

Te Whārangi Aromatawai mā te Pouako

Te pātai	Ngā aromatawai a te pouako										
1. Whakamahia he wāti tū hei ine i te wā e oti ai ngā piunga 10, mai i tētahi taha ki tētahi me te hoki anō ki te taha tuatahi.											
2. Whakamahia tō inenga i te wā hei whiriwhiri i te wā e oti ai tētahi piunga kotahi.											
3. Kia pērā anō te mahi hei ine, hei whiriwhiri i te wā o te piunga kotahi, mēnā e 300mm, e 400mm, e 500mm, e 600mm te roa o te aho. Tuhia ki tētahi tūtohi pēnei i tēnei: <table><tr><td>Te roa o te aho</td><td>Te wā o te piunga kotahi</td></tr><tr><td>300mm</td><td></td></tr><tr><td>400mm</td><td></td></tr><tr><td>500mm</td><td></td></tr><tr><td>600mm</td><td></td></tr></table>	Te roa o te aho	Te wā o te piunga kotahi	300mm		400mm		500mm		600mm		
Te roa o te aho	Te wā o te piunga kotahi										
300mm											
400mm											
500mm											
600mm											
4. Tuhia he kauwhata rārangi hei whakaatu i ngā wā e oti ai te piunga kotahi mēnā e 300mm, e 400mm, e 500mm, e 600mm te roa o te aho.											
5. He aha ngā kōrero matua e kītea mai ana i te kauwhata?											
6. Ki tō whakaaro, e hia te wā o te piunga kotahi mō ēnei whāroa o te aho? Whakamāramatia he aha i pēnā ai ō whakaaro: <table><tr><td>Te roa o te aho</td><td>Te wā o te piunga kotahi</td></tr><tr><td>200mm</td><td></td></tr><tr><td>350mm</td><td></td></tr><tr><td>700mm</td><td></td></tr><tr><td>900mm</td><td></td></tr></table>	Te roa o te aho	Te wā o te piunga kotahi	200mm		350mm		700mm		900mm		
Te roa o te aho	Te wā o te piunga kotahi										
200mm											
350mm											
700mm											
900mm											
7. He aha te take i inea ai te wā mō te 10 piunga, kātahi ka whiriwhiria te wā mō te piunga kotahi?											

Te Tārere

Te Tārere

Tūārere	1			2			3	
Tau	1	2	3	4	5	6	7	8

Tohu Ako: Te Ine, Te Tauanga
Kaupapa: Te ine i te wā me te kauwhata rārangi

Hei whakamārama

He tauira ngohe tēnei, hei aromatawai i te mōhio o te ākonga ki te ine i te wā me te kauwhata rārangi. Mā te āta mātakitaki me te āta whakarongo a te pouako ki te mahi a te ākonga, e mōhiotia 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 ine i te wā me te kauwhata rārangi, kaua 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.
- **Hei Tautoko i te Marautanga Pāngarau: Te Tauanga.** Ko ngā huatau matua me ētahi ngohe whakaako e hāngai ana ki te tauanga.

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 whakamahi wāti tū
- ki te whakahaere tūhuratanga hei kohikohi raraunga
- ki te tuhi kauwhata rārangi
- ki te whakamāori kauwhata rārangi

Ngā kupu pāngarau e hāngai ana

āwhata, huapae, kauwhata rārangi, maihea, tuaka pae, tuaka pou, tūtohi, wāti tū

Ngā kupu e hāngai ana ki te horopaki

aho, piu, tārere

Ngā rauemi

- te kāri ngohe
- he rūri mita
- he aho
- he maihea
- he pepa tukutuku
- he wāti tū

Ētahi ngohe whakaako e hāngai ana

Hei Tautoko i te Marautanga Pāngarau: Te Ine

He Ngohe Whakaako:

- Te Ine i te Wā

He Tūhuratanga:

- Te Ine i te Wā

Hei Tautoko i te Marautanga Pāngarau: Te Tauanga

He Ngohe Whakaako:

- Kauwhata Rārangi

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 tēnā i te tuatahi?
- E mōhio ana koe ki tētahi atu rautaki e hāngai ana ki tēnā pātai?
- He aha tō mahi hei whiriwhiri i te wā mō te piunga kotahi?
- He aha te mea hei whakaatu ki te tuaka pae o te kauwhata?
- Āta whakaarohia ngā āwhata e tika ana mō ngā tuaka o te kauwhata. Me whakaatu ia mitamano, ia 10 mitamano, ia 100 mitamano rānei mō te roa o te aho?

Hei Ārahi i te Aromatawai

Te Tārere

Te pātai	Tau 6	Tau 7	Tau 8															
1. Whakamahia he wātī tū hei ine i te wā e oti ai ngā piunga 10, mai i tētahi taha ki tētahi me te hoki anō ki te taha tuatahi.	E tika ana te whakamahi i te wātī tū. (Whanaketanga 3a) E mōhio ana ki te tikanga mō te whakahaere tūhuratanga, arā, kia pūmau tonu ngā taurangi kāore e inea ana. I kōnei, kia pūmau tonu te teitei e tukuna ai te tārere kia piu.																	
2. Whakamahia tō inenga i te wā hei whiriwhiri i te wā e oti ai tētahi piunga kotahi.	E mōhio ana, me whakawehe te wā ki te 10, ā, ka whakamahia tōna mōhio ki te pūnaha ngahuru hei whakawehe i te tau ā-ira ki te 10. Hei tauira: (Kaupae 6) 18.30 ÷ 10 = 1.83																	
3. Kia pērā anō te mahi hei ine, hei whiriwhiri i te wā o te piunga kotahi, mēnā e 300mm, e 400mm, e 500mm, e 600mm te roa o te aho. Tuhia ki tētahi tūtohi pēnei i tēnei:	E tika ana te whakahaere i te tūhuratanga, te kohikohi i ngā raraunga, me te whiriwhiri i te wā o te piunga kotahi. Hei tauira: <table><tr><th>Te roa o te aho</th><th>Te wā o ngā piunga 10</th><th>Te wā o te piunga kotahi</th></tr><tr><td>300mm</td><td>12.67</td><td>1.267</td></tr><tr><td>400mm</td><td>14.55</td><td>1.455</td></tr><tr><td>500mm</td><td>16.40</td><td>1.640</td></tr><tr><td>600mm</td><td>18.30</td><td>1.830</td></tr></table>	Te roa o te aho	Te wā o ngā piunga 10	Te wā o te piunga kotahi	300mm	12.67	1.267	400mm	14.55	1.455	500mm	16.40	1.640	600mm	18.30	1.830		
Te roa o te aho	Te wā o ngā piunga 10	Te wā o te piunga kotahi																
300mm	12.67	1.267																
400mm	14.55	1.455																
500mm	16.40	1.640																
600mm	18.30	1.830																
4. Tuhia he kauwhata rārangi hei whakaatu i ngā wā e oti ai te piunga kotahi mēnā e 300mm, e 400mm, e 500mm, e 600mm te roa o te aho.		E tika ana te whakaatu i ngā raraunga ki te kauwhata rārangi, arā: • ka whakaaturia te roa o te aho ki te tuaka pae; • ka whakaaturia te wā o te piunga kotahi ki te tuaka pou; • te whiriwhiri i ngā āwhata e tika ana mō ia tuaka.																
5. He aha ngā kōrero matua e kitea mai ana i te kauwhata?	E tika ana te whakamāori i te kauwhata, me te tipako i ngā kōrero matua. Hei tauira: He tere ake te piu mēnā he poto te aho.	E tika ana te whakamāori i te kauwhata, me te whakamahi rautaki tau hei tautohu i ngā kōrero matua. Hei tauira: Mēnā ka hauruatia te roa o te aho, ka pātata ki te $\frac{2}{3}$ te wā o te piunga. Arā: 300 → 1.267 600 → 1.830 Ko te 300 te haurua o te 600. Ko te 12 te rua haurua o te 18.																
6. Ki tō whakaaro, e hia te wā o te piunga kotahi mō ēnei whāroa o te aho? Whakamāramatia he aha i pēnā ai ō whakaaro:	Ka whakatau tata i te wā, i runga i te whakaaro māmā, kia tau ki raro iho, ki waenganui, ki runga ake rānei i ngā wā i whiriwhiria i te Pātai 3. Hei tauira: • Ko te 350 kei waenganui pū i te 300 me te 400. • Ko te 1.45 kei waenganui pū i te 1.267 me te 1.640.	Ka whakamahia te ia o te kauwhata, ā, ka tautohu i ngā wā e hāngai ana ki ia roa o te aho.	Ka whakamahia te whakaaro taurangi hei whiriwhiri i te wā o te piunga. Hei tauira: <table><tr><th>Te roa o te aho</th><th>Te wā o te piunga kotahi</th></tr><tr><td>200</td><td></td></tr><tr><td>300</td><td>1.267</td></tr><tr><td>400</td><td>1.455</td></tr><tr><td>500</td><td>1.644</td></tr><tr><td>600</td><td>1.830</td></tr><tr><td>700</td><td></td></tr></table> Ia pikinga o te aho mā te 100mm, ka piki ake te wā o te piu mā te takiwā o te 0.19 hēkona. Nō reira, tangohia te 0.19 i te wā mō te 300mm hei whiriwhiri i te wā mō te 200mm. Arā: 1.267 – 0.19 = 1.077 hēkona.	Te roa o te aho	Te wā o te piunga kotahi	200		300	1.267	400	1.455	500	1.644	600	1.830	700		
Te roa o te aho	Te wā o te piunga kotahi																	
200																		
300	1.267																	
400	1.455																	
500	1.644																	
600	1.830																	
700																		
7. He aha te take i inea ai te wā mō te 10 piunga, kātahi ka whiriwhiria te wā mō te piunga kotahi?		E mōhio ana ki te tikanga mō te whakahaere tūhuratanga, arā, kia whakaitia te hapa o te mahi ine. I konei, kua whakawehea te hapa o te mahi ine ki te 10.																