



Te Kaupae 1 Pūtaiao 2024

92071 Te torotoro i ngā kōrero tuku iho e pā ana ki tētahi kaupapa taiao ā-iwi

Ngā Whiwhinga: E 5

Kairangi	Kaiaka	Paetae
Ka parahau i ngā kōrero tuku iho e pā ana ki tētahi kaupapa taiao ā-iwi.	Ka whakamārama i ngā kōrero tuku iho e pā ana ki tētahi kaupapa taiao ā-iwi.	Ka torotoro i ngā kōrero tuku iho e pā ana ki tētahi kaupapa taiao ā-iwi.

HE TAUAROMAHĪ

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Ko tā te Ākonga A mahi

Kairangi - Ka parahau i ngā kōrero tuku iho e pā ana ki tētahi kaupapa taiao ā-iwi.

Kia manaaki i te ākonga, tōna whānau, me ngā kōrero tuku iho o tōna hapū, kua tangohia ētahi wāhanga e pā ana ki ngā kōrero whaiaro.

Kaupapa-taiao-ā-iwi - **Marae 1** (Ki tāhuna)

Ko **Maunga** te maunga
Ko **Awa** te Awa
Ko **me** ngā tāheke wai
Ko **Hapū** te Hapu
Ko **te waka**
Ko **te Iwi**
Ko **te Wharenui**
Ko **te Wharekai**
Ko **te Wharekarakia**
Ko **me** ngā Urupa

Ko **Marae 1** te Marae



Whakataki

Kōrero whakamārama - Ko **Marae 1** he wāhi tino kai ngākau ki a au, ka mohio au te take i tapu ai te maunga a **Maunga** na te mea i noho a **Tīpuna 1** ki reira i te wā i noho a Ngāti **Iwi 1** ki **Marae 1** i mua i tāna matenga. Whai muri i a **Tīpuna 1** i noho ngā rangatira o **Marae 1** - **Hapū** **Hapū** ki runga a **Maunga**, me te mea nei i nui te māpu i noho ki reira.

He wāhi tapu hoki na ngā ana, hei wahi okioki i ngā rangatira.

Arā ngā wahi tapu a **Maunga**, i reira i whakamate a Ngāti **Iwi 1** i a **Tīpuna 1**, i kamo mai tā rātau whatu ki ngā taua e whakamate i a **Tīpuna 1**. Na te kino o te mate o **Tīpuna 1** i maka ngā whekau o **Tīpuna 1** ki te moana, ā, i ū mai ngā whekau ki uta. Ko te wāhi i u mai ngā whekau ko te **Maunga** o te ngākau o **Tīpuna 1**. (Haere ki ngā korero tuku iho ki reira te whakawhānuitanga o tēnei kōrero)

“Hoki koe ki [Marae 1] kia whakamātau i ngā waiparapara o te [Awa] e.”



He whakaahua o tōna Maunga

E korero tenei whakatauki ki nga uri o [Hapū]. He kupu tohutohu ki a matau mena ka mau iui, ka taumaha me hoki ki [Marae 1] kia tapaea nga he me nga pehi o te ao e te wai o te [Awa]

Pai ake te wai o te [Awa] mo te inu ki te wai o te koawa o [Marae 1]. Ka rere te wai ma runga paipa ki te marae, me ngā whare o ngā kaumātua. I te wā o Matariki i te tau 2023 i hikoi mātau ki te pa o [Tīpuna 2], arā ko [Marae 2]. Kei te rāwhiti ki raki tenei pa tahito ki te marae o [Marae 1]. Kei te take whenua o Kaimoho. I tae atu ki te wāhi ka timata ai te

[Awa]. Ka hono te koawa a [] me te koawa a [] mai te rāwhiti ka puta ko te [Awa].

“Haere ki te kainga i a [Tīpuna 2] tutua!”

He taina tuakana a [Tīpuna 2] me [Tīpuna 1]. Ahakoa i whakamate a Ngati [Iwi 1] i a [Tīpuna 1], kare a Ngati [Iwi 1] i whakamamaetia i a [Tīpuna 2], i noho a ia ki tāna pā a [Marae 2]. I rāhuitia a [Tīpuna 2] i te wāhi o te moana i mate ai a [Tīpuna 1]. Ka whakaatu tēnei kōrero i tāna manakotanga mo te hii ika tua atu ki taharangi, tua atu tāna wāhi hii ika mēna ka ngaro te whenua ki reira te wāhi hii ika. I hopu a [] i ngā tikanga i tapaina a [Tīpuna 2] mo te hii ika ki te moana.

Ko ētahi kapata kai ki te tongoa o te ngutu awa o [Marae 1] ko [Kōawa 1], ko [Kōawa 2] me [Kōawa 3]. Ko te [Kōawa 1] tētahi o ngā kōawa e rere iho mai i [Maunga]. Ko ngā kai kei reira ko ngā paua, ngā kina, ngā pūpū. Ko [Kōawa 2] he wahi i puta mai ngā karaerae kia hua kia toene. Ko [Kōawa 3] te rohenga mo [Hapū] me [Hapū 2]. I whanau mai taku kuia ki reira i te tau 1919 ko [Kuia]. He tokaroa i reira. He wāhi pai ki te kohi kina me ngā koura. Reka rawa atu ēnei kai.

I te tau 2023 i hikoi mātau ki [Kōawa 3] ki te kitea i te utunga mai i ngā huripari o Gabrielle me Hale. I rite te moana ki te paraikete paru, i ngaro ai te moana na te parataiao. Ēngari, i reira tonu ngā kōaraerae, me ngā mango e whānau mai i wā rātau pēpi. I tino ohorere te rōpu ki ēnei kitenga na te whakaaro i mate te nuinga o ngā kai moana na te paruparu o te moana. Ahua 50 ngā karaerae i kitea mātau e kaukau tonu ki [Kōawa 3].

Korero Tuku Iho:

Ko Tīpuna 1 te rangatira o Ngati Iwi 1. I noho haumarua a Tīpuna 1 me tona whanau i waenganui i a ratou. Ā, ko te whakaaaro matua i whakaae a Ngati Iwi 1 ki te rangatiratanga o Tīpuna 1. Ia ra, ia ra ka hii ika a Ngati Iwi 1. Ko te hapuku te ika pai o reira. Ko te tikanga i toha nga ika ki a Tīpuna 1 raua ko Tīpuna 3. Ēngari, e ai ki ngā kōrero o Monty Soutar, me teara.govt.nz a te wā i pakeke nga tama, i pōrahua a Ngati Iwi 1 e ngā mahi nanakia o nga tama o Tīpuna 1. Tuatahi, i tango ratou nga tama i ngā ika pai ake. Ka waiho nga toenga anake mo Ngati Iwi 1. A te wā i tino pukuriri a Ngati Iwi 1 i te mahi o ngā tama, i te whakamahere rātou kia patua i a Tīpuna 1, me āna tama nanakia. Ka whakatakoto kaupapa e Ngati Iwi 1: “Me whakatu wharau tatau mo Tīpuna 1 ma. Ka panuitia ki a ia me ona tamariki tane kia haramai ki te hii ika hei te ra whakatuwhera i taua whare. Ka tae atu tatau ki te moana-waipu ka kohurutia ratou i reira” (Soutar, 1988) I whakaae a Tīpuna 1 me ana tama ki te haere ki te hii ika. I te po i mua o te haerenga i titiro a Tīpuna 1 ki te moana me te rangi. I korero aia “he marino tua-ukiuki apopo, he kawatawata tata moana te koangiāngi; ka haere au ki te moana”. (Soutar, 1988) > talk about the wharau built? Of ponga?? Ao ake i te ata, i whakarite rātou katoa ki te hii ika. Ā, ka tae ki nga taunga ika, ka mōunu ia i nga matau. Mohio a Ngati Iwi 1 ko te kamo o ngā whatu te tohu kia kōhuru ia Tīpuna 1 me ngā tama. I tere te whakamate ia Tīpuna 1, a, i whakahaehae e rātou i te puku o Tīpuna 1 kia puta mai ngā whekau. A, i ahu ngā whekau ki tāhuna ki te ngutu awa o Marae 1. I whakaingoatia i te wāhi i ahu ngā whekau ko [redacted] o Tīpuna 1. I āpuru nga toa i nga tama, i heke ratou katoa. Kāre a Ngati Iwi 1 i whakamate ia Tīpuna 4, na te mea i noho tahi aia i te taha o tāna matua kēkē ko Tīpuna 2 ki Marae 2. Ko ngā waihotanga o Tīpuna 1 ko Tīpuna 4 rātou ko ngā tamāhine a Tīpuna 4 ratou ko, Tīpuna 5, me Te Tīpuna 6. I ngā tau i heke mai, i whakangaki ngā mokopuna o Tīpuna 1 ko Mokopuna 1 raua ko Mokopuna 2. He mea nui te ariā o te ngaki o te mate o Tīpuna 1 mo ngā hapu o Ngati [redacted] i ēnei wā.

Whakakapi

Hei whakakapi i ngā kauapapa taiao nei, kei reira tonu ngā kapata kai a Kōawa 1, Kōawa 2 me Kōawa 3. Mai i te kinotanga o ngā huripari, te ahuārangi, me te whānako o ēnei wāhi kua tū tonu. Kei te whakapae ai mātau i ēnei wāhi hei kāpata kai mo ngā reanga kei te puta mai.

He Kairangi

Te Wāhanga Ako: Pūtaiao

Te Paerewa: 92071

Te Maaka: 08/08

Te Pātai	He pitopito kōrero
Tuatahi	I whakamārama, i whakatakoto taunakitanga hoki te ākonga, e pā ana ki ngā mōhioatanga, ngā māramatanga me ngā hononga o ngā mahi a ngā tīpuna me te whakamahi i ngā kōrero tuku iho e pā ana ki ngā mahinga kai o tōna rohe.

Ko tā te Ākonga A mahi

Kairangi - Ka parahau i ngā kōrero tuku iho e pā ana ki tētahi kaupapa taiao ā-iwi.

Kia manaaki i te ākonga, tōna whānau, me ngā kōrero tuku iho o tōna hapū, kua tangohia ētahi wāhanga e pā ana ki ngā kōrero whaiaro. Ko Te Pataka o Rakaihautu te kaupapa taiao ā-iwi. Ko ngā kōrero tuku iho e pā ana ki tēnei wāhi, ko ngā kōrero mō ōna hua, ngā kai, ngā taonga tuku iho ara te mōkihi, he kōrero parahau. Kua whaia ngā whakaahua, ngā mahere, ngā momo taunakitanga rerekē. Ko ngā whakamaatau wai, he raraunga hoki, hei tautoko i te mahere ako. Kāore i eke te ākonga mā tēnei mahi noa. Mā tēnei mahi ka whai mōhioranga ka whai māramatanga ki te mauri o te wāhi, te kaupapa taiao ā-iwi, Te Pataka o Rakaihautu. E **whā** ngā wāhanga o tēnei Kete Manarua.

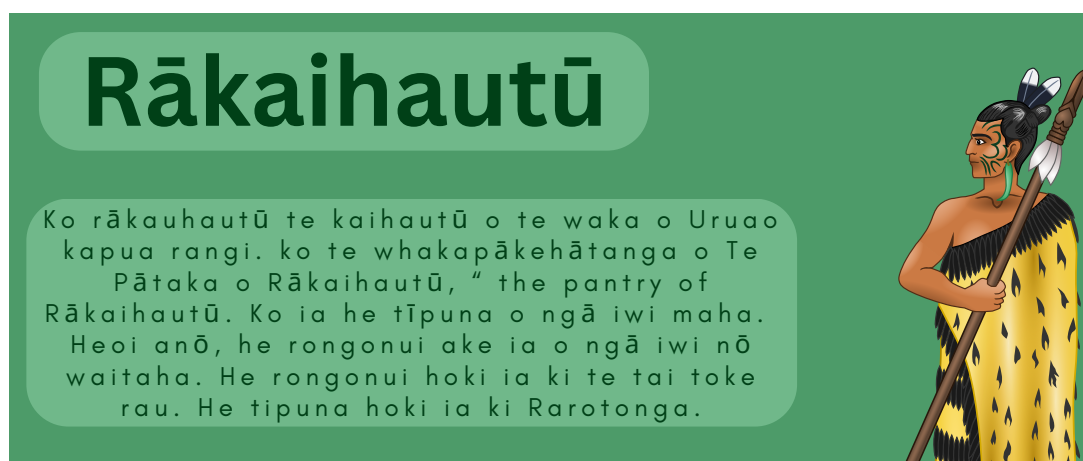
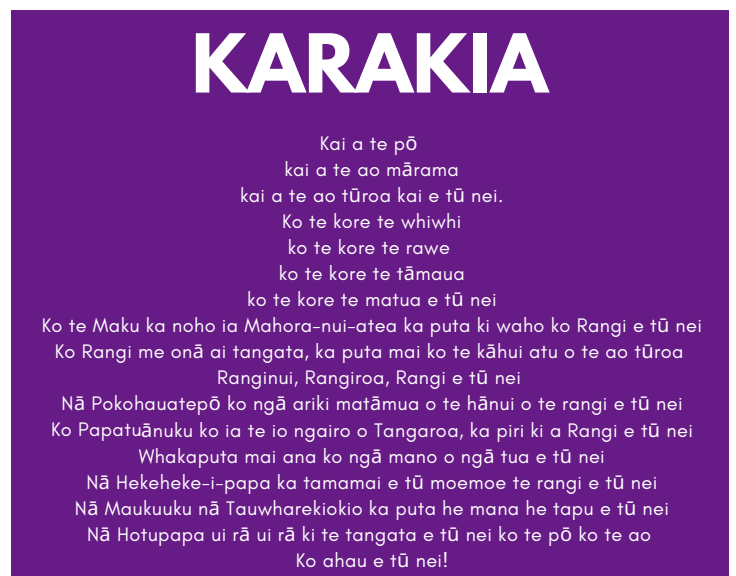
Tāmiro:

E taea e te ākonga ki te hiahia te whai tāmiro ki paerewa paetae anō.

Pūtaiao 92072: Mā te āta aro ki ngā atua Māori e hāngai ana ki Te Pataka o Rakaihautu ka whai tāmiro ki tēnei paerewa paetae.

Hangarau 92054 & 92055 - Te kōrero mō ngā Mōkihi.

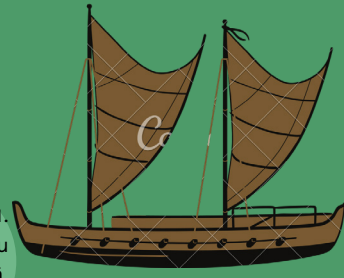
Te Wāhanga Tuatahi: He whakaaturanga ataata 1 (PowerPoint Presentation)



UPOKO 1

WHAKAPAPA O TE PATAKA O RĀKAIHAUTŪ

I tae mai a Rākaihautū ki runga i te waka Uruao, i tau ai ki Whakatū. Mai i tā rātou taenga mai, i whakawewehe ai i ngā tāne ki ngā rōpu e rua. Ko Rākaihautū tērā i titiro haere ki roto i te Waipounamu. Mā tāna tama, a Rākihauia e titiro ki te takutai.



I hangaia ai a Rākaihautū i ngā roto nui o te Waipounamu, (Ngā puna wai karikari a Rākaihautū). E whakamahia ana i tāna reo ātahu, a Tuwhakarōrea. Whai ake i tāna tīrotiro haere ki roto i te Waipounamu, i tutaki ai a ki tāna tama ki waitaha ki te taitonga. Kātahi ka haere tōtika ki te pataka a Rākaihautū. Mai i konei, i karawhiti ai a Rākaihautū e rua anō ngā roto (te kita ika a Rākaihautū, te pataka a Rākaihautū hoki).

Mutu ai a Rākaihautū ki te hangaia i ngā roto o te waipounamu, ka waiho i tōna iho ki roto i a Tūraki, ki te pūahatanga o Akaroa anō hoki. Me te aha ka whakaingoatia ai te Bank Peninsula, ki te pataka a Rākaihautū. Kia maumahara ai ia ia nā te nui o ngā kai i tipu ai. Kua waiho a Akaroa hei kainga mōna.



E ai ki ngā kaipūtaiao, I timata ai Te pataka o Rākaihautū hei moutere, e puta mai ana mai i ngā hūnga puia. I whakatau tata ai rātou i timata ai tēnei mai i te tekau, ki te tekau mā rima miriona tau ki muri.



Mai i te hūnga puia tuatahi, kua haere ki wī, ki wā ngā moana, ngā roto hoki. Mā te wai e haere ki wī, ki wā, kua tini ai te ahua o te whenua. Kua hurihuri haere te whenua. Kitea ai ngā whārua, te kokoru e whakakānohi ana i te pataka o Rākaihautū i ēnei rangi o inamata.

Mōkihi

Ko te Mōkihi, te mohi rānei he momo waka. I hangaia mai i te raupō, te kōrari rānei.

Te āhua nei he māmā ake te hanga waka awa i te waka tūturu. Ki au nei, ko tā ngā tūpuna nō ngā rā o onamata, ka tae atu ki tētahi awa ki tētahi arawai. Me te mōhio hoki me whakawhiti rātou i te awa. Ā, i whakatau rātou i taua wā tonu me hanga Mōkihi. E taea ana ki te tikina i ngā harakeke mēna kei reira. Ka kōhia i ētahi harakeke ka herea kia hanga i te Mōkihi, whakawhiti ai i te awa. Ka pēnei hoki mō te raupō.



Ka hangaia ngā marae maha i te mōkihi. I ngā marae o Ngai Tahu, ā, kua waiho noa atu kei raro i te atamiri, kua iria rānei. Ā kāore kua whakamahia. Ka pakaru haere, ka wareware i a rātou ka noho noa ki reira. Kāore hoki tētahi i hangaia i tētahi atu mōkihi. Nā reira ka mahiti te tikanga, te mohiotanga me pehea te hanga Mōkihi. Me whāngaihia ai tēnei tikanga, tēnei mātauranga ki ngā tāngata katoa kia ora tonu ai mō ake tonu.

TĪ KOUKA

KO TE TĪKOUKA HE MOMO MAHINGA KAI KEI ROTO I TE WAIPOUNAMU. HE MEA NUI TĒNEI MAHINGA KAI KI TE IWI MĀORI. KO TE TAKE MŌ TĒNEI, I NGĀ RĀ O ONAMATA, I WHAKAMAHIA TE IWI I NGĀ RAU MAI I TE TĪ KOUKA MŌ TE RARANGA. I WHAKAMAHI HOKI TE IWI MĀORI I TE PAKIAKA O TE TĪ KOUKA, HEI RONGOA.

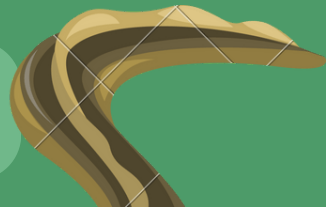


HE MAHA NGĀ MOMO KAI E TAEA ANA NGĀ KARAREHE KIA KAI. PĒRĀ KI NGĀ MANU, NGĀNGARĀ, MOKOMOKO, ME ĒNEI MOMO KARAREHE KATOĀ. KO TE WAIHONGA MAI I NGĀ PUTIPUTI, MĀ NGĀ NGĀNGARA, NGĀ MANU RĀNEI E KAI. KO NGĀ HUARĀKAU E TAEA ANA E KOE KI TE KIMI I TE TĪ KOUKA KI NGĀ ROHE KŌREPOREPO

Tuna

ko te tuna tētahi momo mahinga kai e mohio ana te katoa o Aotearoa. ko te take mō tēnei, korekau ngā whāngote tata nei ki te whenua o Aotearoa. He māma ki te hopu, he maha ngā taioro.

Mai i tēnei, kāore e kore he momo mahinga kai matua ki roto i te ao Māori.



Ngā rā o onamata

Opawaho

Te hītori o Opawaho

I ēnei rā o inamata, kua whakarāpopoto ai i te ingoa “Ōpawaho”, ki te “Ōpawa”. Ko te whakapākehātanga o te “Ōpawaho”, ko te “Outer most settlement or the place of the outer pā.” koia nei te “descriptive term” e kī nei he taupuni tawhiti mō te whakatatū kapi matua o Kaiapoi. I tū ai te pā ki tēnei wāhi ki ēnei rā o inamata, ko Judges Street me Vincent Place intersect.

I whakamahia ai te iwi o te pā i te Ōpawaho me ngā repo i huri taiao i te awa hei mahinga kai. Ko te Ōpawaho me tōna kotahi e whai tikanga, nā te pūtake o te tuna me te pihapiharau. Ko ētahi o ngā rangatira o ia hāpu i haere ai kei tēnei awa kia hōpu kai. Katahi ka hoki ki te kainga i te wā kua nui ai ngā kai kua hopu.

I whakamahia hoki ai ētahi wāhanga o Ngai Tahu i tēnei wāhi hei wāhi whakatā ia rātou e teretere ana mai i a Kaiapoi me Te pātaka o Rākaihautū.



Te āhua o te awa

I ngā rā o onamata, i kōpiko ai te awa o Ōpawaho ki ngā rohe kōreporepo, whenua harakeke, ngā sedgeland anō hoki. He awa tēnei i whakamahia ai e mātou tīpuna hei hangaia i ngā waka waimōkihi. Nā te raupō e huri taiao i tēnei awa hirahira, i whai pūkenga ai kia hangai i tētahi waka hei whai mahinga kai.

I ngā wā o Ngai Tahu, i noho ai ētahi kei tēnei taupuni tawhiti tuauri, kei te taupuni ranea o te kai anō hoki. Mai i kōnei, i hāereere rātou ki Rāpaki ki te kūrae, kia haere rāwhiti ki te wahapū, haere tonga ki Waihora rānei.

I runga i tēnei haerenga mai i a Kaiapoi me ētahi atu noninga kumu o te whenua, i haere ki roto i te rohe kōreporepo o Ngā -p ā kih i-wha ka te ka te ka -o -Wa ita ha .

I teretere rātou ki roto i te awa, i runga i ngā mōkihi, i hangaia mai i te raupō. I whakarawe te Opawaho i ngā tuna me te kanakana. Nā tēnei, i haere mai hoki ētahi mō te whai kai.

Te Wāhanga Tuawhā: He ipurangi

1. Te Kainga

Tauparapara

*Ka tuwheratia ngā tatau o Tiki-tiki-o-rangi
Te kore-tamaua-ki-te-hiringa
Te kore-tamaua-ki-te-hononga
Te kore-te-whakaarohia-i-te-timatanga
Te kore-te-whakaarohia-i-te-otinga*

*He kore-tau-awhia,
He kore-tau-tatai,
He kore-tau-ritenga
Te kore-pea-nui
Te kore-pea-roa
Te kore-te-waahi-awa
Te kore-te-toetoe-awa
Te kore-tipua
Te kore-te-oranga*

*Tuturu o whiti whakamaua kia tina! Tina!
Haumie, hui e, taiki e!*

Whakatakinga

I tēnei tau, i whakatōmene ahau i te Pātaka o Rākaihautū. Kia ako ai i ngā momo mahinga kai i hopu ai ōku tīpuna huri noa i tēnei whenua. Kia mohio ai pehea rātou i whakamahia i te taiao, hei arahi ai tō rātou hauhake. Mai i ōku rangahau, i hangaia ahau i tētahi pukapuka. Kia tuku ai ngā mohiotanga ki ngā reanga e haere ake nei. Kia whāngaihia ai ngā kōrero tuku iho, kia whakakāia o rātou kete mātāuranga ki ngā kōrero. He mea nui te whakarite i ēnei momo āhuatanga kia whāomoomo ana ngā kōrero mō te mahinga kai.

I oro hoki ahau ki te awa e rere ana kei muri i tōku kura, āra ko te Waimōkihi. I whakaingoatia ai nā tōku wharekura (Te waka o Waimōkihi). I ako ahau mō te hirahiratanga o tēnei awa ki ōku tīpuna, me te whakamātauria i te hauora o te awa. Ki ahau nei, he haepapa tēnei mō tōku kura hei tū hei kaitiaki o tēnei awa. Kia whakarauora, kia whāomoomo ai tōna oranga. Ko ōku wawata, kia toea nei e mātou ngā tauira o tōku kura ki te hauhake i te raupō, te hopu tuna, hauhake harakeke, me ērā momo āhuatanga katoa. Kia ako ai i ngā tauira katoa i ēnei tikanga. I roto i tēnei aromatawai, i whakaaturia ahau ngā momo āhuatanga hei pai ake te awa, pērā ki te whakatō rākau ki ngā tahataha, aha atu aha atu.



Te Waka o Waimōkihi (A)

koia nei te wāhi tuatahi i tae atu kia whakamātau. ka rere ai tēnei wāhanga o te awa kei muri i tōku kura, āra ko Te Kura Kaupapa Māori o Te Whanau Tahi.



Warren Crescent (B)

koia nei te wāhi tuarua i tae atu ai e tōku akomanga mō tēnei aromatawai. Ka pūheke ai tēnei wāhanga o te awa kei warren crescent.



Opawa Road (C)

koia nei te wāhanga whakamutunga o te awa i whakatairite ai e au mō tēnei aromatawai. Ka maringi ai tēnei waha kei te rori o Opawa.

2. Ngā Paetohu

Ko ngā mea e whakatairite ahau, ko ngā paetohu. Ānei tētahi whakarāpopototanga o ngā whakamārama o ia o ngā paetohu:

Haukita (Coliform bacteria): ko tēnei mea te haukita, e ine ana i te teko kei roto i te wai. Ko te take me ine i te haukita, nā te mea i roto i te wai e taea nei e koe ki te inu, kāore, he iti rānei te haukita kei roto. Mō tēnei whakamātau, ka tohu mēna he nui ake, iti ake rānei i te 20 coliform colonies ia 100ml o te wai.

Wai hōraora (dissolved oxygen): He mea nui tēnei mea te hōraora. Mō te hōraora ka tipu pai ai te pūnaha hauropi.

Kia ora ai ngā kaimoana, me whai hōraora kia mōrehurehu. i te nuinga o te wā, mēnā he nui te wai hōraora ki roto i te awa, he pai te hauora, he pai hoki te taiao. Nā, he nui ake tūponotanga ka tipu pai ai ngā tuaiwi-kore maha.

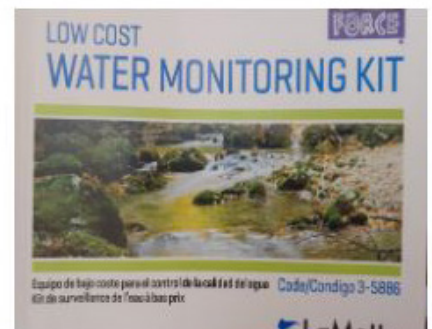
Te tonotono hōraa mōtū koiora (Biochemical Oxygen Demand/BOD): ko tēnei mea te BOD, e whakamātauria i te rahi o te wai hōraora e noho ana kei roto i te wai.

Pākawa ota (nitrate): ko tēnei mea te nitrate, he taiora nui ki roto i te ao o ngā aquatic plants, ngā kararehe anō hoki. Nā tēnei mea te nitrate e whai pūmau ēnei momo mea.

Hauwai moe (pH) : ko te mahi o te pH, ko te ine i te nui o te hīmoemoe, te kōunga o te wai anō hoki. ko te ine whānui o te pH, ka timata ki te kore (maha te hīmoemoe) tae atu ki te tekau mā whā (tino basic).

Pāka tūtaewhetū (phosphate): Ko tēnei mea te pāka tūtaewhetū, he taiora me whai ngā tipu, ngā kararehe hoki kia tipu pai ai tōna oranga. he pūmotu pūmau mō tēnei mea te tauhohe whakarau pūngao (metabolic reaction). Mēna he nui te pāka tūtaewhetu ki roto i te wāhi, ka waipapa haere ngā tipu, ka nui ake te huakita, ka iti ake te wai hōraora anō hoki.

Jackson turbidity unit: Ka ine tēnei mea te turbity i te pūahoahotanga o te awa. ka ahu mai te renga mai i te uku, parahua, matū pararopi/ matū pararopi-kore, rauropi mōkitokito, aha atu aha atu. Me kaua e whakarangirua i te renga mai i te tae. Nā te mea e taea tōnu nei te wai whēuriuri, kia pūahoaho.



3. Ngā kohikohi raraunga

Inaianeī, ka kōrero ahau mō ngā wāhi e toru o te awa e whakamātau ai ahau. Ko te wāhanga tuatahi, ko te Waimōkihi. Ko te take i haere ake ahau ki tēnei wāhanga, nā te mea ka rere ai tēnei wāhanga kei muri i tōku kura. He wāhi hirahira tēnei mō tōku kura.

kua whakatakotohia ai i te āhuatanga o tēnei wai mai i te 1-4. (1 - kāore he pai, 2 - āhua pai, 3 - pai, 4 - tino pai).

Kei te taha noho ai ōku pūrongo:

Ko ngā kitenga kua puta mai i tēnei, he pai tēnei wāhanga. Ehara i te mea he nui ngā mea kino, engari ehara i te mea he maha ngā wāhanga tino pai (3). Nā tēnei o ngā kitenga e mohio ahau he pai tēnei wāhanga o te awa.

Āra ngā kitenga o ōku pūrongo mō te wāhanga tuatahi o te awa. Inaianeī, ka huri ki te wāhanga tuarua o te awa. Ko te wāhanga tuarua, kei Warren crescent.

Kei te taha noho ai ōku pūrongo:

I roto i ēnei o ngā pūrongo, e taea nei e au ki te whakatau he pai (3) tēnei wāhanga o te awa. E taea nei e au ki te whakatau i tēnei, nā te mea ia ahau e whakarite ana i ōku kauwhata kauamo, ko tōku tau waenga ko te toru (pai).

Āra ngā kitenga o ōku pūrongo mō te wāhanga tuarua o te awa. Inaianeī, ka huri ki te wāhanga whakamutunga o te awa. Ko te wāhanga tuatoru, kei te rori o Ōpawa.

Kei te taha noho ai ōku pūrongo:

I te mutunga o tēnei pūrongo, e taea nei ahau ki te whakatau he pai (3) tēnei wāhanga o te awa. He āhua ruarua ngā raraunga o tēnei wāhi. E rua ngā otinga tino pai, ngā otinga pai, ngā otinga kāore he pai, tētahi otinga āhua pai. Māi i tēnei, kāore e kore ka tau mai te otinga hei pai.

Āra ōku pūrongo mō ngā wāhanga e toru o tēnei awa. Nā ēnei o ngā pūrongo i āwhina ia ahau kia whakatau tata i te oranga o tēnei awa hirahira o Ōtautahi.

Kua whakatau ahau he pai te oranga o te awa. Engari, koira ngā raraunga i whai ahau. Ānei tētahi hononga ki te paetukutuku "[Lowā](#)". Kei runga i tēnei paetukutuku, kua whai rātau i ētahi raraunga o te pai o te awa. Hei tā tēnei paetukutuku, kāore he pai te oranga o tēnei awa. He maha ngā momo mētara e rere ana ki te awa, ehara i te mea he maha ngā tipu ki ngā tahataha o te awa. He maha ngā take kāore he pai tēnei awa. Engari, mai i ōku ake raraunga, he pai tēnei awa. Me whai wā anō kia whai raraunga ki ngā hangarau pai ake.

Ma 22.08.2014
Wahi: Waimōkihi
Tahae ngā taure: 11

Momo whakamatau (Test Factor)	Otinga (results)	Heaonga (rank)
Dissolved Oxygen (% saturation)	2.0 PPM	Poor
BOD - Biochemical O ₂ Demand (ppm)	2.0 PPM	Good
Coliform Bacteria	Positive	Poor
pH	6.5	excellent
Temperature Change °C		
Nitrate (ppm)	3.0 PPM	fair
Phosphate (ppm)	2.0 PPM	excellent
Turbidity (NTU)	30 NTU	Good
Turbidity (duke)		

Temp: 10

Ma 22.08.2014
Wahi: Waimōkihi
Tahae ngā taure: 11

Momo whakamatau (Test Factor)	Otinga (results)	Heaonga (rank)
Dissolved Oxygen (% saturation)	1.0 PPM	Poor
BOD - Biochemical O ₂ Demand (ppm)	2.0 PPM	Good/excellent
Coliform Bacteria	Positive	Good
pH	6.5	Good
Temperature Change °C		
Nitrate (ppm)	5.0 PPM	fair
Phosphate (ppm)	2.0 PPM	Good
Turbidity (NTU)	40 NTU	fair
Turbidity (duke)		

Ma 22.08.2014
Wahi: Waimōkihi
Tahae ngā taure: 11

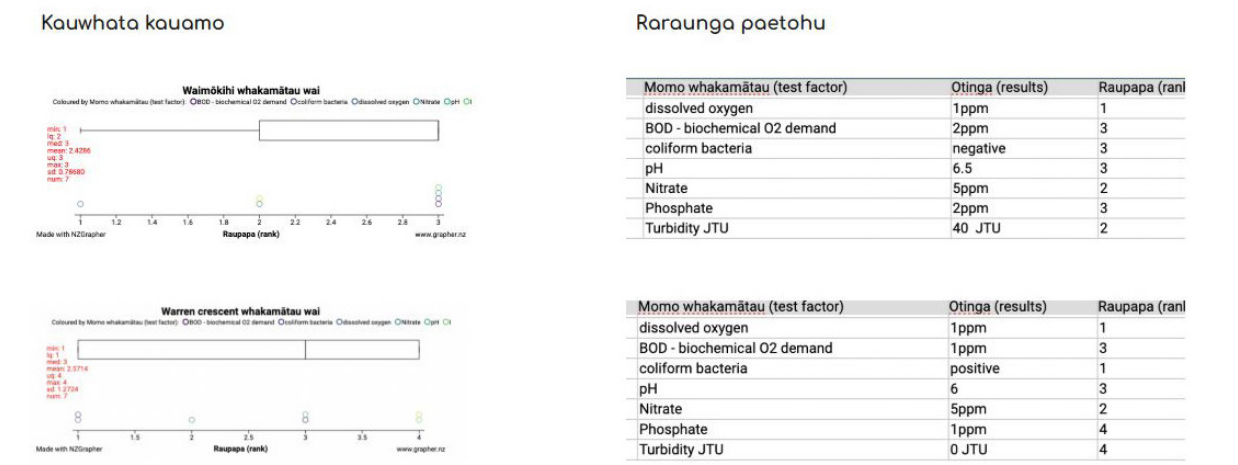
Momo whakamatau (Test Factor)	Otinga (results)	Heaonga (rank)
Dissolved Oxygen (% saturation)	1.0 PPM	Poor
BOD - Biochemical O ₂ Demand (ppm)	1.0 PPM	Good
Coliform Bacteria	Positive	Poor
pH	6	Good
Temperature Change °C		
Nitrate (ppm)	5.0 PPM	fair
Phosphate (ppm)	1.0 PPM	excellent
Turbidity (NTU)	0 NTU	excellent
Turbidity (duke)		

Sc1: 0.25

1 2 3 4 5 6 7 8 9 10 11 12

Max/min = 2.5
Avg = 1.5
Std Dev = 1.0
Min = 1
Max = 3

4. Whakatairite ngā wāhi e rua (A & B)



Kei runga ake, ko ōku kauwhata kauamo. kei te whakaatu mai i ngā raraunga o ngā awa e whakamātau ai e au (A,B,C). Kei te kimi ahauHe pai ake te awa kei wāhi A, wāhi B rānei?

I mua i te whakatairite, me whakamohio atu ahau i tētahi mea kua kite ahau i te wā i titiro ana ki ōku kauwhata kauamo. Titiro ai ki ngā kauwhata kauamo o wāhi B, ko te ine whānui o tēnei wāhi, ko te 1 - 4. Engari, ko te ine whānui o wāhi A, ko te 1 - 3. Ia ahau e whakatairite i ōku kauwhata, me maumahara ahau ki tēnei rerekētanga o ngā kauwhata, nā te mea he iti ake to ine hauwhātanga o te wāhi A, ki tērā o ngā wāhi B.

Ia ahau e whakatairite ana i ōku raraunga, i mohio ahau he āhua uua tēnei mahi. Ko te take mō tēnei, he tino tata ngā raraunga. Hei tauira, ko te 3 te tau waenga o ngā kauwhata kauamo katoa. Ko te te 1 te mōkito o ngā kauwhata katoa. Ko ngā mōrahi, ko te 4, 3.

tuatahi ake, ka whakatairite ahau i te āhua/tuari o ngā kauwhata kauamo.

ko te momo āhua/tuari o te wāhi A, he tītaha tōraro (negatively-skewed). E mohio ana ahau ki tēnei, nā te mea ko te nuinga o ngā raraunga e noho ana ki te taha matau. Wāhi B, he tuari māori. E mohio ana ahau ki tēnei, nā te mea kua hora ngā raraunga ki te katoa o te kauwhata kauamo.

5. Anamata

Hei whakakapi ake i ōku rangahau, he mea nui tēnei mea te whakarauora i te awa. Me whakarauoratia ai i tēnei taonga e rere ana kei Ōtautahi. Ko ngā kaitiaki o tēnei wāhanga a te Waimōkihi, ko mātou ngā tauira o Te Whānau Tahi. Nō reira, nā te hirahiratanga o tēnei mea te whakarauora, i haere mai tētahi ki te āwhina ia mātou. I haere mai tētahi wahine, āra ko Georgina St John-Ives. He community waterways advisor ia, nō te Christchurch City Council. Ko te take i haere mai ia ki te tautoko, kia whakamārama i ngā āhuetanga o te awa. Mai i ōna rangahau, kua whakatau kāore he pai tēnei wahaanga o te awa. Ko te take mō tēnei, nā te mea he nui te konutea (zinc), te konukura (copper) ki roto i te awa. Kāore he pai tēnei āhuetanga mō te awa. Kāore he pai te pūahoaho (clarity) hoki.

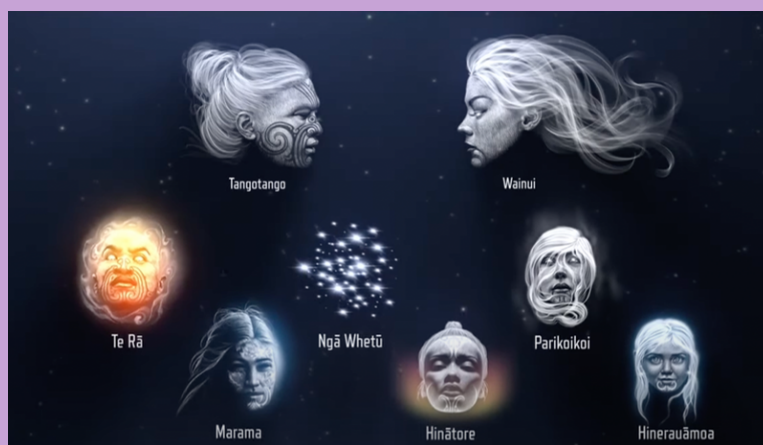
Ānei te pukapuka i hangaia ahau mō te Pātaka o Rakaihautū. Mō te tūpono he kōrero e huna kei roto mō te taha mahinga kai, te taha o te maramataka, oha atu oha atu.

Te pātaka o Rākaihautū pukapuka

Nō reira, ko tā mātou mahi, ko te whakatō i ngā tipu kia marumaru te awa. Hei noho ai ngā manu, kia nui ake ngā mahinga kai, hei maru ai i te awa kia pai ake tōna rere.

TE WHĀNAU MARAMA

KA WHAKAMĀRAMA AHAU I TE WHAKAPAPA O TE WHĀNAU MARAMA. TUATAHI RĀ, KA TIMATA TĒNEI KI A TANGOTANGO, KI A WAINUI ANŌ HOKI. KO RĀUA NGĀ MATUA O TE WHĀNAU MARAMA. KO TANGOTANGO KA MOE IA WAINUI, KA PUTA RĀ KO TE MARAMA, TE RĀ, NGĀ WHETU, HINĀTORE, PARIKOIKOI, KO HINERAUĀMOA ANŌ HOKI. KO RĀTOU MĀ E NOHO AKE KEI RUNGA, E PĪATAATA MAI ANA. MEI KORE AKE KO RĀTOU, KA KORE E TŪRAMARAMA AI TŌ TĀTOU AO. KA NOHO NOA KI TE KORE, KI TE PŌ.



MŌKIHI

KIA HAUHAKE I TE RAUPŌ, HE PAI TE MATA A TANGAROA-Ā-ROTO. NĀ TE MEA, KOIA NEI TE MATA O MĀRAMA ME HE HIGH ENERGY. MAI I TĒNEI, KA TAU HAERE TE TIPU O TE RAUPŌ. Ā, WHAI AKE I TE TIPURANGA O TE RAUPŌ KA PAI AI TE HANGA I TĒTAHI MŌKIHI.



He Kairangi

Te Wāhanga Ako: Pūtaiao

Te Paerewa: 92071

Te Maaka: 08/08

Te Pātai	He pitopito kōrero
Tuatahi	I tōtōpū te aronga ki ngā kōrero tuku iho, te taiao, te wai o te awa me ngā kai, te taetanga mai o te Pākehā me ētahi mahi o neherā. Nui ngā korero o te ākonga, ā, te ataahua hoki o ngā wāhanga o te Kete Manarua nei.