Their play is valued as meaningful learning and the importance of spontaneous play is recognised
- » They gain confidence in and control of their bodies
- » They learn strategies for active exploration, thinking and reasoning
- » They develop working theories for making sense of the natural, social, physical and material worlds

### Over time and with guidance and encouragement, children become increasingly capable of:

- » Playing, imagining, inventing and experimenting | te whakaaro me te tūhurahura i te pūtaiao
- » Moving confidently and challenging themselves physically | te wero ā-tinana
- » Using a range of strategies for reasoning and problem solving | te hīraurau hopanga
- » Making sense of their worlds by generating and refining working theories | te rangahau me te mātauranga




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# Evidence of learning and development

- Language of collaboration
- Children taking risks and physical challenges
- “Puzzling over”
- Children pursuing an interest or a project for a sustained period of time.




**IT'S A BUG'S LIFE**  
HOW TO HELP YOUNG CHILDREN DO SCIENCE

For kaiako (educators) of children aged 2–8 years  
Early childhood (ECE) and junior primary levels

See how easy it is to learn and teach scientific skills, knowledge, dispositions, and practices. This practical resource, based on real-life experiences, implements the Ministry of Education's five science capabilities.

CO-CREATED BY REBECCA BROWNE, MUSEUM OF NEW ZEALAND TE PAPA TONGAREWA WITH THE CHILDREN, TEACHERS, AND WHĀNAU OF RAUMATI SOUTH KINDERGARTEN, KIWI KIDS CHILDCARE CENTRE, AND IMAGINE CHILDCARE




**Capability 1**  
Gather and  
interpret data



**Capabilities 2 & 3**  
Use and critique  
evidence



**Capability 4**  
Interpret  
representations



**Capability 5**  
Engage  
with science

Museum of New Zealand Te Papa Tongarewa. [It's A Bug's Life. How To Help Young Children Do Science.](#)



# Children as scientific investigators



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# Kaiako as a key resource

## Children understanding and using oral language



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Infants and toddlers: →  
competent and confident  
communicators and explorers



JUNE 2015

Education Review Office Te Tari Arotake Mātauranga. [/infants and toddlers: competent and confident communicators and explorers](#). ISBN 978-0-478-43821-5

# Kaiako as a key resource

## Teaching and learning in the most responsive services

- Kaiako encouraged children to try new things and make connections to what they were interested in.
- Kaiako encouraged children to explore different environments, by introducing new resources in deliberate ways
- Kaiako offered new and challenging experiences and activities.
- Kaiako supported children to take risks and solve problems.
- Kaiako were often physically nearby to provide support, but were careful not to interfere.
- Children had opportunities to make decisions, ask questions, think creatively and use their imagination

Education Review Office Te Tari Arotake Mātauranga. [Infants and toddlers: competent and confident communicators and explorers](#). ISBN 978-0-478-43821-5

# Mathematics through manaakitanga

Kaiako created community eye spy adventure packs for whānau that included

- Photos of different landmarks and aspects within their community
- Questions about mathematical concepts on the back of the photos
- Information about the history, cultural narratives and local landmarks of Murihiku/Bluff
- Cameras so that children and their whānau could represent their discoveries using digital media



<http://tewhariki.tki.org.nz/en/teaching-strategies-and-resources/mathematics/>



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“The environment offers a range of possibilities for exploring, planning, reasoning and learning with space arranged to encourage active exploration”

*Te Whāriki p 50*

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[Te Whāriki](#) p.50. ISBN 978-0-478-16926-3



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<http://spotidoc.com/doc/741536/if-the-environment-is-the-third-teacher-what-language-doe>



# Making sense of Mana aotūroa

**Mana aotūroa** - Children see themselves as explorers, able to connect with and care for their own and wider worlds

- History of Māori exploration and navigation
- The value of kaitiakitanga



# History of Māori exploration and navigation



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## Ngātokimatawhaorua

# Connecting to the legacy of navigation

- Understanding tamariki whakapapa
- Considering the pūrakau/legends of iwi waka.
- Strengthening knowledge and understanding of your own and tamariki waka from mihi or pepeha
- Considering the dispositions and attitudes that tipuna demonstrated as they navigated the Pacific ocean

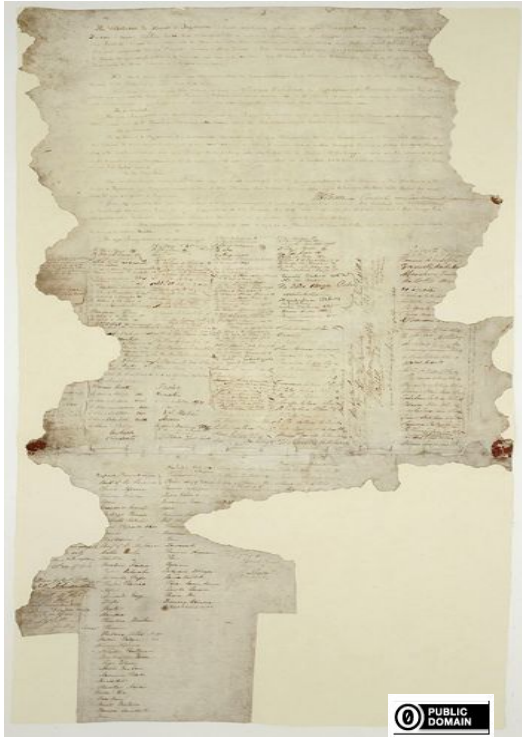
# Kaitiakitanga

“Kaiako recognise the relationship mokopuna have with the environment.

They support them to fulfil their responsibilities as kaitiaki of the environment.”

*Te Whāriki, p.48*

Ministry of Education | Te Tāhuhu o Te Mātauranga [Te Whāriki](#) p.48. ISBN 978-0-478-16926-3



# Making sense of Exploration

**Exploration** - Children are critical thinkers, problem solvers and explorers.

- Working theories
- Future focused learning
- Building and maintaining a culture of inquiry

# Learning dispositions and working theories .....two sides of the same coin



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Reciprocity  
Creativity  
Imagination  
Resilience  
Rangatiratanga  
Whakatoi  
Manaakitanga  
Aroha  
Hūmarie  
Whakahī



# Working Theories

“*Working theories* are the evolving ideas and understandings that children develop as they use their existing knowledge to try to make sense of new experiences.”

*Te Whāriki p. 23*

Ministry of Education | Te Tāhuhu o Te Mātauranga [Te Whāriki](#) p.23.  
ISBN 978-0-478-16926-3



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# Kaiako role in facilitating working theories

- model curiosity and inquiry in their interactions with tamariki
- set up the environment in ways that invite curiosity and opportunities to puzzle over ideas and events
- make listening to tamariki thinking and ideas as expressed through gesture and words a priority
- monitor their own inclinations to give “correct” answers
- use responses (questioning and commenting) that give value to diverse perspectives and so increase the likelihood that tamariki feel safe to express their thoughts
- use responses that encourage tamariki to adjust and refine their working theories

[http://www.tlri.org.nz/sites/default/files/projects/9266\\_%20davis-summaryreport.pdf](http://www.tlri.org.nz/sites/default/files/projects/9266_%20davis-summaryreport.pdf)

“hold children’s working theories lightly, as we do not live in their heads”

*Keryn Davis personal communication*



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# Future focused learning

*“The expectation is, that in their early years children will experience a curriculum that empowers them for their journey” ..... and..... “as global citizens in a increasingly connected world children need to be adaptive, creative and resilient”*



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*Te Whāriki p. 7*

Ministry of Education | Te Tāhuhu o Te Mātauranga [Te Whāriki](#) p.7. ISBN 978-0-478-16926-3

He pai te tirohanga  
ki ngā mahara mō  
ngā rā pahemo  
engari ka puta te  
māramatanga i runga  
i te titiro whakamua.



It's fine to have recollections of the past, but wisdom comes from being able to prepare opportunities for the future.



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“The knowledge age must foreground the development of learners’ dispositions, capacities or competencies to deal with new situations and environments, including those with high degrees of complexity, fluidity and uncertainty”

*Bolstad and Gilbert, with McDowall, Bull, Boyd and Hipkins 2012 p.2*





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**Critical thinking**  
**Researching**  
**Reasoning Inquiry**  
**Collaboration**  
**Problem solving**



# Building and maintaining a culture of inquiry



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# Building and maintaining a culture of inquiry

- Using evidence to shape your practice
- Engaging in robust learning dialogue with colleagues
- Collaborating with other professionals within education
- Engaging in and presenting professional inquiry as part of the appraisal process
- Reading and critically reflecting on current literature
- Make the familiar strange
- Maintaining a focus on all children and whānau

# Questions for reflection

- How might children be encouraged to connect with and care for their worlds in ways that are responsive to Māori values?
- In what ways do you show children that their play AND imagination are valued?
- How might you encourage children to see a range of strategies they might adopt for exploration, thinking, reasoning and problem solving?
- How do you create and model a culture of inquiry amongst children?
- What opportunities exist in your service for children to participate in long term projects that support the development of their working theories?

# Growing your professional knowledge - What do you need to know more about?

- History of Māori exploration and navigation
- The value of kaitiakitanga
- Working theories
- Future focused learning
- Building and maintaining a culture of inquiry

# Bibliography

Brownie, R., Raumati South Kindergarten, Kiwi Kids Childcare Centre, Imagine Childcare. (2016). *It's A Bug's Life. How To Help Young Children Do Science*. retrieved from [https://www.tepapa.govt.nz/sites/default/files/bugs\\_science\\_final\\_h.pdf](https://www.tepapa.govt.nz/sites/default/files/bugs_science_final_h.pdf)

Davis, K. & McKenzie, R. (2017). *Nurturing and encouraging young children's identity, language and culture in the early years*. Retrieved from <http://www.tlri.org.nz/tlri-research/research-completed/ece-sector/nurturing-and-encouraging-young-children%E2%80%99s-identity>

Education review Office Te Tari Arotake Mātauranga. (2015). *Infants and toddlers: competent and confident communicators and explorers*. Retrieved from <http://www.ero.govt.nz/assets/Uploads/ERO-Infants-Toddlers-WEB.pdf>

Ministry of Education Te Tāhuhu o Te Mātauranga (2017). *Te Whāriki He whāriki mātauranga mō nga mokopuna o Aotearoa : Early childhood curriculum*. Wellington, NZ: Author.

Pairman, A. & Terreni, L. n.d. *If the environment is the third teacher what language does she speak?* Retrieved from <http://spotidoc.com/doc/741536/if-the-environment-is-the-third-teacher-what-language-doe>

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Tomokia te aō, te aō whatu tāngata  
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Haumi e, hui e, tāiki e!

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From understanding comes unity  
We are interwoven, we are interconnected  
Together as one!

Justin Roberts



Ngā mihi nui ki a koutou

Ma te wā