

Te Whārangi Aromatawai mā te Pouako

He Māra Kai

Te pātai	Ngā aromatawai a te pouako
1. Tuhia ki te pepa tukutuku ētahi tapawhā hāngai e rima, koirā hei pikitia āwhata o ētahi māra. Kia 32 te paenga o ia tapawhā hāngai (te tapeke o ngā tapa = 32). Tuhia ngā inenga o ngā tapa.	
2. Whiriwhiria te horahanga o ia tapawhā hāngai, ka tuhi ai ki raro iho.	
3. Ko tēhea te māra he nui rawa atu te horahanga, ko tēhea te māra he iti rawa atu te horahanga? He aha tētahi tauira e kitea ana i te horahanga o ngā tapawhā hāngai me te āhua o ngā tapawhā hāngai?	
4. Ko te 13.5m te roa o tētahi tapa o te māra e whakaarohia ana e Tamarau. Whiriwhiria te roa o ērā atu o ngā tapa.	
5. Ko te 9.5m te roa o tētahi tapa o te māra e whakaarohia ana e Hinewai. Whiriwhiria te roa o ērā atu o ngā tapa.	
6. Ko tēhea te māra he rahi ake te horahanga, ko te māra a Tamarau, ko te māra a Hinewai rānei?	
7. Tuhia te pikitia āwhata o tētahi atu māra, he tapatoru te āhua, engari kia mau tonu ki te 32m rākau hei hanga i ngā tapa. Tuhia ngā inenga ki ngā tapa.	
8. Whakatau tatangia te horahanga o tēnei māra tapatoru kua tuhia e koe. He nui ake, he iti ake rānei i ētahi o ngā māra he tapawhā hāngai te āhua?	

He Māra Kai

Tūārere	1	2	3
Tau	1	2	3

Tohu Ako: Te Ine, Te Āhuahanga

Kaupapa: Te paenga, te horahanga me te hoahoa āwhata

Hei whakamārama

He tauira ngohe tēnei, hei aromatawai i te mōhio o te ākonga ki te horahanga me te paenga o te tapawhā hāngai. Mā te āta mātakitaki me te āta whakarongo a te pouako ki te mahi a te ākonga, e mōhiohia ai te taumata o te ākonga, ngā wāhi e pakari ana, me ngā wāhi hei whakapakari ake.

I ētahi wā, mā te whakawhitiwhiti kōrero, mā te paku whakamārama rānei a te pouako, e kite ai te ākonga i te rautaki, i te huarahi rānei hei whakaoti i te ngohe.

E tika ana kia taunga te ākonga ki tēnei mea te whakaoti rapanga, te wetewete i ngā kōrero me ngā tohutohu, te āta whakaaro i te rautaki e hāngai ana, me te tūhonohono anō i ngā maramara mātauranga kei roto i tōna hinengaro. Koirā te āhua o tēnei ngohe aromatawai.

Me tuku kia mahia tēnei ngohe aromatawai i muri i ngā akoranga e hāngai ana ki te horahanga me te paenga o te tapawhā hāngai, kava e tuku mātao noa iho.

Rauemi Tautoko:

Kei te whare whakaputu rauemi o Te Tāhuhu o te Mātauranga ēnei rauemi (Down the Back of the Chair), kei te whata rauemi tuihono hoki o Tāhūrangi.

- **Te Poutama Tau, Pukapuka Tuarua: Te Uiui Aromatawai.** Ko ngā kōrero whānui e pā ana ki te aromatawai pāngarau.
- **Hei Tautoko i te Marautanga Pāngarau: Te Ine.** Ko ngā huatau matua me ētahi ngohe whakaako e hāngai ana ki te ine.

Ngā tohutohu

Whakaaturia te kāri, ākene pea me pānui tahi me te ākonga, **kia mārama ai ngā kōrero.**

Hoatu he wā hei whakaoti mā te ākonga i ngā pātai.

Tonoa te ākonga kia whakamārama i āna mahi. Tāruatia ‘Te Whārangi Aromatawai mā te Pouako’, hei tuhi māu i āna whakamārama, me ō whakaaro, ō whakataunga aromatawai.

Āta tirohia ngā kōrero kei te whārangi ‘Hei Ārahi i te Aromatawai’ hei āwhina i a koe ki te whakatau i te taumata e hāngai ana ki ngā mahi a te ākonga. Kei tēnei whārangi te ngako o te pāngarau e hāngai ana ki tēnei ngohe, me ngā tauira whakamārama a ngā ākonga.

Me mātua mōhio te ākonga

- ki te mātauranga me ngā momo rautaki tau hei whakaoti tāpiritanga, whakareatanga hoki
- ki ngā whiriwhiringa tau ā-ira (kia kotahi te mati ā-ira)
- ki te tuhi hoahoa āwhata māmā ki te pepa tukutuku
- ki te hanga o te tapawhā hāngai me te tikanga o te horahanga me te paenga.
- ki te whiriwhiri i te horahanga o te tapawhā hāngai me te tapatoru
- ki te whakamahi taputapu hei tuhi hoahoa āwhata (pērā i te tāporowhita me te rūri)

Ngā kupu pāngarau e hāngai ana

horahanga, paenga, hoahoa āwhata, tapa, tapatoru, tapawhā hāngai, tapeke

Ngā kupu e hāngai ana ki te horopaki

māra, paetaha

Ngā rauemi

- te kāri ngohe
- te pepa tukutuku
- te rūri me te tāporowhita

Ētahi ngohe whakaako e hāngai ana

Hei Tautoko i te Marautanga Pāngarau: Te Ine

He Ngohe Whakaako i te Ine:

- Te Whakatairite Horahanga
- Te Whiriwhiri Horahanga
- Ko Tēhea te Horahanga Nui?
- Te Horahanga Tapawhā Hāngai
- Te Horahanga Tapatoru

He Tūhuratanga Ine:

- Te Paenga Taparau
- Te Pakitara Pereki
- Te Tākai Pouaka Tiakareti
- Te Horahanga Matapihi
- Te Taiapa Pāmu
- Te Horahanga me te Paenga Tapawhā Hāngai

He tauira pātai hei kukume whakaaro

- Whakamāramahia ngā mahi i oti i a koe i tō hinengaro. He aha tō mahi tuatahi? He aha tō mahi tuarua?
- He aha koe i whiriwhiri ai i te roa o tēnā tapa i te tuatahi?
- E mōhio ana koe ki tētahi atu rautaki e hāngai ana ki tēnā pātai?
- He aha i pēnā ai tō whakatau tata?

Hei Ārahi i te Aromatawai

He Māra Kai

Te pātai	He tauira whakautu a te ākonga me ngā paetohu aromatawai
1. Tuhia ki te pepa tukutuku ētahi tapawhā hāngai e rima, koirā hei hoahoa āwhata o ētahi māra. Kia 32 te paenga o ia tapawhā hāngai (te tapeke o ngā tapa = 32). Tuhia ngā inenga o ngā tapa.	E mārama ana ki te tikanga o te paenga. (Tau 3) Ka whakamahia te waeine tika mō ngā tapa. (Tau 3) Ka tatauria ngā wehenga tukutuku hei whiriwhiri i ngā tapa. (Tau 3) Ka whāia tētahi rautaki wāwāhi tau hei whiriwhiri i ngā tapa tauoti. (Tau 4) Ka whāia tētahi rautaki wāwāhi tau hei whiriwhiri i ngā tapa e whai hautau ana. (Tau 5) E tika ana te tuhi hoahoa āwhata ki te pepa tukutuku. (Tau 5)
2. Whiriwhiria te horahanga o ia tapawhā hāngai, ka tuhi ai ki raro iho.	E mārama ana ki te tikanga o te horahanga. (Tau 3) Ka whakamahia te waeine tika mō te horahanga. (Tau 6) Ka whakamahia te tukutuku hei whiriwhiri i te horahanga o ngā tapawhā hāngai. (Tau 6) Ka whakamahia ngā inenga tapa me te ture tātai hei whiriwhiri i te horahanga o ngā tapawhā hāngai. (Tau 7)
3. Ko tēhea te māra he nui rawa atu te horahanga, ko tēhea te māra he iti rawa atu te horahanga? He aha tētahi tauira e kitea ana i te horahanga o ngā tapawhā hāngai me te āhua o ngā tapawhā hāngai?	Ka kitea te tauira nei, he iti te horahanga o ngā tapawhā hangai mēnā he roa ētahi tapa, he poto ētahi, ā, he rahi ake te horahanga o te tapawhā rite. (Tau 7) Hei tauira: $15\text{m} \times 1\text{m} = 15\text{m}^2$ (e 32m te paenga) $8\text{m} \times 8\text{m} = 64\text{m}^2$ (e 32m te paenga) Ka tautohua ko te tapawhā rite ($8\text{m} \times 8\text{m}$) te māra he rahi rawa atu te horahanga. (Tau 7)
4. Ko te 13.5m te roa o tētahi tapa o te māra e whakaarohia ana e Tamarau. Whiriwhiria te roa o ērā atu o ngā tapa.	Ka whāia tētahi rautaki arorau hei whiriwhiri i ngā tapa, me te whakamahi anō i ngā rautaki wāwāhi tau e hāngai ana. (Tau 6) Hei tauira: $13.5 \times 2 = (13 \times 2) + (0.5 \times 2) = 27\text{m}$ te tapeke o ngā tapa roa $32 - 27 = 5\text{m}$ te tapeke o ngā tapa poto $5 \div 2 = 2.5\text{m}$ ngā tapa poto
5. Ko te 9.5m te roa o tētahi tapa o te māra e whakaarohia ana e Hinewai. Whiriwhiria te roa o ērā atu o ngā tapa.	Ka whāia tētahi rautaki arorau hei whiriwhiri i ngā tapa, me te whakamahi anō i ngā rautaki wāwāhi tau e hāngai ana. (Tau 6) Hei tauira: $9.5 \times 2 = (10 \times 2) - (0.5 \times 2) 20 - 1 = 19\text{m}$ te tapeke o ngā tapa roa $32 - 19 = 13\text{m}$ te tapeke o ngā tapa poto $13 \div 2 = 6.5\text{m}$ ngā tapa poto
6. Ko tēhea te māra he rahi ake te horahanga, ko te māra a Tamarau, ko te māra a Hinewai rānei?	Ka whakamahia te tukutuku hei whiriwhiri i te horahanga o ngā tapawhā hāngai. (Tau 6) Ka whakamahia ngā inenga tapa hei tātai i te horahanga o ngā tapawhā hāngai. (Tau 7) Ka whakamahia te tauira i kitea i te pātai 3 hei tautohu ko te māra a Hinewai te māra he rahi rawa te horahanga. (Tau 7)
7. Tuhia te hoahoa āwhata o tētahi atu māra, he tapatoru te āhua, engari kia mau tonu ki te 32m rākau hei hanga i ngā tapa. Tuhia ngā inenga ki ngā tapa.	Ka whakamahi rautaki wāwāhi tau hei whiriwhiri i te roa o ngā tapa. (Tau 6) Ka whiriwhiria he āwhata e hāngai ana, pērā i te 1cm = 1m. (Tau 7) Ka whakamahi tika i ngā momo taputapu hei tuhi i te tapatoru, pērā i te tāporowhita me te rūri. (Tau 7)
8. Whakatau tatanga te horahanga o tēnei māra tapatoru kua tuhia e koe. He nui ake, he iti ake rānei i ētahi o ngā māra he tapawhā hāngai te āhua?	Ka whakatau tata i te mahua o ngā wāhanga tukutuku hei whiriwhiri i te horahanga. (Tau 7) Ka whakamahi i te ture tātai horahanga mō te tapatoru me te whakaawhiwhi hei whakatau tata i te horahanga. (Tau 7)