



## HE PUKAPUKA POUAKO

# TE PĀNGARAU



### KAUPAE 1

92067 | Te whakamahi tikanga taurangi hei whakaoti rapanga.

(Ngā Whiwhinga: E 5)

92068 | Te tautohu i ngā āhuatanga matua o te kaitiakitanga me te hononga ki te oranga.

(Ngā Whiwhinga: E 5)

**Te Rā Tuku Aromatawai ā-Waho: Te Wāhanga 4 – I mua i te 28 o Oketopa 2026**

# NZQA

Mana Tohu Mātauranga o Aotearoa  
New Zealand Qualifications Authority

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## He Kete Manarua

Ko te **KETE** i pū mai i te pā harakeke, ā, he whakapapa tōna.

He **MANA** tōna, ā, e **RUA** hoki ōna āhuatanga. Ko ngā taonga tuku iho ka kohikohia e te ākonga, ka tahi. Ka rua, ko te whakapiki i te mana motuhake o te ākonga, o ōna hapū, o ōna iwi hoki.

He tāpaetanga ā-matihiko te āhua o te **KETE MANARUA** ka tukuna mai e te kura, ā, he kōpaki, he kiriata, he kōrero ā-waha, he rauata, he tuinga, he pūrongo, he whakaaturanga, he rātaka, he mahi rangahau, he aha atu, he aha atu ngā momo tāpaetanga.



### MĀTĀPUNA

Cover Page: Manu Aute (Māori tapa kite) titled Manu Iti, produced by Ms Nikau Hindin (Aotearoa – Ngāi Tūpoto, Te Rarawa, Ngāpuhi), October 2023–May 2024. Part of the Pacific Cultures collection, Museum of New Zealand Te Papa Tongarewa.

# Ngā Tūmahi Aromatawai ā-Waho

E whakaatu ana te Kete Manarua i t/ētahi tauira hei kōwhiringa mā te kaiako. Mā te kaiako tonu e whiriwhiri mēnā rānei ka whakamahia te/ngā tauira nei, ka whakamahia rānei hei mahi whakaharatau, ka whakaritea rānei he Tūmahi Aromatawai anō.

## Te Mahinga Toi

Ko te mahinga toi he āhuatanga nui ki roto i te ahurea māori. Mā roto i ngā toi ka kitea ngā kōrero tuku iho, te whakapapa, ngā uara, ngā tikanga hoki a te Māori.

He taonga whakahirahira te manu autē me te tukutuku, he hononga ki ngā rangi tūhāhā, otirā ki ngā atua, e tohu ana i te hononga o te ao wairua ki te ao turoa, ā, e kōtuitui ana ngā kōrero tuku iho, te whakapapa, te mātauranga Māori hoki ki te hanganga o te pāngarau mā te tauira, te āhuahanga me te ine.

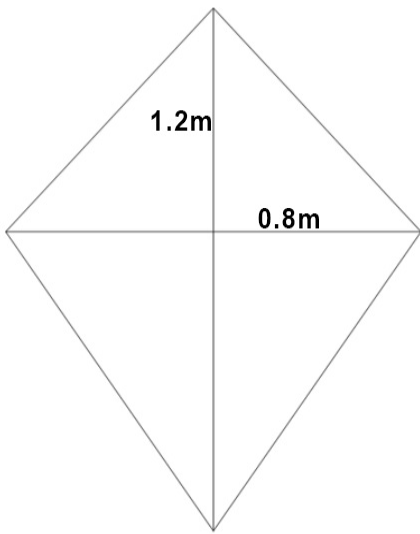
Ka whakamahi tikanga taurangi, tikanga āhuahanga me te ine hei tutuki pai i te aromatawai nei, mā te waihanga te whakamahere rānei i tētehi manu autē, tētehi tukutuku me te whakamārama i tōna āhuatanga tāpua ki te iwi Māori.

## Manu Autē

1. Rangahaua te hitori, te hiranga hoki o te Manu Autē ki te Iwi Māori.
  - Ngā momo rauemi hei hanga Manu Autē
  - Ngā hononga ki Te Ao Māori
  - Ngā hononga ki te Taiao Māori.
2. Waihanga tētehi Manu Autē.
  - Waihangatia tikanga Taurangi (Whārite, Kianga, Ture Taurangi) kia whakaatu i ngā āhuatanga o te Manu Autē, pērā i te anga, te roa o te taura (pingao), me te hononga pāpātanga (Hei tauira; ōwehenga roanga ki te whānui)
  - Waihangatia tikanga Ine me te Āhuahanga hei tātai i te horahanga mata o te manu autē, te roanga o te pīngao/harakēkē, te roanga hoki o te taura.
3. Whakaatuhia ngā o tātaitanga katoa.

## 92067 Taurira – Taurangi

Ko te tapawhā whakarara rite te āhua o te manu autē.



$$d_1 = 1.2m \text{ and } d_2 = 0.8m$$

$$A = \frac{1}{2} \times d_1 \times d_2$$

$$A = \frac{1}{2} \times 1.2 \times 0.8$$

$$A = \frac{1}{2}(1.2)(0.8) = 0.48m^2$$

Ōwehenga taurangi mo te roa o te tāpare

Ko te 3:2 te ōwehenga roanga ki te whānui o te manu autē, mehemea e 80cm te whānui, he aha tōna roanga?

$$h = \frac{3}{2} \times 80 = 120cm$$

## Taurira Raupapa

0.6m te roanga o te kākaho roa, inā he tapawhā whakarara rite te hanga o te manu autē, ā, 1cm iti iho ia roanga kākaho, he aha te tataunga o te katoa o te kākaho?

Whakamāhia te whārite rārangi kia tātai i te roanga o te katoa o te kākaho.

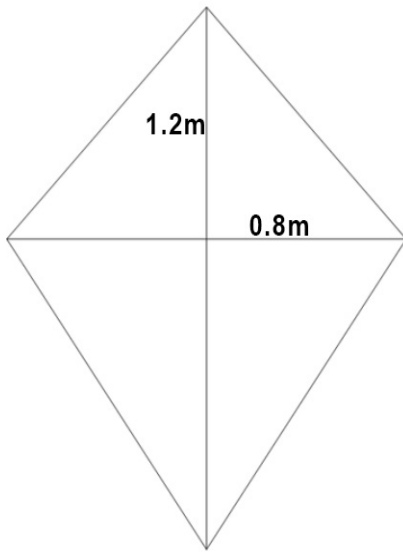
Hei runga

Roanga = 0.6

Hei raro

Roanga = 0.5

## 92068 Tauira – Ine me te Hanga



Ko te tapawhā whakarara rite te āhua o te manu autē.

Tātai te roa o ngā rau harakeke kia hoatu ki te paenga o te anga. Ka whakamahia te ture paenga tapawhā whakarara rite

### Tauira pythagoras

Whakamahia te ture pythagoras kia whai te roanga o ia taha o te manu autē.

$$P = 4 \times \sqrt{\left(\frac{d_1}{2}\right)^2 + \left(\frac{d_2}{2}\right)^2}$$

$$P = 4 \times \sqrt{\left(\frac{1.2}{2}\right)^2 + \left(\frac{0.8}{2}\right)^2} = 4 \times 0.72m \approx 2.88m$$

## Tukutuku

1. Rangahaua te hitori, te hiranga hoki o te Tukutuku ki te Iwi Māori. Whakamāramahia tōna hononga ki Te Ao Māori me te Taiao Māori.
  - Ngā momo rauemi hei hanga Tukutuku
2. Waihangatia tētehi tukutuku.
  - Whakamahia ngā kīanga taurangi, ngā tauira raupapa (h.t. ture me te nui o ngā tāruarua, tuitui hoki) hei whakamārama i ngā āhuetanga tāruarua o tō hoahoa.
  - Tātaia te nui o ngā paewhiri me te nui o ngā rawa ka whakamahi i te hoahoa (pou kākaho, kiekie, harakeke rānei)
3. Whakamahia ngā tikanga pāngarau hei whakamārama i te ōwehenga, i te hangarite me te tāruarua o te hoahoa. Whakaaturia ngā āhuetanga nei mā ngā tikanga taurangi, tikanga ine me te āhuahanga hoki.



# Te Pāngarau

92067 Te whakamahi tikanga taurangi hei whakaoti rapanga

(Te Kaupae 1, Ngā Whiwhinga: E 5)

Kairangi	Kaiaka	Paetae
Ka whakamahi tikanga taurangi me ngā whakaaro waitara hei whakaoti rapanga.	Ka whakamahi tikanga taurangi me ngā whakaaro tūhonohono hei whakaoti rapanga.	Ka whakamahi tikanga taurangi hei whakaoti rapanga.

# Te Paerewa Paetae

**Tau** AS92067 **Putanga** 3 **Whārangi** 1 o te 4

## Paerewa Paetae

<b>Aronga</b>	Pāngarau 1.3		
<b>Ingoa</b>	Te whakamahi tikanga taurangi hei whakaoti rapanga		
<b>Kaupae</b>	1	<b>Whiwhinga</b>	5
		<b>Aromatawai</b>	Ā-waho
<b>Marau akoranga</b>	Te Marautanga o Aotearoa		
<b>Kokonga akoranga</b>	Pāngarau		
<b>Mana rēhita</b>	Kua rēhitatia	<b>Te rā i mana ai</b>	Hakihea 2023
<b>Te rā e arotakengia ai</b>	Hakihea 2028	<b>Te rā i puta ai</b>	Hakihea 2023

## Te Whāinga

Ko tā tēnei paerewa he whakamahi tikanga taurangi hei whakaoti rapanga. Ko te pūtake o te taurangi, he tūāpapa mō ngā tohu mātauranga nui, ka whaitake ki ngā rāngai huhua.

## Paearu Paetae

<b>Paetae</b>	Hei tohu i te paetae: <ul style="list-style-type: none"> <li>Ka whakamahi tikanga taurangi hei whakaoti rapanga.</li> </ul>
<b>Kaiaka</b>	Hei tohu i te kaiaka: <ul style="list-style-type: none"> <li>Ka whakamahi tikanga taurangi me ngā whakaaro tūhonohono hei whakaoti rapanga.</li> </ul>
<b>Kairangi</b>	Hei tohu i te kairangi: <ul style="list-style-type: none"> <li>Ka whakamahi tikanga taurangi me ngā whakaaro waitara hei whakaoti rapanga.</li> </ul>

## Kōrero Āpiti

- I ahu mai tēnei paerewa paetae i te Taumata 6 o Te Marautanga o Aotearoa (Te Tāhuhu o te Mātauranga, 2017). E hono ana ki te Papa Whakaako mō Pāngarau kei: <https://ncea.education.govt.nz>.

*Whāinga Paetae*

Te Tau me te Taurangi, Te Whārite me te Kīanga

6. Ka tuhi, ka whakaoti whārite rārangi, tōrite rārangi, whārite pūrua, whārite taupū māmā, whārite tukutahi, kia rua ngā taurangi.

Te Tau me te Taurangi, Te Pānga me te Taurira

7. Ka whakawhānui i ngā tikanga paheko tau, me ngā tikanga taupū.

2 E whai ake nei ngā whakamārama mō ngā paearu paetae:

<p><i>Ka whakamahi tikanga taurangi hei whakaoti rapanga.</i></p>	<ul style="list-style-type: none"> <li>• Ka whiriwhiri, ka whakamahi i ētahi tikanga taurangi whānui e hāngai ana hei whakaoti rapanga.</li> <li>• Ka whakaatu i ngā hononga o te tūtohi, te whārite me te kauwhata.</li> <li>• Ka whakaatu mōhioatanga ki ngā huatau me ngā kupu e hāngai ana.</li> <li>• Ka whakamārama i ngā otinga mēnā kotahi, e rua rānei ngā mahi o roto i te tikanga i whakamahia.</li> <li>• Ka whakamahi i te reo matatini o te pāngarau hei whakawhitiwhiti whakaaro.</li> </ul>
<p><i>Ka whakamahi tikanga taurangi me ngā whakaaro tūhonohono hei whakaoti rapanga.</i></p>	<p>Ko te whakaaro tūhonohono te mea nui. Arā, kia kotahi, nui ake rānei o ēnei:</p> <ul style="list-style-type: none"> <li>• Ka whiriwhiri, ka whakatutuki raupapatanga mahi arorau hei whakaoti rapanga.</li> <li>• Ka tūhonoa ētahi huatau rerekē, ētahi whakaahuahanga rerekē rānei.</li> <li>• Ka whakaatu māramatanga ki ngā huatau e hāngai ana.</li> <li>• Ka hanga, ka whakamahi taurira.</li> <li>• Ka whakahāngai i te kaupapa ki tētahi pūāhua Māori me te tautohu i ngā tikanga Māori e whaitake ana.</li> <li>• Ka tūhono i ngā otinga ki te horopaki o te rapanga, ka whakamahi rānei i ngā kīanga pāngarau hei whakawhitiwhiti whakaaro ki te reo Māori.</li> </ul>

<p><i>Ka whakamahi tikanga taurangi me ngā whakaaro waitara hei whakaoti rapanga.</i></p>	<p>Ko te whakaaro waitara te mea nui. Arā, kia kotahi, nui ake rānei o ēnei:</p> <ul style="list-style-type: none"> <li>• Ka waihanga rautaki hei tūhura, hei whakaoti rānei i tētahi rapanga.</li> <li>• Ka tautohua ngā huatau e hāngai ana ki te horopaki.</li> <li>• Ka whakaputaina tētahi raupapatanga whakaaro arorau, tētahi hāponotanga rānei.</li> <li>• Ka whakahoropaki i te kaupapa ki tētahi pūāhua Māori me te tautohu i ngā tikanga Māori e whaitake ana.</li> <li>• Ka whakamahi kīanga pāngarau tika, ka whakawhitiwhiti rānei i te aroā pāngarau ki te reo Māori.</li> </ul>
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- 3 E whai ake nei ngā whakamārama mō ngā kupu me ngā kīanga whaitake matua o te paerewa nei:

<p><i>rapanga</i></p>	<p>Ko ngā āhukatanga o ia rā, ngā āhukatanga pāngarau rānei, ka whai wāhi mai te whakamahinga o te mātauranga pāngarau, o ngā huatau pāngarau, o ngā tikanga pāngarau rānei.</p>
<p><i>hononga</i></p>	<p>Ko ngā āhukatanga e hono ana i te tūtohi, te whārite me te kauwhata e whakaatu ana i ētahi taurangi, me te whakaatu anō i ngā taurangi hei takirua raupapa.</p>
<p><i>ētahi tikanga taurangi whānui</i></p>	<p>Kia toru, nui ake rānei ngā tikanga.</p>

- 4 Kia taunga te ākongā ki ngā tikanga e whai wāhi mai ana:

- te whakatauwehe kīanga taurangi
- te whakawhānui kīanga taurangi
- te whakarūnā i ngā kīanga taurangi e whai wāhi mai ana te taupū, pērā i te  $(2x^4)^3$  me te  $12a^5/8a^7$
- te whakauru uara ki te ture tātai
- te rāwekeweke me te whakarūnā i ngā kīanga pērā i te  $3x/4 - x+2/3$  me te  $(3x^2 - 12)/x - 2$
- te huri i ngā ture tātai pērā i te  $E = 1/2mv^2$  me te  $1/u + 1/v = 1/f$
- te whakaoti whārite rārangi, tōrite rārangi hoki, pērā i te  $5x + 12 = 3 - 2x$  me te  $3(x - 2) < 7$
- te whakaoti whārite pūrua pērā i te  $(8x + 3)(x - 6) = 0$ , te  $x^2 + 5x - 6 = 0$  me te  $3x^2 = 10x - 8$  (kāore e whai wāhi mai te whakaoti pūruatanga, te ture pūrua rānei)
- te whakaoti whārite māmā e whai wāhi mai ana te taupū, pērā i te  $x^3 = 8$  me te  $5x = 125$
- te whakaoti whārite rārangi tukutahi, e rua ngā taurangi

- te whakamahi ture tātai
  - te hanga, te tuhi kauwhata, me te rāwekeweke i ngā whārite rārangi, pērā i te  $E = 8 + 0.75t$ , hei whakaoti rapanga
  - te tūhono i te pāpātanga o te whiti ki te rōnaki o te kauwhata
  - te whakamahi whārite tukutahi, tōrite, kauwhata rānei hei whakaoti rapanga e whai wāhi mai ana te pānga rārangi
  - Kāore e whakaaetia te hangarau tāhiko i roto i ngā aromatawai mō tēnei paerewa paetae.
- 5 Me honohono te ākonga i ngā whakaaro whānui ki ngā pūāhua ahurea, ki ngā pūāhua pāpori (He Uri Whakaheke):
- ki te tautohu i ngā uara, i ngā kawa me ngā tikanga
  - ki te tautohu i ngā kōrero tuku iho, i te mātauranga Māori
  - ki te tūhono i te pāngarau ki ngā take o te takiwā, o te hapū, o te iwi, me ngā kaupapa o te ao whānui.
- 6 Me whakamahi te ākonga i te reo matatini o te pāngarau me ngā rautaki reo maha (He Puna Kōrero) ki te kōrerorero i ngā whakaaro pāngarau nei ki te reo Māori – ā-tuhi, ā-waha, ā-ataata.
- 7 Arā ngā Tikanga Aromatawai mō tēnei paerewa paetae, kei: <https://ncea.education.govt.nz>.
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## Kōrero Whakakapinga

I whakakapingia ngā paerewa 91655-91656 e ngā paerewa 92065-92068.

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## Tātari Kounga

- 1 Me mātua whakamana ngā Kaituku Akoranga me ngā Whakahaere Whakangungu Ahumahi e te Mana Tohu Mātauranga o Aotearoa ka rēhita ai i ngā hua ka puta mai i ngā aromatawai ki ngā paerewa paetae.
- 2 Ko ngā Kaituku Akoranga me ngā Whakahaere Whakangungu Ahumahi kua mana, ā, e aromatawai ana i ā rātou hōtaka ki ngā paerewa paetae, me uru rātou ki ngā pūnaha whakaōrite e tika ana mō aua paerewa paetae.

Ko te tohutoro ki te Mahere Whakamana, Whakaōritenga hoki

0233

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# Te Tautuhinga Aromatawai ā-Waho



Te Paerewa Paetae	92067
Te Ingoa o te Paerewa Paetae	Te whakamahi tikanga taurangi hei whakaoti rapanga
Ngā whiwiringa	E 5
Te Marau	Te Marautanga o Aotearoa: <a href="#">Pāngarau</a>
Te Wāhanga Ako	<a href="#">Te Tukutuku Ako</a>
Te Tukanga Aromatawai ā-Waho	<a href="#">He Kete Manarua</a>
Ngā Momo Tāpaetanga ā-Matihiko	He konae tuhituhi – .PDF (5–20 whārangi)
Te Rā Tuku Aromatawai ā-Waho	Hei te 28 o Oketopa 2026
Ngā Wātaka Aromatawai ā-Waho	<ol style="list-style-type: none"> <li>1. NCEA and School Assessment Timetable 2026</li> <li>2. <a href="#">2026 Examination Timetable dates and intra-year Assessment Timetable</a></li> </ol>

## Te Whakatakotoranga Aromatawai ā-waho

Ka whakaritea e te ākonga tētahi Kete Manarua o āna mahi kua kohikohia, kua whakaraupapahia hoki i te roanga ake o te tau.

He tāmiro te āhua o tēnei Kete Manarua hei kōwhiri mā te ākonga. Ka hono ngā taunakitanga o te Paerewa Paetae 92067 me ngā taunakitanga o te Paerewa Paetae 92068 ki raro i te kaupapa kotahi.

Ko te Kete Manarua:

Ka tutuki te ākonga i te Paerewa Paetae 92067 mā te whakamahi i ngā momo tikanga taurangi (kia toru, nui ake rānei) hei whakaoti rapanga. Ka whakaemi te ākonga i ngā mahi katoa, ka whakaraupapa ai hei taunakitanga mō te Kete Manarua nei:

- He whakaaturanga (he kohinga whakaahua hoki) me ngā kōrero whakamārama (kia 5 – 8 ngā whārangi).

Tēnā tirohia te Kete Manarua i te paetukutuku nei - [He Kete Manarua](#).

E whakaatu ana te Kete Manarua i tētahi taurira hei kōwhiringa mā te kaiako. Mā te kaiako tonu e whiriwhiri mēnā rānei ka whakamahia te/ngā taurira nei, ka whakamahia rānei he mahi whakaharatau, ka whakaritea rānei he Tūmahi Aromatawai anō.

## Ngā Herenga Aromatawai ā-Waho

He mahi takitahi tēnei mahi me te whakatakoto taunakitanga mō te aromatawai ā-waho mā te ākonga. Kia tutuki pai ai te Kete Manarua ā-matihiko nei:

- me whakaputa hei PDF;

- me tika te whakaraupapatanga o ngā mahi;
- me tika te whakatakotoranga o ngā mahi (kia kua e noho tītaha, e huripoki rānei).

[Using the new digital submission portal.](#)

## Te Motuhēhē o ngā mahi o ngā ākonga

Me pēhea e mōhiotia ai te motuhēhē o ngā mahi a ngā ākonga? He tukanga, he taunakitanga me whai, e mōhiotia ai nā te ākonga ake āna mahi aromatawai ā-waho. Kia mataara ngā ākonga, ngā kaiako me te whānau hoki o te kura ki te motuhēhē o ngā mahi a ngā ākonga.

He māmā noa iho te tiki mahi a tangata kē, heoi, mā te mihi e whakaatu, e whakanui hoki i ngā tāngata me ngā puna awhina i puta ai ngā mahi a ngā ākonga.

### Hei tauira:

- He rerenga kupu poto e tohu ana i te pūtakenga mai o tētahi kōrero;
- He rārangi tohutoro i te whārangi whakamutunga o ngā mahi;
- He mihi ki ngā puna āwhina, ki ngā puna kōrero;
- Ngā momo puna awhina, puna kōrero rānei:
  - » he kōrero ā-waha: he uiui i ngā kaumātua, i ngā pakeke, i ngā rangatira, i ngā mātanga rānei;
  - » ngā pukapuka i whakaputaina;
  - » ngā pukapuka kāore anō i whakaputaina;
  - » ngā wāhitau ipurangi, ngā honongaitua rānei.

He kōrero anō kei ngā paetukutuku NZQA:

- [Authenticity: NZQA](#)
- [Myth 3 Managing authenticity: NZQA](#)
- [Authenticity of externally assessed standards: NZQA](#)
- [Guidance on the acceptable use of Artificial Intelligence: NZQA](#)

## Te Tāpaetanga me te Hāponotanga

Ko ngā tāpaetanga Kete Manarua me mahi mā te pūnaha hou (kei te paetukutuku matua o MyNZQA): [Tāpaetanga pūnaha hou a MyNZQA.](#)

Kāore te Kete Manarua matihiko e whakahokia ki te ākonga. Mēnā he kōrero anō mō te tāpaetanga me te hāponotanga o te mahi, mā te tari o NZQA e pānui atu ki ngā kura.

Mēnā kei te hiahia āwhina te kura ki te tuku i ngā tāpaetanga o te Kete Manarua:

- Īmērahia a [assessment.service.centre@nzqa.govt.nz](mailto:assessment.service.centre@nzqa.govt.nz),
- waeahia rānei te NZQA Contact Centre i te 0800 687 296.

# He Mahere Aromatawai ā-Waho

Pāngarau 92067: Te whakamahi tikanga taurangi hei whakaoti rapanga.

Kairangi	Kaiaka	Paetae
Ka whakamahi tikanga taurangi me ngā whakaaro waitara hei whakaoti rapanga.	Ka whakamahi tikanga taurangi me ngā whakaaro tūhonohono hei whakaoti rapanga.	Ka whakamahi tikanga taurangi hei whakaoti rapanga

## Te Taunaki i te Aromatawai ā-Waho

Kairangi	Kaiaka	Paetae
<p>Ko te whakaaro waitara te mea nui. Arā, kia kotahi, nui ake rānei o ēnei ka whakamahi tikanga taurangi.</p> <ul style="list-style-type: none"> <li>• Ka waihanga rautaki hei tūhura, hei whakaoti rānei i tētahi rapanga.</li> <li>• Ka tautohua ngā huatau e hāngai ana ki te horopaki.</li> <li>• Ka whakaputaina tētahi raupapatanga whakaaro arorau, tētahi hāponotanga rānei.</li> <li>• Ka whakahoropaki i te kaupapa ki tētahi pūāhua Māori me te tautohu i ngā tikanga Māori e whaitake ana.</li> <li>• Ka whakamahi kīanga pāngarau tika, ka whakawhitiwhiti rānei i te aroā pāngarau ki te reo Māori.</li> </ul>	<p>Ko te whakaaro tūhonohono te mea nui. Arā, kia kotahi, nui ake rānei o ēnei ka whakamahi tikanga taurangi.</p> <ul style="list-style-type: none"> <li>• Ka whiriwhiri, ka whakatutuki raupapatanga mahi arorau hei whakaoti rapanga.</li> <li>• Ka tūhonoa ētahi huatau rerekē, ētahi whakaahuahanga rerekē rānei.</li> <li>• Ka whakaatu māramatanga ki ngā huatau e hāngai ana.</li> <li>• Ka hanga, ka whakamahi tauira.</li> <li>• Ka whakahāngai i te kaupapa ki tētahi pūāhua Māori me te tautohu i ngā tikanga Māori e whaitake ana.</li> <li>• Ka tūhono i ngā otinga ki te horopaki o te rapanga, ka whakamahi rānei i ngā kīanga pānga</li> </ul>	<p>Ka whakamahi tikanga taurangi hei whakaoti rapanga.</p> <ul style="list-style-type: none"> <li>• Ka whiriwhiri, ka whakamahi i ētahi tikanga taurangi whānui e hāngai ana hei whakaoti rapanga.</li> <li>• Ka whiriwhiri, ka whakamahi i ētahi tikanga taurangi whānui e hāngai ana hei whakaoti rapanga.</li> <li>• Ka whakaatu i ngā hononga o te tūtohi, te whārite me te kauwhata.</li> <li>• Ka whakaatu mōhioatanga ki ngā huatau me ngā kupu e hāngai ana.</li> <li>• Ka whakamārama i ngā otinga mēnā kotahi, e rua rānei ngā mahi o roto i te tikanga i whakamahia</li> </ul>

Kairangi	Kaiaka	Paetae
<p>Hei Tauira</p> <ul style="list-style-type: none"> <li>• Ka whakaritea he pātai tūhuratanga taurangi e hāngai ana ki te kaupapa</li> <li>• Ka rangahaua ngā āhuratanga o te kaupapa (Te Papa Kainga)               <ul style="list-style-type: none"> <li>» Kōrero tuku iho</li> <li>» Kōrero-ā-lwi, Hapū</li> <li>» Tukanga</li> </ul> </li> <li>• Ka whakamahi tikanga taurangi hei whakautu i te pātai tūhuratanga               <ul style="list-style-type: none"> <li>» te whakaoti whārite rārangi</li> <li>» te whakawhānui kianga</li> <li>» te whakawhānui whārite pūrua</li> <li>» te whakamahi tikanga whakauru</li> <li>» te tuhi, te whakaoti whārite rārangi, tōrite rārangi, whārite pūrua, whārite taupū māmā, whārite tukutahi</li> <li>» te whakawhānui i ngā tikanga pāheko tau me ngā tikanga taupū.</li> </ul> </li> </ul>	<p>Hei Tauira</p> <ul style="list-style-type: none"> <li>• Ka whakaritea he pātai tūhuratanga taurangi e hāngai ana ki te kaupapa</li> <li>• Ka rangahaua ngā āhuratanga o te kaupapa               <ul style="list-style-type: none"> <li>» Kōrero tuku iho</li> <li>» Kōrero-ā-lwi, Hapū</li> <li>» Tukanga</li> </ul> </li> <li>• Ka whakamahi tikanga taurangi hei whakautu i te pātai tūhuratanga               <ul style="list-style-type: none"> <li>» te whakaoti whārite rārangi</li> <li>» te whakawhānui kianga</li> <li>» te whakawhānui whārite pūrua</li> <li>» te whakamahi tikanga whakauru</li> </ul> </li> </ul>	<p>Hei Tauira</p> <ul style="list-style-type: none"> <li>• Ka whakaritea he pātai tūhuratanga taurangi e hāngai ana ki te kaupapa</li> <li>• Ka whakamahi tikanga taurangi hei whakautu i te pātai tūhuratanga               <ul style="list-style-type: none"> <li>» te whakaoti whārite rārangi</li> <li>» te whakawhānui kianga</li> <li>» te whakawhānui whārite pūrua</li> <li>» te whakamahi tikanga whakauru</li> </ul> </li> </ul>

**Taunakitanga**

Taunakitanga Kairangi		Taunakitanga Kaiaka		Taunakitanga Paetae		Taunakitanga Kāore i whiwhi	
K8	K7	KA6	KA5	P4	P4	Kwh2	Kwh1



## Te Pāngarau

92068 Te whakamahi whakaaro āhuahanga, whakaaro ine  
hei whakaoti rapanga

(Te Kaupae 1, Ngā Whiwhinga: E 5)

Kairangi	Kaiaka	Paetae
Hei tohu i te kairangi: Ka whakamahi whakaaro āhuahanga, whakaaro ine mā roto mai i ngā whakaaro waitara hei whakaoti rapanga.	Hei tohu i te kaiaka: Ka whakamahi whakaaro āhuahanga, whakaaro ine mā roto mai i ngā whakaaro tūhonohono hei whakaoti rapanga.	Hei tohu i te paetae: Ka whakamahi whakaaro āhuahanga, whakaaro ine hei whakaoti rapanga.

# Te Paerewa Paetae

**Tau** AS92068 **Putanga** 3 **Whārangi** 1 o te 4

## Paerewa Paetae

<b>Aronga</b>	Pāngarau 1.4		
<b>Ingoa</b>	Te whakamahi whakaaro āhuahanga, whakaaro ine hei whakaoti rapanga		
<b>Kaupae</b>	1	<b>Whiwhinga</b>	5
		<b>Aromatawai</b>	Ā-waho
<b>Marau akoranga</b>	Te Marautanga o Aotearoa		
<b>Kokonga akoranga</b>	Pāngarau		
<b>Mana rēhita</b>	Kua rēhitatia	<b>Te rā i mana ai</b>	Hakihea 2023
<b>Te rā e arotakengia ai</b>	Hakihea 2028	<b>Te rā i puta ai</b>	Hakihea 2023

### Te Whāinga

Ko tā tēnei paerewa he whakamahi whakaaro āhuahanga, whakaaro ine hei whakaoti rapanga. Ko te pūtake o tēnei paerewa he tautoko i ngā ākonga ki te waihanga pūkenga kia taea ai te whakaoti rapanga mō te ine me te āhuahanga.

### Paearu Paetae

<b>Paetae</b>	Hei tohu i te paetae: <ul style="list-style-type: none"> <li>• Ka whakamahi whakaaro āhuahanga, whakaaro ine hei whakaoti rapanga.</li> </ul>
<b>Kaiaka</b>	Hei tohu i te kaiaka: <ul style="list-style-type: none"> <li>• Ka whakamahi whakaaro āhuahanga, whakaaro ine mā roto mai i ngā whakaaro tūhonohono hei whakaoti rapanga.</li> </ul>
<b>Kairangi</b>	Hei tohu i te kairangi: <ul style="list-style-type: none"> <li>• Ka whakamahi whakaaro āhuahanga, whakaaro ine mā roto mai i ngā whakaaro waitara hei whakaoti rapanga.</li> </ul>

### Kōrero Āpiti

- 1 I ahu mai tēnei paerewa paetae i te Taumata 6 o Te Marautanga o Aotearoa (Te Tāhuhu o te Mātauranga, 2017). E hono ana ki te Papa Whakaako mō Pāngarau kei: <https://ncea.education.govt.nz>.

*Whāinga Paetae*

*Te Ine me te Āhuatanga, Te Hanga*

4. Ka whakaputa, ka whakamahi i ngā tikanga koki o te porowhita.
5. Ka aro ki ngā āhua ōrite, ā, ka whakamahi whakaaro pānga riterite hei tātai i tētahi tapa.
6. Ka whakamahi ōwehenga pākoki me te ture a Pythagoras, i ngā pūāhua ahu-2, ahu-3 hoki.

2 E whai ake nei ngā whakamārama mō ngā paearu paetae:

<p><i>Ka whakamahi whakaaro āhuahanga, whakaaro ine hei whakaoti rapanga.</i></p>	<ul style="list-style-type: none"> <li>• Ka whiriwhiri, ka whakamahi i ētahi tikanga whānui hei whakaoti rapanga.</li> <li>• Ka whakaatu mōhioatanga ki ngā huatau ine/āhuahanga me ngā kupu e hāngai ana.</li> <li>• Ka whakamārama i ngā otinga mēnā kotahi, e rua rānei ngā mahi o roto i te tikanga i whakamahia.</li> <li>• Ka whakamahi kupu āhuahanga/ine, whakaahuahanga rānei hei whakamārama i ngā otinga.</li> </ul>
<p><i>Ka whakamahi whakaaro āhuahanga, whakaaro ine mā roto mai i ngā whakaaro tūhonohono hei whakaoti rapanga.</i></p>	<p>Ko te whakaaro tūhonohono te mea nui. Arā, kia kotahi, nui ake rānei o ēnei:</p> <ul style="list-style-type: none"> <li>• Ka whiriwhiri, ka whakatutuki i te raupapatanga mahi arorau e hāngai ana.</li> <li>• Ka tūhono i ētahi huatau rerekē, ētahi whakaahuahanga rerekē rānei.</li> <li>• Ka whakaatu māramatanga ki ngā huatau e hāngai ana.</li> <li>• Ka hanga, ka whakamahi tauira.</li> <li>• Ka tūhono i ngā otinga ki tētahi horopaki, ka whakamahi rānei i ngā kīanga pāngarau hei whakawhitiwhiti whakaaro ki te reo Māori.</li> <li>• Ka whakahāngai i te kaupapa ki tētahi pūāhua Māori me te tautohu i ngā tikanga Māori e whaitake ana.</li> </ul>
<p><i>Ka whakamahi whakaaro āhuahanga, whakaaro ine mā roto mai i ngā whakaaro waitara hei whakaoti rapanga.</i></p>	<p>Ko te whakaaro waitara te mea nui. Arā, kia kotahi, nui ake rānei o ēnei:</p> <ul style="list-style-type: none"> <li>• Ka waihanga rautaki hei tūhura, hei whakaoti rānei i tētahi rapanga.</li> <li>• Ka tautohu i ngā huatau e hāngai ana ki te horopaki.</li> <li>• Ka whakaputa i tētahi raupapatanga whakaaro arorau, tētahi hāponotanga rānei.</li> <li>• Ka hanga whakawhānuitanga.</li> </ul>

	<ul style="list-style-type: none"> <li>• Ka whakamahi kīanga pāngarau tika, ka whakawhitiwhiti rānei i te aroā pāngarau ki te reo Māori.</li> <li>• Ka whakahoropaki i te kaupapa ki tētahi pūāhua Māori me te tautohu i ngā tikanga Māori e whaitake ana.</li> </ul>
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- 3 E whai ake nei ngā whakamārama mō ngā kupu me ngā kīanga whaitake matua o te paerewa nei:

<i>rapanga</i>	Ko ngā āhuetanga o ia rā, ngā āhuetanga pāngarau rānei, ka whai wāhi mai te whakamahinga o te mātauranga pāngarau, o ngā huatau pāngarau, o ngā tikanga pāngarau rānei.
<i>ētahi tikanga whānui</i>	Kia toru, nui ake rānei ngā tikanga.

- 4 Kia taunga te ākonga ki ngā tikanga e whai wāhi mai ana:
- te ture a Pythagoras
  - ngā pānga pākoki o te tapatoru hāngai
  - ngā taparau he ōrite te āhua
  - ngā hononga koki o te rārangi pūtahi me te rārangi whakarara
  - ngā hononga koki o ngā momo taparau
  - ngā hononga koki o te porowhita
  - te roa, te paenga, te horahanga me te horahanga mata, te rōrahi
  - ngā waeine ngahuru
  - te kītanga, te papatipu, te paemahana me te wā
  - ngā waeine pāpātanga pērā i ērā mō te kiato, te tere, te utu ā-waeine me te whakapau kōhinu.
- 5 Me honohono te ākonga i ngā whakaaro whānui ki ngā pūāhua ahurea, ki ngā pūāhua pāpori (He Uri Whakaheke):
- ki te tautohu i ngā uara, i ngā kawa me ngā tikanga
  - ki te tautohu i ngā kōrero tuku iho, i te mātauranga Māori
  - ki te tūhono i te pāngarau ki ngā take o te takiwā, o te hapū, o te iwi, me ngā kaupapa o te ao whānui.
- 6 Me whakamahi te ākonga i te reo matatini o te pāngarau me ngā rautaki reo maha (He Puna Kōrero) ki te kōrerorero i ngā whakaaro pāngarau nei ki te reo Māori – ā-tuhi, ā-waha, ā-ataata.
- 7 Arā ngā Tikanga Aromatawai mō tēnei paerewa paetae, kei: <https://ncea.education.govt.nz>.

## 8 Kuputaka

whakaaro tūhonohono	<i>relational thinking</i>
whakaaro tūhonohono	<i>abstract thinking</i>

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### Kōrero Whakakapinga

I whakakapingia ngā paerewa 91655-91656 e ngā paerewa 92065-92068.

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### Tātari Kounga

- 1 Me mātua whakamana ngā Kaituku Akoranga me ngā Whakahaere Whakangungu Ahumahi e te Mana Tohu Mātauranga o Aotearoa ka rēhita ai i ngā hua ka puta mai i ngā aromatawai ki ngā paerewa paetae.
- 2 Ko ngā Kaituku Akoranga me ngā Whakahaere Whakangungu Ahumahi kua mana, ā, e aromatawai ana i ā rātou hōtaka ki ngā paerewa paetae, me uru rātou ki ngā pūnaha whakaōrite e tika ana mō aua paerewa paetae.

Ko te tohutoro ki te Mahere Whakamana, Whakaōritenga hoki

0233

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# Te Tautuhinga Aromatawai ā-Waho



Te Paerewa Paetae	92067
Te Ingoa o te Paerewa Paetae	Te whakamahi tikanga taurangi hei whakaoti rapanga
Ngā whiwhinga	E 5
Te Marau	Te Marautanga o Aotearoa: <a href="#">Pāngarau</a>
Te Wāhanga Ako	<a href="#">Te Tukutuku Ako</a>
Te Tukanga Aromatawai ā-Waho	<a href="#">He Kete Manarua</a>
Ngā Momo Tāpaetanga ā-Matihiko	He konae tuhituhi – .PDF (5–20 whārangi)
Te Rā Tuku Aromatawai ā-Waho	Hei te 28 o Oketopa 2026
Ngā Wātaka Aromatawai ā-Waho	<ol style="list-style-type: none"><li>1. NCEA and School Assessment Timetable 2026</li><li>2. <a href="#">2026 Examination Timetable dates and intra-year Assessment Timetable</a></li></ol>

## Te Whakatakotoranga Aromatawai ā-waho

Ka whakaritea e te ākonga tētahi Kete Manarua o āna mahi kua kohikohia, kua whakaraupapahia hoki i te roanga ake o te tau.

He tāmiro te āhua o tēnei Kete Manarua hei kōwhiri mā te ākonga. Ka hono ngā taunakitanga o te Paerewa Paetae 92067 me ngā taunakitanga o te Paerewa Paetae 92068 ki raro i te kaupapa kotahi.

Ko te Kete Manarua:

Ka tutuki te ākonga i te Paerewa Paetae 92067 mā te whakamahi i ngā momo tikanga taurangi (kia toru, nui ake rānei) hei whakaoti rapanga. Ka whakaemi te ākonga i ngā mahi katoa, ka whakaraupapa ai hei taunakitanga mō te Kete Manarua nei:

- He whakaaturanga (he kohinga whakaahua hoki) me ngā kōrero whakamārama (kia 5 – 8 ngā whārangi).

Tēnā tirohia te Kete Manarua i te paetukutuku nei - [He Kete Manarua](#).

E whakaatu ana te Kete Manarua i tētahi tauira hei kōwhiringa mā te kaiako. Mā te kaiako tonu e whiriwhiri mēnā rānei ka whakamahia te/ngā tauira nei, ka whakamahia rānei he mahi whakaharatau, ka whakaritea rānei he Tūmahi Aromatawai anō.

## Ngā Herenga Aromatawai ā-Waho

He mahi takitahi tēnei mahi me te whakatakoto taunakitanga mō te aromatawai ā-waho mā te ākongā. Kia tutuki pai ai te Kete Manarua ā-matihiko nei:

- me whakaputa hei PDF;
- me tika te whakaraupapatanga o ngā mahi;
- me tika te whakatakotoranga o ngā mahi (kia kua e noho tītaha, e huripoki rānei).

[Using the new digital submission portal.](#)

## Te Motuhēhē o ngā mahi o ngā ākongā

Me pēhea e mōhiotia ai te motuhēhē o ngā mahi a ngā ākongā? He tukanga, he taunakitanga me whai, e mōhiotia ai nā te ākongā ake āna mahi aromatawai ā-waho. Kia mataara ngā ākongā, ngā kaiako me te whānau hoki o te kura ki te motuhēhē o ngā mahi a ngā ākongā.

He māmā noa iho te tiki mahi a tangata kē, heoi, mā te mihi e whakaatu, e whakanui hoki i ngā tāngata me ngā puna awhina i puta ai ngā mahi a ngā ākongā.

### Hei tauira:

- He rerenga kupu poto e tohu ana i te pūtakenga mai o tētahi kōrero;
- He rārangi tohutoro i te whārangi whakamutunga o ngā mahi;
- He mihi ki ngā puna āwhina, ki ngā puna kōrero;
- Ngā momo puna awhina, puna kōrero rānei:
  - » he kōrero ā-waha: he uiui i ngā kaumātua, i ngā pakeke, i ngā rangatira, i ngā mātanga rānei;
  - » ngā pukapuka i whakaputaina;
  - » ngā pukapuka kāore anō i whakaputaina;
  - » ngā wāhitau ipurangi, ngā honongaitua rānei.

He kōrero anō kei ngā paetukutuku NZQA:

- [Authenticity: NZQA](#)
- [Myth 3 Managing authenticity: NZQA](#)
- [Authenticity of externally assessed standards: NZQA](#)
- [Guidance on the acceptable use of Artificial Intelligence: NZQA](#)

## Te Tāpaetanga me te Hāponotanga

Ko ngā tāpaetanga Kete Manarua me mahi mā te pūnaha hou (kei te paetukutuku matua o MyNZQA): [Tāpaetanga pūnaha hou a MyNZQA.](#)

Kāore te Kete Manarua matihiko e whakahokia ki te ākongā. Mēnā he kōrero anō mō te tāpaetanga me te hāponotanga o te mahi, mā te tari o NZQA e pānui atu ki ngā kura.

Mēnā kei te hiahia āwhina te kura ki te tuku i ngā tāpaetanga o te Kete Manarua:

- Īmērahia a [assessment.service.centre@nzqa.govt.nz](mailto:assessment.service.centre@nzqa.govt.nz),
- waeahia rānei te NZQA Contact Centre i te 0800 687 296.

# He Mahere Aromatawai ā-Waho

Pāngarau 92068: Te whakamahi whakaaro āhuahanga whakaaro ine hei whakaoti rapanga

Kairangi	Kaiaka	Paetae
Ka whakamahi whakaaro āhuahanga, whakaaro ine mā roto mai i ngā whakaaro waitara hei whakaoti rapanga.	Ka whakamahi whakaaro āhuahanga, whakaaro ine mā roto mai i ngā whakaaro tūhonohono hei whakaoti rapanga. hei whakaoti rapanga.	Ka whakamahi whakaaro āhuahanga, whakaaro ine hei whakaoti rapanga.

## Te Taunaki i te Aromatawai ā-Waho

Kairangi	Kaiaka	Paetae
<p>Ko te whakaaro waitara te mea nui. Arā, kia kotahi, nui ake rānei o ēnei ka whakamahi whakaaro āhuahanga, whakaaro ine.</p> <ul style="list-style-type: none"> <li>• Ka waihanga rautaki hei tūhura, hei whakaoti rānei i tētahi rapanga</li> <li>• Ka tautohu i ngā huatau e hāngai ana ki te horopaki</li> <li>• Ka whakaputa i tētahi raupapatanga whakaaro arorau, tētahi hāponotanga rānei</li> <li>• Ka hanga whakawhānuitanga.</li> <li>• Ka whakamahi kīanga pāngarau tika, ka whakawhitiwhiti rānei i te aroā pāngarau ki te reo Māori.</li> <li>• Ka whakahoropaki i te kaupapa ki tētahi pūāhua Māori me te tautohu i ngā tikanga Māori e whaitake ana.</li> </ul>	<p>Ko te whakaaro tūhonohono te mea nui. Arā, kia kotahi, nui ake rānei o ēnei ka whakamahi whakaahua āhuahanga, whakaaro ine.</p> <ul style="list-style-type: none"> <li>• Ka whiriwhiri, ka whakatutuki i te raupapatanga mahi arorau e hāngai ana.</li> <li>• Ka tūhono i ētahi huatau rerekē, i ētahi whakaahuahanga rerekē rānei.</li> <li>• Ka whakaatu māramatanga ki ngā huatau e hāngai ana.</li> <li>• Ka hanga, ka whakamahi tauira.</li> <li>• Ka tūhono i ngā otinga ki tētahi horopaki, ka whakamahi rānei i ngā kīanga pāngarau hei whakawhitiwhiti whakaaro ki te reo Māori.</li> <li>• Ka whakahāngai i te kaupapa ki tētahi pūāhua Māori me te tautohu i ngā tikanga Māori e whaitake ana.</li> </ul>	<p>Ko te whakamahi whakaaro āhuahanga, whakaaro ine hei whakaoti rapanga.</p> <ul style="list-style-type: none"> <li>• Ka whiriwhiri, ka whakamahi i ētahi tikanga whānui hei whakaoti rapanga.</li> <li>• Ka whakaatu mōhiotanga ki ngā huatau ine/āhuahanga me ngā kupu e hāngai ana.</li> <li>• Ka whakamārama i ngā otinga mēnā kotahi, e rua rānei ngā mahi o roto i te tikanga i whakamahia.</li> <li>• Ka whakamahi kupu āhuahanga/ine, whakaahuahanga rānei hei whakamārama i ngā otinga.</li> </ul>

Kairangi	Kaiaka	Paetae
<ul style="list-style-type: none"> <li>• Ka whakaritea he pātai tūhuratanga Ine me te Hanga e hāngai ana ki te kaupapa (Te Papa Kainga)</li> <li>• Ka rangahaua ngā āhuatanga o te kaupapa (Te Papa Kainga)               <ul style="list-style-type: none"> <li>» Kōrero tuku iho</li> <li>» Kōrero-ā-lwi, Hapū</li> <li>» Tukanga</li> </ul> </li> <li>• Ka whakamahi whakaaro ine, whakaaro āhuahanga hei whakautu i te pātai tūhuratanga               <ul style="list-style-type: none"> <li>» ngā pānga pākoki o te tapatoru hāngai</li> <li>» ngā taparau he ōrite te āhua</li> <li>» ngā hononga koki o te rārangi pūtahi me te rārangi whakarara</li> <li>» ngā hononga koki o ngā momo taparau</li> <li>» ngā hononga koki o te porowhita</li> <li>» te roa, te paenga, te horahanga me te horahanga mata, te rōrahi</li> <li>» ngā waeine ngahuru</li> <li>» te kītanga, te papatipu, te paemahana me te wā</li> <li>» ngā waeine pāpātanga pērā i ērā mō te kiato, te tere, te utu ā-waeine me te whakapau kōhinu.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Ka whakaritea he pātai tūhuratanga Ine me te Hanga e hāngai ana ki te kaupapa (Te Papa Kainga)</li> <li>• Ka rangahaua ngā āhuatanga o te kaupapa (Te Papa Kainga)               <ul style="list-style-type: none"> <li>» Kōrero tuku iho</li> <li>» Kōrero-ā-lwi, Hapū</li> <li>» Tukanga</li> </ul> </li> </ul> <p>Ka whakamahi whakaaro ine, whakaaro āhuahanga hei whakautu i te pātai tūhuratanga</p> <ul style="list-style-type: none"> <li>» ngā pānga pākoki o te tapatoru hāngai</li> <li>» ngā taparau he ōrite te āhua</li> <li>» ngā hononga koki o ngā momo taparau</li> <li>» ngā hononga koki o te porowhita</li> <li>» te roa, te paenga, te horahanga me te horahanga mata, te rōrahi</li> <li>» ngā waeine ngahuru</li> <li>» te kītanga, te papatipu, te paemahana me te wā</li> </ul>	<p>Ka whakaritea he pātai tūhuratanga Ine me te Hanga e hāngai ana ki te kaupapa</p> <p>Ka whakamahi whakaaro ine, whakaaro āhuahanga hei whakautu i te pātai tūhuratanga</p> <ul style="list-style-type: none"> <li>» ngā taparau he ōrite te āhua</li> <li>» ngā pānga pākoki o te tapatoru hāngai</li> <li>» ngā taparau he ōrite te āhua</li> <li>» te roa, te paenga, te horahanga me te horahanga mata, te rōrahi</li> <li>» ngā waeine ngahuru</li> <li>» te kītanga, te papatipu, te paemahana me te wā</li> </ul>

**Taunakitanga**

Taunakitanga Kairangi		Taunakitanga Kaiaka		Taunakitanga Paetae		Taunakitanga Kāore i whiwhi	
K8	K7	KA6	KA5	P4	P4	Kwh2	Kwh1