

Paerewa Paetae

Aronga	Pāngarau 1.1		
Ingoa	Te whakamahi whakaaro tau whaitake hei whakaoti rapanga		
Kaupae	1	Whiwhinga	5
		Aromatawai	Ā-roto
Marau akoranga	Te Marautanga o Aotearoa		
Kokonga akoranga	Pāngarau		
Mana rēhita	Kua rēhitatia	Te rā i mana ai	Hakihea 2023
Te rā e arotakengia ai	Hakihea 2028	Te rā i puta ai	Hakihea 2023

Te Whāinga

Ko tā tēnei paerewa he whakamahi whakaaro tau whaitake hei whakaoti rapanga. Ko te pūtake o tēnei paerewa, ko te tau te tūāpapa o te nuinga o te mahi pāngarau kei roto i ngā horopaki o ia rā.

Paearu Paetae

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

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>.

<i>Whāinga Paetae</i>
<p><u><i>Te Tau me te Taurangi, Te Mātauranga me ngā Rautaki Tau</i></u></p> <ol style="list-style-type: none"> 1. Ka whakamahi pānga rārangi, pānga rārangi hāngai, pānga rārangi kōaro hoki. 2. Ka whakawhānui taupū, kia hāngai ki ngā tau tōpū me ngā hautau. 3. Ka whakamahi pāpātanga whakaputu o ia rā. 4. Ka whakamahi rautaki tau ki te whiriwhiri otinga tino whaihua. 5. Ka mārama ki te whaitakenga o te otinga o tētahi rapanga.

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

<p><i>Ka whakamahi whakaaro tau whaitake hei whakaoti rapanga.</i></p>	<ul style="list-style-type: none"> • Ka whiriwhiri, ka whakamahi i ētahi tikanga tau whānui e hāngai ana hei whakaoti rapanga. • Ka whakaatu mōhiotanga ki ngā huatau me ngā kupu pāngarau e hāngai ana. • Ka whakamārama i ngā otinga mēnā kotahi, e rua rānei ngā mahi o roto i te tikanga i whakamahia.
<p><i>Ka whakamahi whakaaro tau whaitake me ngā whakaaro tūhonohono hei whakaoti rapanga.</i></p>	<ul style="list-style-type: none"> • Ko te whakaaro tūhonohono te mea nui. Arā, kia kotahi, nui ake rānei o ēnei: <ul style="list-style-type: none"> ○ ka whiriwhiri, ka whakatutuki i te raupapatanga mahi arorau hei whakaoti rapanga ○ ka tūhono i ētahi huatau rerekē, ētahi whakaahuahanga rerekē rānei ○ ka whakaatu māramatanga ki ngā huatau e hāngai ana ○ ka hanga, ka whakamahi tauira. • Ka kite te raupapatanga arorau o ōna whakaaro, āna whakamārama pāngarau ki te reo Māori. • Ka whakahāngai i te kaupapa ki tētahi pūāhua Māori me te tautohu i ngā tikanga Māori e whaitake ana.

<p><i>Ka whakamahi whakaaro tau whaitake me ngā whakaaro waitara hei whakaoti rapanga.</i></p>	<ul style="list-style-type: none"> • Ko te whakaaro waitara te mea nui. Arā, kia kotahi, nui ake rānei o ēnei: <ul style="list-style-type: none"> ○ ka waihanga rautaki hei tūhura, hei whakaoti rānei i tētahi rapanga ○ ka tautohu i ngā huatau e hāngai ana ki te horopaki ○ ka whakaputa i tētahi raupapatanga whakaaro arorau, tētahi hāponotanga rānei ○ ka hanga whakawhānuitanga. • Ka whakamahi kīanga pāngarau tika, ka whakawhitiwhiti rānei i te aroā pāngarau ki te reo Māori. • Ka whakahoropaki i te kaupapa ki tētahi pūāhua Māori me te tautohu i ngā tikanga Māori e whaitake ana.
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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 āhuatanga o ia rā, ngā āhuatanga pāngarau rānei, ka whai wāhi mai te whakamahinga o te mātauranga pāngarau, o ngā huatau pāngarau, o ngā tikanga pāngarau rānei.
<i>tētahi tikanga tau whānui</i>	Kia toru, nui ake rānei ngā tikanga.

- 4 Kia taunga te ākonga ki ngā tikanga e whai wāhi mai ana:
- te ōwehenga me te hautanga
 - te tauwehe, te taurea, te taupū me te pūtake
 - te taupū tōraro me te taupū hautanga o tētahi tau
 - te hautau, te tau ā-ira me te ōrau
 - te pāpātanga
 - te whakaawhiwhinga, me te tohu anō i te maha o ngā mati ā-ira, te maha rānei o ngā mati whai tikanga
 - te tānga ngahuru.
- 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

huatau pāngarau	<i>mathematical concept</i>
whakaaro arorau	<i>logical thinking</i>
whakaaro tau whaitake	<i>numeric reasoning</i>
whakaaro tūhonohono	<i>relational thinking</i>
whakaaro waitara	<i>abstract thinking</i>

Kōrero Whakakapinga

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

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

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