

Kaupapa
Miharo

Wero wai

Ingoa o te rōpū:

Ngā tāngata
o te rōpū:

Hei whakakapi

E hoa mā, he nui ngā raraunga kua whakaemihia e koutou, he nui ngā akoranga hou, ā, he mīharo hoki ngā whatunga wai. Me whakamahi ināianei ēnei mōhiotio ki te whakautu i te pātai ā-wero.

Me pēhea e tae ai te wai ki a tātou?

Hopu-whakamātau

Te kōhi wai	Te tuku wai				Te tiaki wai
	Tukunga wai (% me ngā ml)				
E hia te nui o te wai i tāpiria ai e koe ki tō whatunga wai?	Tukunga wai ā-hapori 1	Tukunga wai ā-hapori 2	Tukunga wai ā-hapori 3	Tukunga wai ā-hapori 4	I tiakina rānei te mauri o te wai e tō kaupapa mō te whatunga wai? I pehea rā?
1000ml					

Arotakenga

I pēhea te mahi a ngā whatunga wai e rua? He aha i pērā ai?	I oti i a koutou tā koutou horopaki ā-wero?
I tutuki i a koutou tā koutou whāinga ā-wero? I pēhea rā?	He aha tāu e panoni ai ki te mahia anō, mēnā rā he panonitanga?

Ngohe 1.1:
Kia kaha te pātai

Ka tīmata ngā kaupapa a ngā mātanga PŪRAU i te tuku pātai ki ētahi. Mā te pēnei e mārama ai rātou ki te rapanga e whai nei rātou ki te whakaoti.

Ko te rapanga nui hei whakaoti māu:
Me pēhea e tae ai te wai ki a tātou?

Whakaaro ki ō whāinga, ā, me pēhea hoki te whakatutuki i aua whāinga rā.



Nō reira, he aha ngā whāinga?

Ko te whāinga matua, ko te hanga i tētahi whatunga e tuku ana i ngā wai māori ki ngā hapori, me te tiaki tonu i tōna mauri.

Hei tauia: Ko tā tātou whāinga, he hanga i tētahi whatunga wai, kāore e māturu atu te wai.

He aha ngā pātai hei tuku?

He aha atu hei rangahau māu e tutuki ai ngā whāinga?

Hei tauia: Me pēhea e tae ai te wai i ngā puna wai māori ki tō tātou kura?

He aha rā ngā rapanga hei whakaoti mā tātou?

He aha atu anō ngā rapanga ka ara ake pea? Mā te whakaaro atu ināianei e wawe ai tō mōhio ki te whakaoti i ērā.

Hei tauia: Me pēhea te puni i te māturu wai?

Ngohe 1.2: Te tohu mauri

Kia kaha te mātai me te mātakitaki kia pai ai
tō kite i te mauri o te wai ki Te Tohu Mauri.

Kia tino ora te mauri o te wai, ka tino ora hoki ngā whenua, ngā iwi me ngā koiora māori e tata ana.

E tohu ana ia whakaahua kei raro nei i tētahi momo wai, ā, he mauri tō tēnā wai, tō tēnā wai.

Kia whakaaro koutou, ko te rōpū, ki ngā āhuatanga ka pā pea ki te mauri o te wai i ia whakaahua. Tuhia ngā whakaaro ki te pouaka.

Whakaahua 1



Whakaahua 2



Whakaahua 3



Ngohe 6.2: Whāinumia tō hapori

E ngā mātanga PŪRAU, me āwhina e koutou tō hapori!
Kia kaha koutou i te tauwhāinga whakamutunga.

Hono atu ki tētahi atu rōpū, he horopaki ā-wero anō tā rātou, ā,
whakakotahihia ngā whatunga wai e rua ki te whāinu i te hapori katoa!

Tūhonoa ngā whatunga wai e rua

Hei mahi 1

Mā te mahi ngātahi ki tērā atu rōpū,
whakaritea he mahere hei tūhono i
ngā whatunga wai e rua kia kotahi.

Hei mahi 2

Tūhonoa ngā whatunga wai
mā te whakamahi i ētahi atu
rauemi e wātea ana ki a koutou.

Hei mahi 3

Katia ngā katiwai katoa,
ā, tirohia anō ngā
hononga wai katoa.

Hei mahi 4

Waiho tētahi ipu kua whai tapanga
ki ngā tukunga wai ā-hapori e whā,
arā, ki te whare tinei ahi, ki te whare,
ki te kura, me ngā hōhipera.

Hei mahi 5

Riringihia kia 500ml o te
wai ki ngā ipu ine e rua.

Hei mahi 6

Āta riringihia te wai o te ipu tuatahi
ki roto i tō kurawai, kātahi ka riringi
i te wai o te ipu tuarua ki roto.

Hei mahi 7

Kia rite koe, huakina te katiwai, ā,
mātakitaki i te wai e rere ana! Tuhia
ō kitenga ki te hopu-whakamātau.

Me whai koe ki te whakamahi anō i ngā
wai i whakamahia ai i ngā whakamātau
o mua atu, i ahu mai rānei i te ine-ua.

Me whai ēnei:

- Ngā whatunga wai whakamutunga e rua
- Ētahi atu kōrero wai, me ētahi atu hononga wai
- Kia 1000ml o te wai
- He ipu ine
- He rauemi hei whakapūmau i te noho a ngā whatunga wai e rua (he pouaka, he tēpa, he rawhi nui)
- Kia 4 ngā ipu, ka pupuri ia ipu i te 1000ml o te wai

Kāore e whai wāhi ki tēnei ngohe tō
pūnaha whakapai wai, ngā wai paru rānei.

Hei mahi 3: Tō whakapae

He aha ngā tauira me ngā rerekētanga i kitea e koe i waenga i ō ake raraunga me ngā raraunga o mua?

He aha ngā tohu mō te āhuarangi kei ēnei tauira, kei ēnei rerekētanga rānei mō te hekenga wai.

Kei te hāngai ō raraunga ki tō whakapae? He aha ai/he aha i kore ai?

Te Tohu Mauri

Tirohia te hāngai o ō whakaaro ki Te Tohu Mauri

He taputapu Te Tohu Mauri hei arotake i te mauri o te wai ki ēnei āhuatanga e toru:

• Te iwi

• Te wai

• Te whenua

Hei mahi 1

Ka pēhea tā koutou, ko te rōpū, whakautu i ngā pātai i te tūtohi e pā ana ki ia whakaahua wai.

Hei mahi 2

Mākahia ia whakaahua o roto i te 5 i ia pātai.

Hei mahi 3

Tāpiria te tapeke i ia pou kia kitea ai te āhua o te mauri o ia wai.

Ngā āhuatanga	Pātai	Whakaahua 1 tōna tapeke (1 – 5)	Whakaahua 2 tōna tapeke (1 – 5)	Whakaahua 3 tōna tapeke (1 – 5)
Tāngata	E tiaki kai ana, e mahi kai ana hoki te iwi i roto i te wai, i te takiwā rānei o te wai?			
	E kaha ana te hononga o te iwi ki te wai?			
Wai	He nui ngā momo kai i te roto, i te taha hoki o te wai ka pai hei kai ki tō titiro atu? (pēnei i ngā tipu, ngā ika, me ngā kararehe)			
	Kei te ora rānei ngā wāhi e tata ana ki te wai?			
Whenua	Kei te nui rānei ngā momo koiora i te whenua e tata ana ki te wai?			
	Kei te moroitī-kore, kei te matū-kore rānei te āhua o te wai?			
Tapeke		/30	/30	/30

Arotakenga

Ko te mauri e ora katoa ana, nō te wai kei te whakaahua , nā te mea

Kaupapa Mīharo Wero Wai Ngohe 1.2: Te tohu mauri

Whārangi 1 o ngā whārangi 2

Ngohe 1.3: He awa ara rau

Hangaia tētahi awa ara rau e whakaatu ana i te hononga o te iwi ki te whenua me te wai.

Kia tiakina te mauri o te wai, ka tiakina hoki te whenua, me te iwi.
Hangaia he mahi toi mō te akomanga e whakaatu ana i tēnei hononga.

Hei mahi 1

I tō rōpū, kohia ētehi pepamingo, kia toru ngā tae rerekē. E tohu ana ia tae i tētahi o ēnei āhuatanga e pā ana ki te awa, arā, te iwi, te whenua, me te wai.

Hei mahi 2

Mahia tētahi whiri ki te pepamingo.
Takawirihia ngā pito o tō pepamingo
kia kotahi, i ngā pito e rua o tō whiri.

Hei mahi 3

Honoa tō whiri ki ngā whiri a
ērā atu rōpū hei hanga i tētahi
awa ara rau hei wiri ki te pātū.

Hei mahi 4

Whakamahia ngā mōhiotanga kei Te Tohu
Mauri hei tāpiri i ētahi atu tuinga ki tō awa e
tohu ana i te mauri ora.

Arā, ko te manu māori, te rākau
māori, te whenua kākāriki rānei pea.

Mahi tika ana!

Hei mahi 2: Arotake

Ko tāu, he titiro mēnā he mōhiotanga kei ō raraunga mō te āhua o te huri o te āhuarangi i roto i te wā.

Pātai: *Ka pēhea te rerekē o ngā raraunga hekenga wai i ngā raraunga hekenga wai o mua?*

Tā mātou whakapae

Ki a mātou i [nui ake/iti iho] te hekenga wai i tēnei tau. Ko te take e pēnei ana ō mātou whakaaro:

Whakamahia te taputapu raraunga āhuarangi kei te Student Hub ki te kimi i ngā raraunga hekenga wai i tō hapori i tēnei marama, 10 tau ki muri.

Raraunga hekenga wai	Te marama	Te tau	Tapeke o te hekenga wai (mm)	Toharite o te hekenga wai (mm)
Raraunga hekenga wai o mua				
Raraunga hekenga wai o nāianei				
		Rerekētanga raraunga hekenga wai (mm)		

Ngohe 6.1: Ruku raraunga

Kohia he mōhiohio mō te hekenga wai i tō hapori mā te ruku ki ngā raraunga i tō ine-ua.

Hei mahi 1: Whakariterite

Whakaahuatia ngā raraunga ine-ua ki tētahi kauwhata, ā, tāia tētahi whakaahua kia kite ai koe i ngā tauira.

He aha tāu i ako i tāu whakariterite i ō raraunga?

Ngohe 2.1: Te hurihanga wai

Ka tauwhāinga koutou, ko ō hoa ako, ki te haere mā Te Hurihanga Wai, hoki atu anō ki te rangi!

Ko wairehu koe ināianeī, ā, kei te takiwā o Ranginui koe e noho ana. Ko te wero, me tere ake tō haere mā ia wāhanga o Te Hurihanga Wai i ērā atu rōpū kei tō akomanga, me te kore e tōmiti wawe!

Kua rite koutou?

Hei mahi 1

Whakawehea tō akomanga, ō waho rānei o te akomanga ki ngā wāhanga e whā, ā, kia pēnei te takoto whakatekaraka:

Hei mahi 2

E tū ki te kapua, ā, kimihia tētahi nō rōpū kē hei hoa mōu.

Hei mahi 3

Me tākaro kōrua ko te hoa i te pepa-kuti-toka.

Hei mahi 4

Ka huri te toa hei ua, kātahi ia ka neke ki te wāhanga whai muri atu i te huringa. Ka noho te mea i hinga ki te kapua.

Hei mahi 5

Kimihia he hoa anō, ka tākaro ai i te pepa-kuti-toka kia haere tonu ai te kēmu. Ki te toa koe, ka neke koe ki te wāhanga whai muri atu i te huringa. Ki te hinga koe, ka tōmiti koe, ā, me hoki koe ki te kapua, ki reira tīmata anō ai.

Ki te kore he tangata i tō wāhanga, me tatari koe ki te huringa e whai ake nei kia haere tonu ai te kēmu. Mēnā ko kōrua anahe ko tētahi nō tō rōpū i tō wāhanga, ka tauwhāinga kōrua ki a kōrua.

Hei mahi 6

Kia tae koe ki te wāhanga o Wairehu i Te Hurihanga Wai, me toa anō koe i te pepa-kuti-toka e mutu ai tō haere i te hurihanga wai.

Hei mahi 7

E mutu ai te kēmu, me whakamutu ia tangata o tō rōpū i te hurihanga wai. Ko te rōpū tuatahi ka pēnei te toa o te kēmu!

Karawhiua!



Ngohe 2.2: He whatunga wai

Ka tauwhāinga koutou, ko tō rōpū, ki a koutou anō ki te hanga i tētahi whatunga wai, ā, e 500 piro te whiwhinga!

Karawhiua he kāri kōrere wai hei hanga i tō whatunga, whakapōreareahia rānei ō hoariri ki ngā kāri hapa. Engari kia tūpatō! E whai hoki ana rātou ki te whakararu i tō whatunga wai.



Kia tākaro tātou i te Whatunga Wai!



Kia 2-4 ngā kaitākaro



Ko te whāinga

Kia tū koe hei kaitākaro tuatahi ki te whakaoti i tētahi whatunga wai, e 500 piro te whiwhinga.

Hei whakariterite

Whakawhenumihia ngā kāri, ā, tohaina atu kia 6 ngā kāri ki ia tangata i tō rōpū. Whakatakotoria ngā kāri e toe ana kia tāpapa. Ko te pūkei kāri tēnei e tīkina ai ngā kāri.

Ngā tikanga tākaro

Me tiki koe i tētahi kāri kōhi wai me tētahi kāri whakapai wai kia tīmata ai tō hanga i tō whatunga wai.

Kia tae ki a koe

Tīkina tētahi kāri, ka karawhiu atu ai i tētahi kāri. Mēnā kāore i te whaihua ētahi o ō kāri, whiua atu tētahi.

Me 6 rawa ngā kāri i tō ringa i te mutunga o te wāhi ki a koe.

Kia tīmata koe i tō whatunga wai, ka āhei koe ki te karawhiu:

- I tētahi **kāri kōrere wai** ki tō whatunga wai.
- I tētahi **kāri hapa** ki te whatunga wai a tō hoariri. Mā tēnei ia e aukati ki te karawhiu anō i ētahi kāri kōrere wai. Me karawhiu kē ia i tana kāri kōhi wai e whiwhi ai ia i tētahi kāri hapa.
- I tētahi **kāri PŪRAU** ki tō whatunga wai ki te whakakore i tētahi kāri hapa. Kātahi koe ka āhei ki te karawhiu tonu i ētahi kāri kōrere wai kia tae anō ki a koe.

Ki te pau ngā kāri i te pūkei kāri, whakawhenumihia ngā kāri i whiua, ka tākaro tonu ai.

Ko te toa

Kia eke tō tapeke kōrere wai ki te 500 piro pū, karawhiua tētahi kāri tiaki wai hei whakaoti i tō whatunga wai.

Kāore e āhei tō karawhiua i tētahi kāri ka whakarahi ake i ngā piro kei a koe i te 500. Me whiu kē e koe te kāri rā.

Ina karawhiua tētahi kāri hapa ki a koe i mua i tō karawhiu i tō kāri tiaki wai, me karawhiu koe i tētahi kāri PŪRAU i mua i tō karawhiu i tō kāri tiaki wai.

Ka tiaki rānei koe i te wai, ka māturu rānei te wai i tō whatunga wai? Karawhiua!

Hopu-whakamātau

Te kōhi wai	Te whakapai wai	Te tuku wai		Te tiaki wai	
E hia te nui o te wai i tāpiria e koe ki tō whatunga wai?	Te pH (1-14)	Te puehutanga wai	Te tukunga wai (% me ngā ml)		
			Te tukunga wai ā-hapori 1	Te tukunga wai ā-hapori 2	I tiaki rānei tō whatunga wai i te mauri o te wai? I pēhea rā?
500ml					

Arotakenga

He aha tāu i ako ai tō whakamātau?

He aha hei whakapai ake i tō tauira whakamātau i mua i te wero whakamutunga?

Ngohe 5.2: Hoake

Tūhonoa ngā wāhanga e whā o te rerenga o te wai, ā, whakamātauria tō tauira whakamātau.

Ka oti rānei i tō whatunga wai te horopaki ā-wero? Mā te tūhono i ngā wāhanga o tō whatunga wai e whai nei e mōhio ai koe kia, arā, te kōhi wai, te whakapai wai, te tuku wai, me te tiaki wai.

Hei mahi 1

Tirohia ngā papanga tātari i tō pūnaha whakapai wai, ā, whakahoutia mēnā me pērā.

Hei mahi 2

Whakanohoia tō pūnaha whakapai wai ki runga ake i tō kurawai.

Hei mahi 3

Katia te katiwai, ā, tirohia ngā hononga wai katoa.

Hei mahi 4

Tāpiria ētahi para māori me tētahi koko iti kotahi o te wai rēmana ki te te 500ml o te wai kia huri ai hei wai paru.

Hei mahi 5

Whakamātauria te pH me te puehutanga wai.

Te pH i te tīmatanga

Te puehutanga wai i te tīmatanga

(te purata/te puehu)

Hei mahi 6

Riringihia te wai paru ki roto i tō pūnaha whakapai wai, ā, tukua kia rere ki roto i tō kurawai.

Hei mahi 7

Huakina te katiwai, ā, tukua te wai kia rere!

Hei mahi 8

Kia mutu te rere o te wai mā tō whatunga wai, waiho kia 1-2 meneti. Kātahi ka whakamātau i te pH me te puehutanga wai, ā, tuhia ngā kitenga ki te hopu-whakamātau.

Me whai ēnei:

- Tō pūnaha whakapai wai
- Tō whatunga wai kua whakapaihia ake
- Kia 500ml o te wai
- Te wai rēmana
- He para māori (he paru, he kiri rākau, he pātītī, he rau rākau)
- He rauemi hei whakapūmau i te noho a tō whatunga wai (he pouaka, he tēpa, he rawhi nui)
- Kia 2 ngā ipu ka pupuri i te 500ml o te wai
- He ipu ine
- He ine pH
- He ine-wā
- He rama (ki te hiahiaitia)

Ngohe 2.3: Te kōhi wai

Tirohia te wāhanga tuatahi o te whatunga wai o Aotearoa, ā, kohia hoki he wai!

Kohia he wai i tō whatunga wai mā te hanga i tētahi ine-ua.

Hangaia tō ine-ua

Hei mahi 1

Tapahia te wāhanga o runga o te pātara.



Hei mahi 2

Huripokina te wāhanga o runga o te pātara, ā, whakanohoia ki roto i te wāhanga o raro.



Hei mahi 3

Whakaritea he tēpa, he rite te roa ki te wāhanga o raro o te pātara.



Hei mahi 4

Whakapiria atu te tēpa mai i raro ki runga.



Hei mahi 5

Tuhia tētahi āwhata mitamano i te tēpa ki tētahi rūri, tīmata mai i te 0. Me tīmata te rārangi 0 i te wāhanga papatahi katoa o tō pātara, kia 50 mitamano rānei te matara atu i te take.



Hei mahi 6

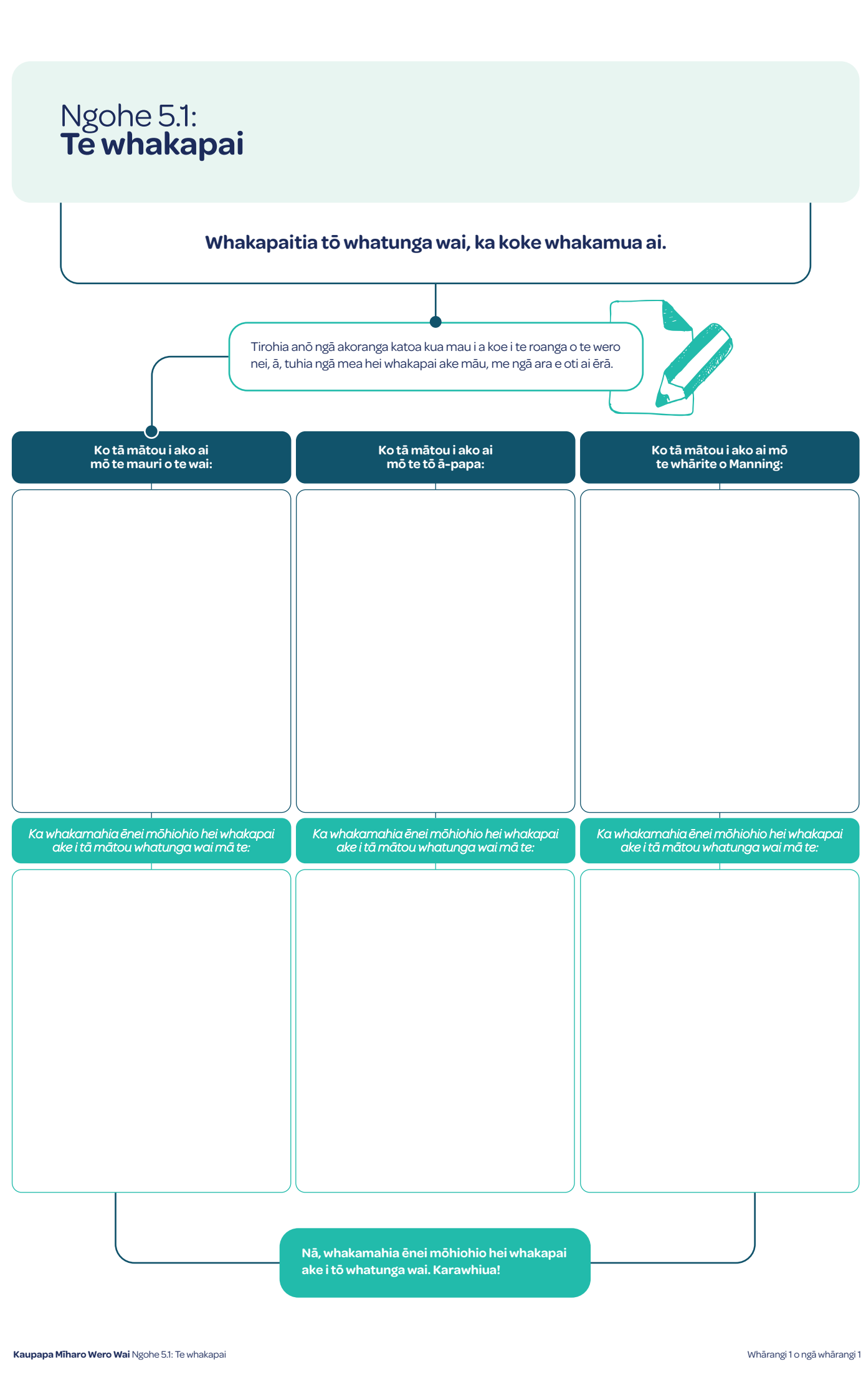
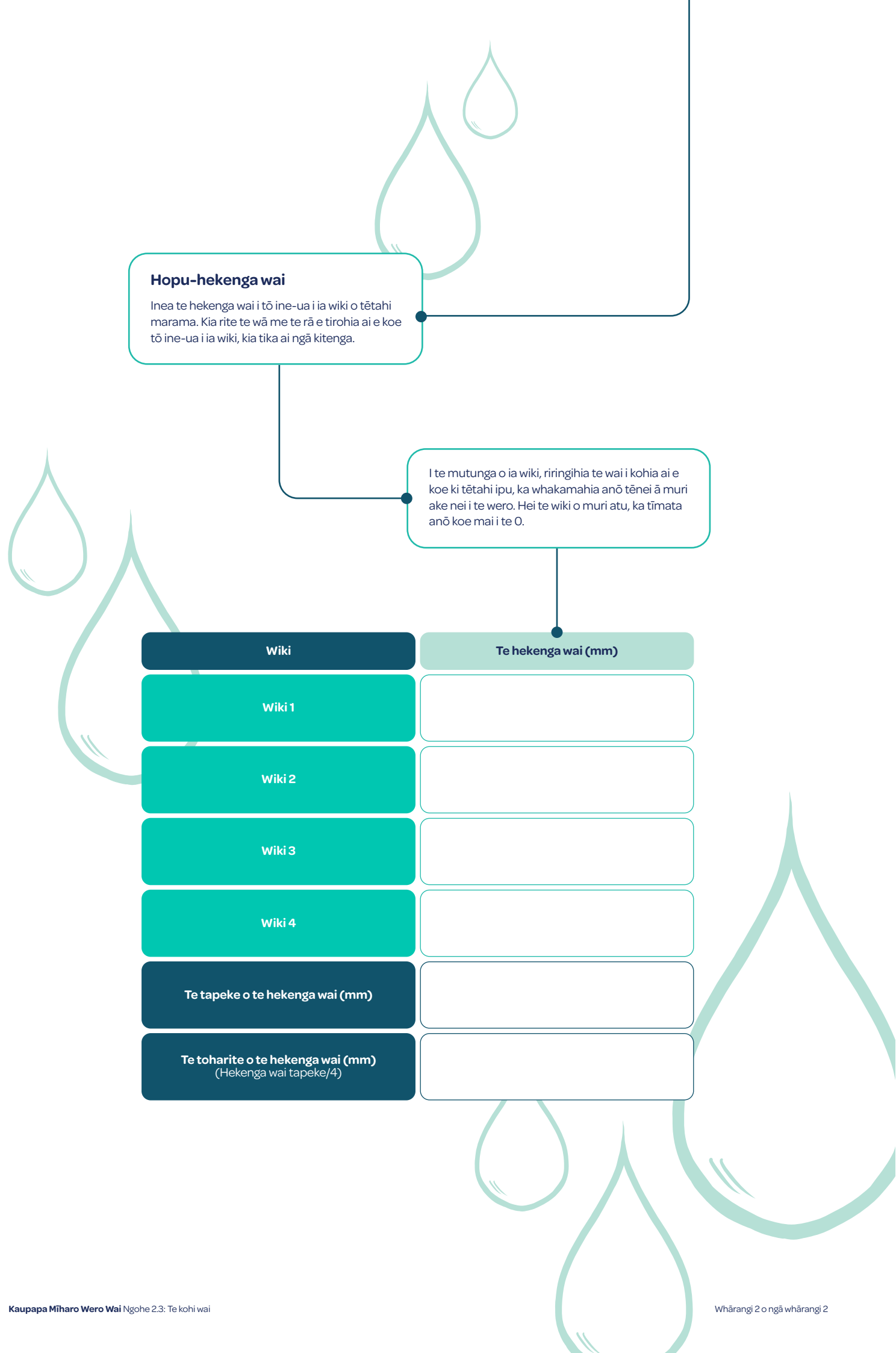
Riringihia atu he wai ki tō ine-ua kia eke noa ki te rārangi 0 i tō tēpa.



Hei mahi 7

Tuhia te ingoa o tō rōpū ki tō ine-ua, kātahi ka waiho ki waho, ki tētahi wāhi haumarua e wātea ana.





He aha tāu i ako ai i tō whakamātau?

He aha tāu e panoni ai hei whakapai ake i tō tauira whakamātau?

Kaua e moumou i te wai ka rere mā tō whatunga wai! Ka āhei koe ki te tāpiri i taua wai rā ki tō whatunga wai i ngā whakamātau ā muri ake nei.

Ngohe 3.1: He tūhura i te paru o te wai

Kia tūhuratia te āhua o te whakapai i ngā parakino i te wai.

Whakamahi ai ngā mātanga PŪRAU i ngā taputapu maha kia kitea ai te pai o te wai, ā, me pēhea hoki te whakapai hei inu.

Kia tīmata tō tūhura i te wai mā te whakamātau i ngā huringa ā-nuku, ā-matū hoki i te wai.

Ngā huringa ā-nuku

Whakamātau: Te puehunga wai me te huinga parariki

Kia mahara! Ko te puehunga wai, ko te purata o te wai, ko te kaha rānei o te whiti o te aho i roto i te wai.

Ko te huinga parariki, ko te piringa o ngā korakora ririki, ā, ka puta mai hei huinga rahi ake.

Me whai ēnei:

- He karāhe kōataata (he ipu rānei)
- He wai mā
- He para māori (he paru, he kiri rākau, he pātītī, he rau rākau)
- He tote
- He koko ine
- He rama (ki te hiahiatia)

Hei mahi 1: Te puehunga wai

- Whakakīia tētahi karaehe kōataata ki te wai.
- Tāpiria tētahi koko o te ngā para maori, ka kaurori ai.
- Whakakāngia te rama, tirohia noatia rānei ki te wai mā te titiro ki te karāhe.

Ngā kitenga

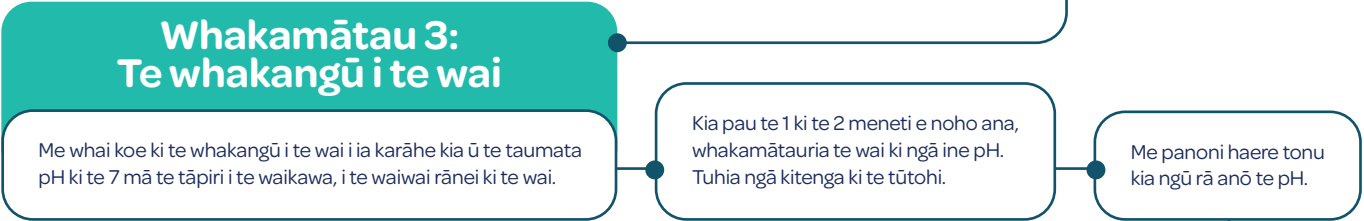
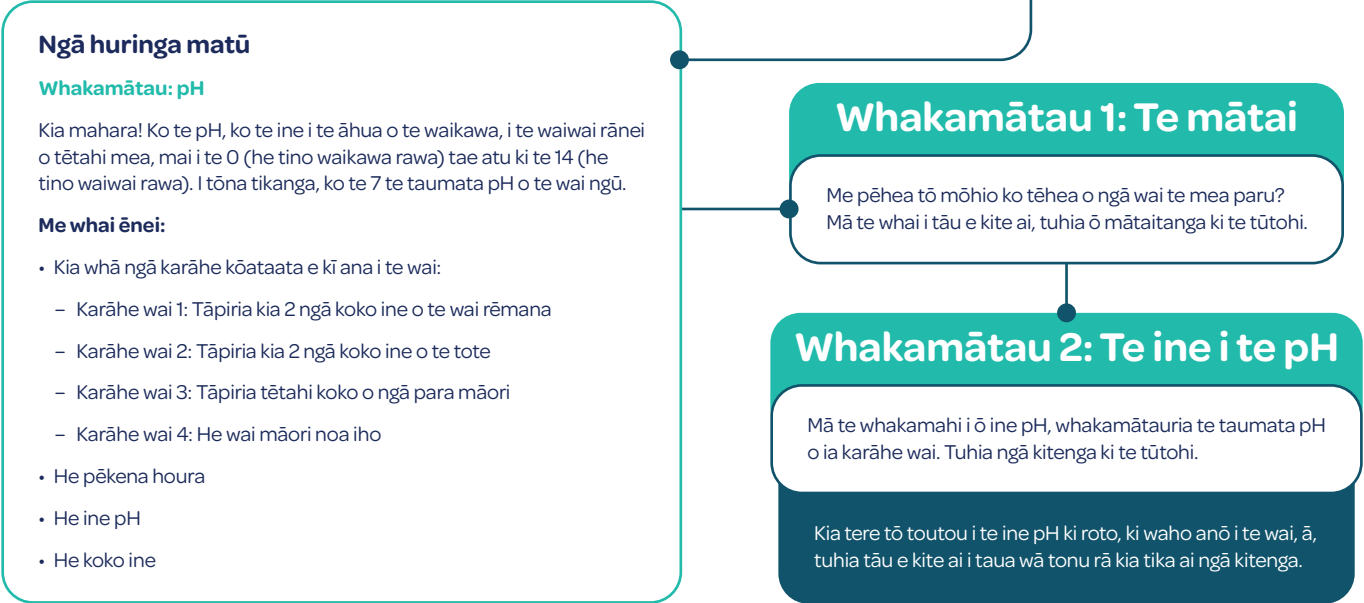
Hei mahi 2: Te huinga parariki

- Tāpiria kia 3 ngā koko (1 te kokonui) o te tote ki te wai.
- Kaurorihia mō te 30 hēkona, ka waiho ai.

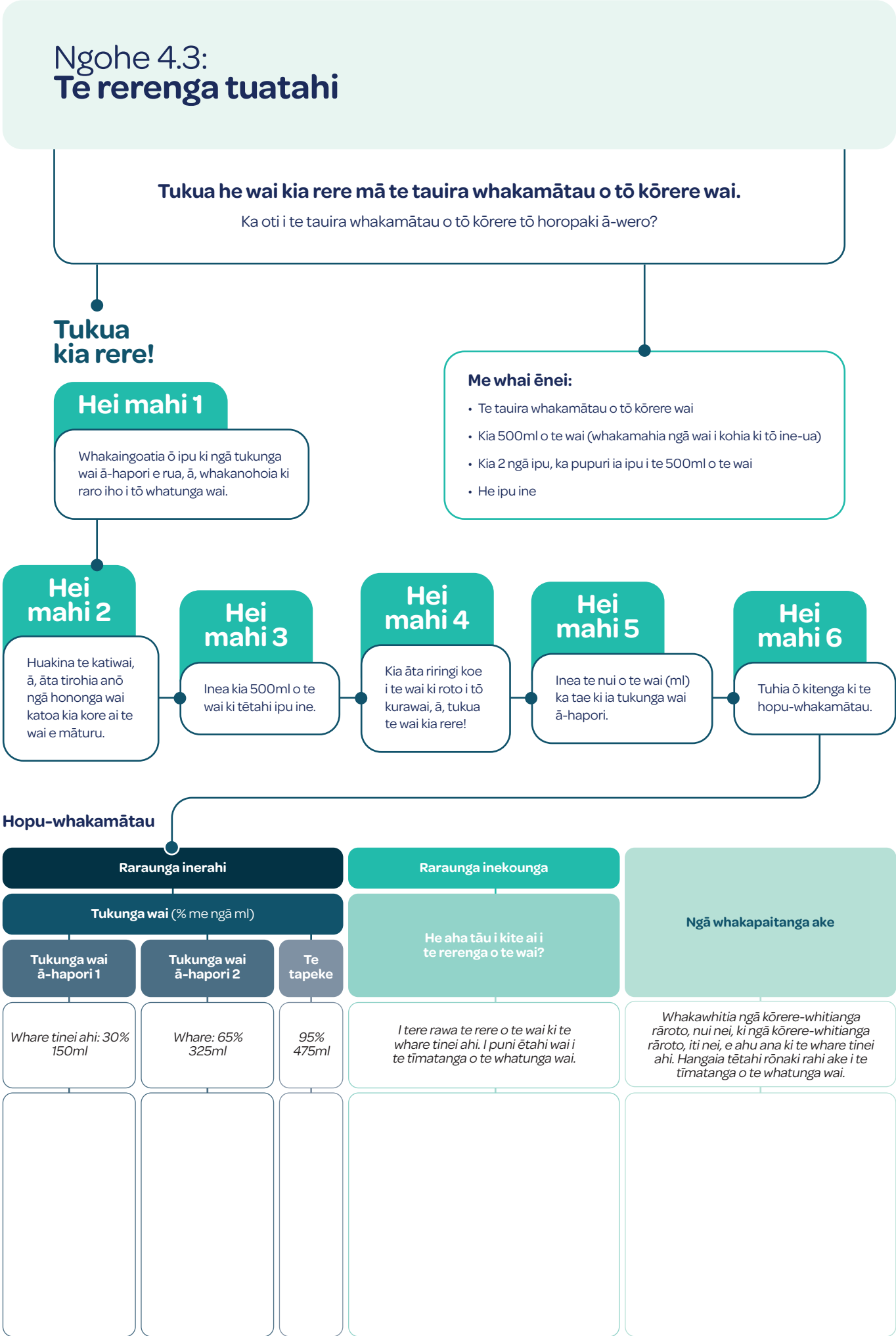
Ngā kitenga

Whai muri i te 2 meneti:

Whai muri i te 20 meneti:



Ngā whakamātau	Karāhe wai 1: Wai rēmana	Karāhe wai 2: Tote	Karāhe wai 3: Para māori	Karāhe wai 4: Wai ngū
Whakamātau 1: Ngā mātaitanga				
Whakamātau 2: Te pH				
Whakamātau 3: Te whakangū i te wai	Te waikawa/waiwai i tāpiria	Te waikawa/waiwai i tāpiria	Te waikawa/waiwai i tāpiria	Te waikawa/waiwai i tāpiria
	Te pH	Te pH	Te pH	Te pH
	Te waikawa/waiwai i tāpiria	Te waikawa/waiwai i tāpiria	Te waikawa/waiwai i tāpiria	Te waikawa/waiwai i tāpiria
	Te pH	Te pH	Te pH	Te pH
	Te waikawa/waiwai i tāpiria	Te waikawa/waiwai i tāpiria	Te waikawa/waiwai i tāpiria	Te waikawa/waiwai i tāpiria
	Te pH	Te pH	Te pH	Te pH
	Te waikawa/waiwai i tāpiria	Te waikawa/waiwai i tāpiria	Te waikawa/waiwai i tāpiria	Te waikawa/waiwai i tāpiria
	Te pH	Te pH	Te pH	Te pH
	Te waikawa/waiwai i tāpiria	Te waikawa/waiwai i tāpiria	Te waikawa/waiwai i tāpiria	Te waikawa/waiwai i tāpiria
	Te pH	Te pH	Te pH	Te pH



Ngohe 4.2: Hangaia

Hangaia tētahi tauira whakamātau o tō kōrere wai hei tuku i te wai ki tō hapori.

Mātakina te ataata 'create', ka whakamahi ai i tō mahere whatunga wai hei hanga i tō tauira whakamātau.

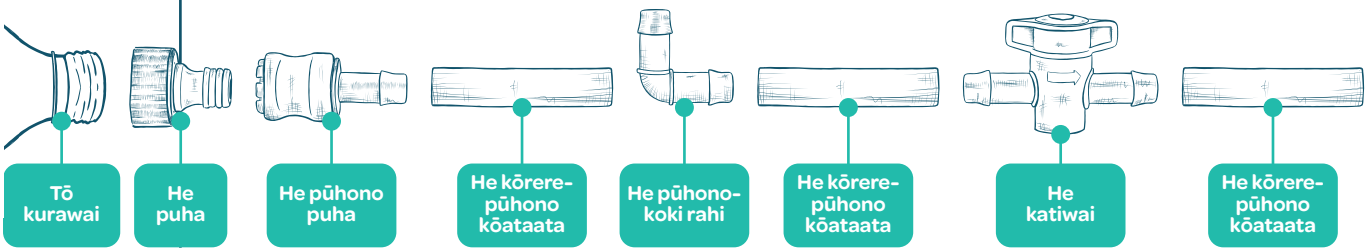
Hangaia tō tauira whakamātau

Hei mahi 1

Hangaia te tīmatanga o tō whatunga wai

Me whai ēnei:

- He puha (nozzle)
- He pūhono puha
- He kōrere-pūhono kōataata x 3
- He pūhono-koki rahi (elbow connector)
- He katiwai
- He rauemi "whatunga wai"
- Tō kurawai mai i te ngohe whakapai wai
- He rauemi hei whakapūmau i te noho a te whatunga wai (he pouaka, he tēpa, he rawhi nui)



Hei mahi 2

Hoahoatia tō tauira whakamātau!

Tāpiria tētahi hononga t-bar mai i tō rauemi "whatunga wai" ki te kōrere-hono kōataata.

Whakatinanahia mai tō mahere whatunga wai mā te tāpiri i ngā kōrere wai me ngā hononga wai e pai ana ki a koe!

Me whakamahi e koe ētahi rauemi hei whakapūmau i tana noho kia tū tika ai.

Karawhiua atu!

Arotakenga

He aha tāu i ako ai i ō raraunga? I pēhea te āwhinatia ōu e ngā whakamātau ki te tūhura i te paru o te wai?

Whakahokia ngā wai i whakamahia i tēnei ngohe ki a Ranginui mā te riringi i ngā wai ki ngā pātītī.

Ngohe 3.2: Kia pai te wai

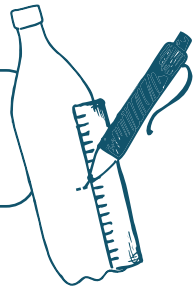
Hangaia tētahi pūnaha whakapai wai i tō whatunga wai kia huri ai te wai paru hei wai pai.

I te whatunga wai o Aotearoa, ka rere ngā wai kua kohia mā tētahi pūnaha whakapai wai e tango atu ana i ngā parakino me ngā para. Mā tēnei e tiakina ai te mauri o te wai i mua i tōna rerenga ki wāhi kē.

Whakaritea tō pūnaha whakapai wai

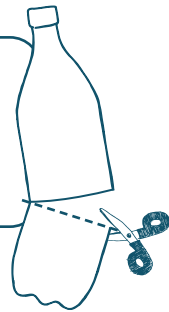
Hei mahi 1

Inea kia 10cm te matara i te take o tō pātara ki tētahi rūri. Tohua te wāhi rā ki tētahi pene.



Hei mahi 2

Atu i te wāhi i tohua ai, tapahia atu te take o tō pātara. Ka huri te take nei hei pūnaha whakapai wai, ā, ko te wāhanga o runga ka huri hei kurawai. Whakaingoatia ngā wāhanga e rua kia kore ai koe e wareware.



Hei mahi 3

Mahia ētahi puare nui i te take o te pātara.



Hei mahi 4

Huripokina te wāhanga o runga o tō pātara, ā, hoatu te take ki roto. Me mau tonu te taupoki!



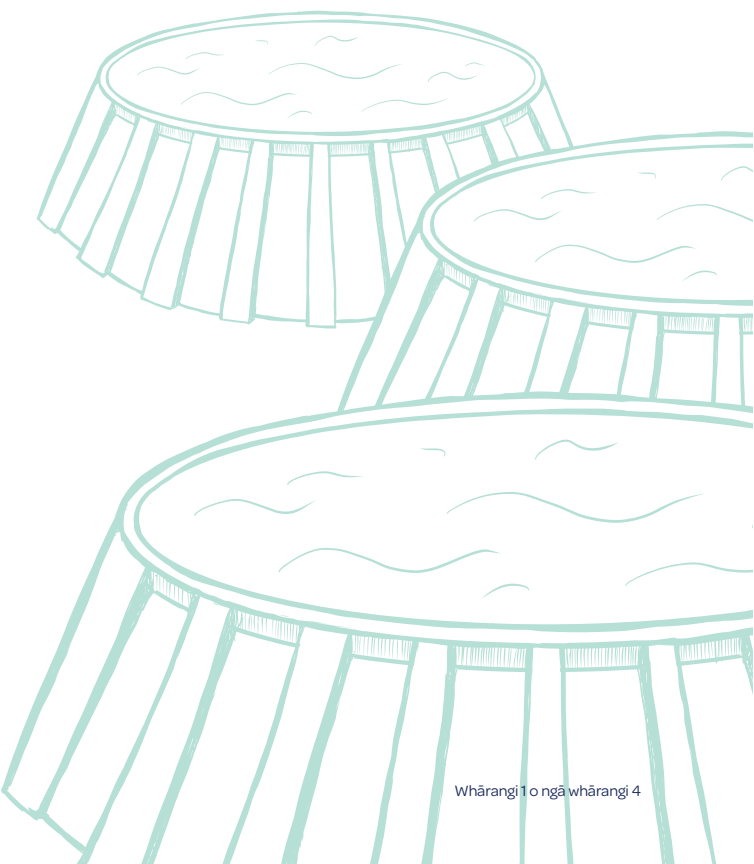
Hei mahi 5

Whakatūria tō pūnaha whakapai wai ki tētahi tūrangā, ā, me whakapūmau rānei ki tētahi pouaka kia tū noa mai.



Me whai ēnei:

- He pātara kōataata, 1.5L te rahi (tangohia te tapanga)
- He pōro kātene
- He waro whakahohe (kua horoia)
- He pepa tātari
- He pēkena houra
- He koko ine
- He kutikuti
- He rūri
- He pene whītau
- He rauemi hei whakapūmau i te noho a tō pūnaha whakapai wai (he pouaka, he tūrangā rānei)



Whārangi 1 o ngā whārangi 4

Tā mātou mahere whatunga wai

Tāia tō mahere ki te pouaka, ā, tapangia hoki ōna wāhanga. Me whai tō mahere i ēnei mea:

- Ngā rauemi i kōwhiria hei whakamahi mā koutou
- Ngā inenga o ia kōrere wai (mm)
- Te ōrau o te wai ka tukua ki tō hapori (%)
- Te rewanga o ia wāhanga o tō whatunga wai (he teitei ake, he hakahaka ake rānei i ētahi atu wāhanga)

Blank area for drawing the water treatment plan.

Me pēhea e oti ai i tēnei mahere tō horopaki ā-wero?

Blank area for drawing the water treatment plan.

He aha ngā rauemi hei kōhi māu hei whakatinana i tō mahere?

Blank area for drawing the water treatment plan.

Ngohe 4.1: Mahere whatunga wai

Whakaritea tētahi whatunga wai hei whakatika i te horopaki ā-wero!

Whakaritea tētahi whatunga wai, e whai wāhi ana ki te whatunga wai nei ngā wāhanga katoa o te rerenga o te wai, waihoki, ko te rahi o te wai e tika ana kia tae ki ō tukunga wai ā-hapori.



Te kōhi wai

Ngā puna wai māori



Te whakapai wai

Ngā pūnaha whakapai wai
Ngā urawai



Te tuku wai

Ngā kōrere wai
Ngā hononga wai



Te tiaki wai

Tō horopaki ā-wero

Te tukunga wai ā-hapori 1 piro
(% me ngā ml)

Te tukunga wai ā-hapori 2 piro
(% me ngā ml)

He aha ngā akoranga kua mau, ā mohoa nei?

Whakaarotia tāu i ako ai i te Wero Wai, ka āwhina nei i a koe i tō mahere. Tuhia ētahi whakaaro ,me ngā take i āwhina ai ēnei whakaaro i a koe.

Hangaia tō tātari

Tāpiria ēnei papanga ki tō pūnaha whakapai wai, ā, kia pēnei te raupapa.

To be accurate, use your measuring scoops.

Papanga 3: Kia 2.5 ngā koko o te waro whakahohe kua horoia

Papanga 1: Kia 1 te pepa tātari

Papanga 4: Kia 6 o ngā pōro kātene

Papanga 2: Kia 1 te koko o te pēkena houra

He aha te tikanga o ia papanga ki ō whakaaro?

Tuhia ō whakaaro ki te pouaka.

