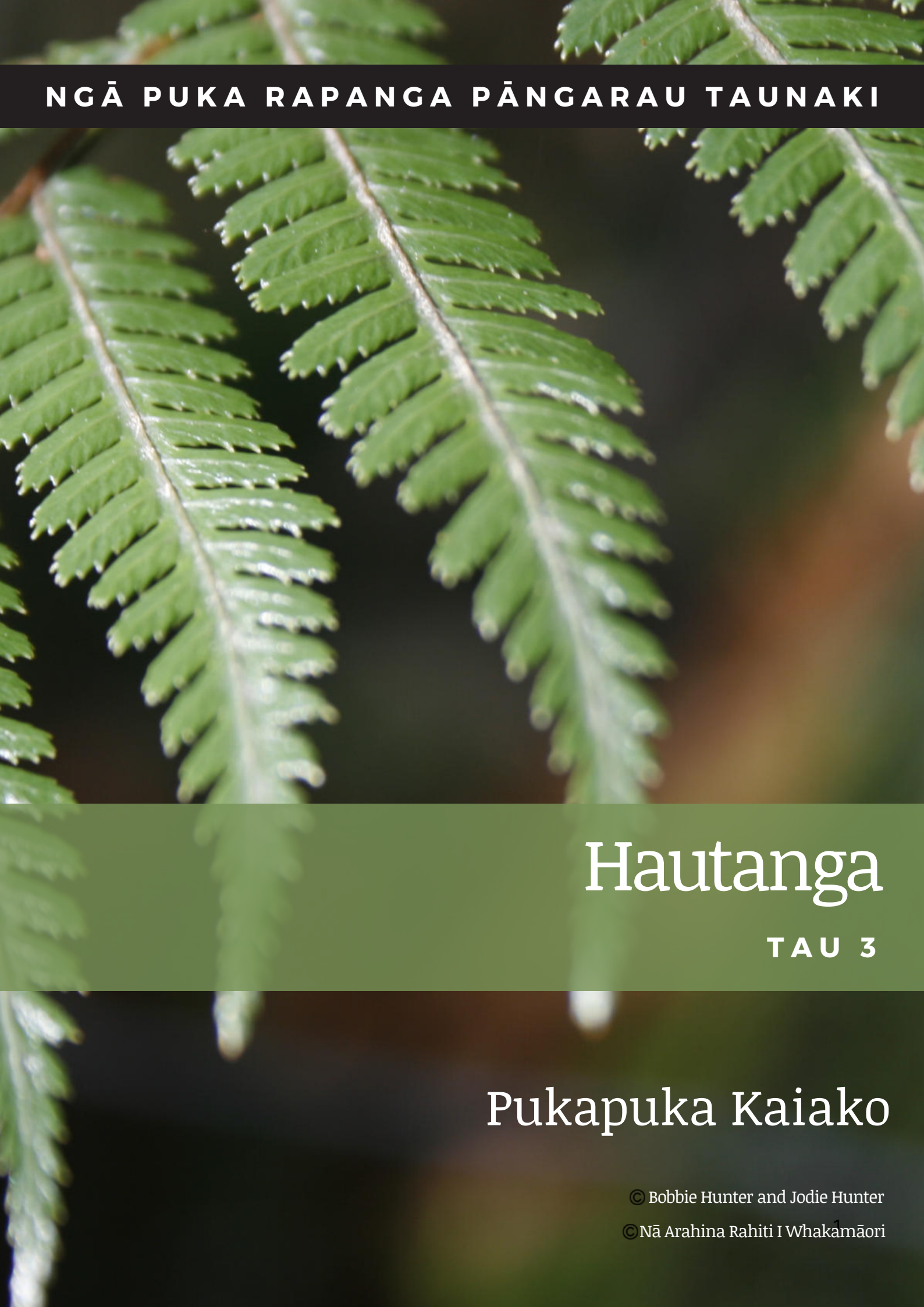


A close-up photograph of several green fern fronds, likely from a tree fern, showing the intricate, feathery structure of the leaves. The fronds are vibrant green and have a slightly glossy texture. They are set against a dark, blurred background, which makes the green leaves stand out. The lighting is soft, highlighting the edges and veins of the fronds.

NGĀ PUKA RAPANGA PĀNGARAU TAUNAKI

Hautanga

TAU 3

Pukapuka Kaiako

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Tūmahi 1

He aha ngā huarahi rerekē e taea ai e koe te whakamahi i ngā tāpa hautanga kia ōrite ki te katoa kotahi?
I a koe e mahi ana i ēnei, tuhia ēnei, ā, kia rite ki te whakamārama me te whakatika me pēhea te whakaoti.

He aha ngā huarahi rerekē e taea ai e koe te whakamahi i ngā tāpa hautanga kia ōrite ki tētahi hautanga iti iho i te kotahi katoa?
I a koe e mahi ana i ēnei tāhopu me te whakarite ki te whakamārama me te whakatika he aha i iti iho ai i te kotahi te katoa.

He aha ngā huarahi rerekē e taea ai e koe te whakamahi i ngā tāpa hautanga kia ōrite ki tētahi hautanga neke atu i te kotahi katoa?
I a koe e mahi ana i ēnei tāhopu me te rite ki te whakamārama me te whakatika he aha i nui ake ai i te kotahi te katoa.

Hei āwhina i te kaiako

Me whai hautanga mō te katoa, ngā hauwhā, ngā haurua me te whakauru i ngā tuaono me te waru i te tūmahi tuarua.

Aroturuki mō ngā ākonga mā te whakamahi i ngā kupu tau hautanga (ehara i te wāhanga, i te moka rānei).

Kia mōhio ki ngā ākonga e whakawhānui ana (hei tauira, ko te iti ake o te tautau, ko te nui ake o te hautanga ina kotahi te tau).

Tuhia ēnei hei whakaaro akomanga, ā, tonoa ngā ākonga kia tūhura me te whakamatau ā muri ake nei hei ngohe whakamahana.

Me tohu ngā ākonga i ngā rauemi me te whakamahi i te tuhipoka tika me te tohu ōrite ($\frac{2}{2} = 1$)

Mō te tūmahi takitahi, me whiwhi koe i ngā huinga tāpa hautanga.

Wā toha

Tīpakohia ngā ākonga ki te tiritiri nā wai i mahi pahekotanga o te katoa, o ētahi atu hautanga rānei mā te whakamahi i ngā wāhanga rahi ōrite (haurua, hauwhā, hauono, hauwaru) me te hopu i ngā pahekotanga hei tau, whārite, kupu rānei. Kātahi, tīpakohia ngā ākonga ki te tiritiri nā wai i mahi pahekotanga o te katoa mā te whakamahi i ngā wāhanga hautanga rerekē (hei tauira, $\frac{1}{2} + \frac{1}{4} + \frac{1}{4} = 1$) me te whakapūkete i ngā pahekotanga hei tau, whārite, kupu rānei. Mēnā kāore he ākonga i mahi i tēnei, whakaurua hei rongoā whirinoa i tiria e ngā ākonga i mua.

Ngā Whakaaro Matua o te Ao

He maha ngā āhuatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei. Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Hono

He ōrite $\frac{2}{2}$ ki?
He ōrite $\frac{6}{6}$ ki?
He ōrite $\frac{4}{4}$ ki?
He ōrite $\frac{8}{8}$ ki?

He aha ngā tauira me ngā pātahitanga e kitea ana e koe?
He aha ētahi atu tau hautanga e ōrite ana ki te katoa kotahi?
Whakahaua ngā ākongā kia hopu mā te tohu ōrite $\frac{2}{2} = \frac{5}{5} = \frac{100}{100}$

He aha te ture mō ngā hautanga e ōrite ana ki te katoa kotahi?
Tuhia ngā whakaaro me te tohu hei $\frac{n}{n}$

Whainga Ako: Ka ako ngā mokopuna ki te:

Whakakotahitia me te whakakotahi anō i ngā wae hautanga rerekē kia kotahi te katoa.

Tautohu me te āhukahuka i ngā hautanga ōrite.

Ngā Tūmahi Takitahi

Whakamahia ngā tāpa hautanga hei hanga i ngā pahekotanga rerekē e ōrite ana ki te katoa kotahi. Whakapūketetia ēnei mā te whakamahi i ngā whakaaturanga rerekē e toru neke atu rānei (ngā tātuhī, ngā whārite).

Whakamahia ngā tāpa hautanga hei hanga i ngā pahekotanga rerekē e ōrite ana ki te iti iho i te kotahi katoa. Whakapūketetia ēnei mā te whakamahi i ngā whakaaturanga rerekē e toru neke atu rānei (ngā tātuhī, ngā whārite).

Whakamahia ngā tāpa hautanga hei hanga i ngā pahekotanga rerekē e ōrite ana ki te katoa neke atu i te kotahi. Whakapūketetia ēnei mā te whakamahi i ngā whakaaturanga rerekē e toru neke atu rānei (ngā tātuhī, ngā whārite).

Marautanga

Tau 3

Tautohu, te pānui me te tuhi (hei tohu, hei kupu) me te waihanga haurua, hatoru, hauwhā, haurima me ngā hauwaru hei hautanga o te āhua, o tētahi huinga rānei mā te tohatoha ōrite ki ia wāhanga.

Whakatairite me te whakaraupapa hautanga haurua, hauwhā, me ngā hauwaru me te tautohu i ngā hautau ōrite.

Reo Pāngarau

Katoa, haurua, hauwhā, tuawhā, hauono, hautanga, tau hautanga, tau oti, hauwaru, ōrite.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 2

He aha ngā huarahi rerekē e taea ai e koe te whakamahi i ngā tāpa hautanga kia ōrite ki tētahi hautanga iti iho i te haurua?

I a koe e mahi ana i ēnei tāhopu me te whakarite ki te whakamārama me te whakatika he aha i iti iho ai i te haurua.

He aha ngā huarahi rerekē e taea ai e koe te whakamahi i ngā tāpa hautanga kia ōrite ki tētahi hautanga neke atu i te haurua engari iti iho i te kotahi katoa?

I a koe e mahi ana i ēnei, tuhia ēnei, ā, kia rite ki te whakamārama me te whakatika he aha i neke atu ai i te haurua me te iti iho i te kotahi katoa.

He aha ngā huarahi rerekē e taea ai e koe te whakamahi i ngā tāpa hautanga kia ōrite ki tētahi hautanga neke atu i te kotahi katoa engari iti iho i te rua?

I a koe e mahi ana i ēnei, tuhia aua mea, kia rite ki te whakamārama me te whakatika he aha i nui ake ai i te kotahi te katoa, iti iho i te rua.

Hei āwhina i te kaiako

Me whai wāhanga hautanga mō te katoa, ngā hauwhā, ngā haurua, ngā tuaono, ngā waru me ngā tuatoru.

Whakangāwari i ngā ākonga kia kite e whakaingoatia ana e te tau ngā tau o te katoa, ā, ka whakaingoatia e te tautau te maha o ngā wāhanga kua wehea te katoa.

Aroturuki mō ngā ākonga mā te whakamahi i ngā kupu tau hautanga (ehara i ngā wāhanga, i ngā moka rānei) me te whakatika i ā rātou tauākī mā te whakamahi i ngā wāhanga hautanga me te tuhipoka.

Mō te ngohe takitahi, me wātea ngā tāpa hautanga mō te katoa, ngā haurua, ngā hauwhā, me ngā tuatoru.

Wā toha

Tīpakohia ngā ākonga ki te tiritiri nā wai i mahi pahekotanga hautanga mā te whakamahi i ngā wāhanga rahi ōrite (haurua, tuatoru, hauwhā, tuaono, waru) me te tuhi i ngā pahekotanga hei tau, whārite, kupu rānei. Kātahi ka tīpako i ngā ākonga ki te tiritiri nā wai i mahi pahekotanga mā te whakamahi i ngā wāhanga hautanga rerekē (hei tauira, he nui ake te $\frac{1}{2}$ me te $\frac{1}{3}$ engari he iti iho i te $\frac{1}{2}$ kotahi katoa) me te tuhi i ngā pahekotanga hei tau, whārite, kupu rānei. Mēnā kāore he ākonga i mahi i tēnei, whakaurua hei rongoā whirinoa i tiria e ngā ākonga i mua.

Ngā Whakaaro Matua o te Ao

He maha ngā āhuatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei. Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Hono

Whakamahia ō tāpa hautanga hei kimi, hei tāhopu hoki i ngā hautanga e ōrite ana ki te haurua kotahi.

He aha ētahi atu hautanga e mōhio ana koe e ōrite ana ki te haurua kotahi?

He aha ngā tauira me ngā pātahitanga e kitea ana e koe?

He aha te ture mō ngā hautanga e ōrite ana ki te haurua? [hei tauira, me haurua te tauraro o te taurunga]

Whainga Ako: Ka ako ngā mokopuna ki te:

Whakakotahitia me te whakakotahi anō i ngā wae hautanga rerekē kia kotahi te katoa.

Ngā Tūmahi Takitahi

Tautuhia ko ēhea ngā rerenga tau e tika ana, e hē ana rānei.

$$20 + 20 + 70 = 40 + 70$$

$$1 = \frac{1}{4} + \frac{1}{4} + \frac{1}{4}$$

$$18 + 6 = 17 + 7$$

$$2 + 2 = \frac{4}{4} + \frac{2}{2} + \frac{3}{3}$$

$$\frac{1}{2} + \frac{1}{2} + \frac{1}{4} + \frac{1}{4} = \frac{2}{2} + \frac{2}{4}$$

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{1}{3} + \frac{1}{2}$$

Whakamārama, whakamātauria hoki he aha koe i whakaaro ai he pono, he hē rānei ngā rerenga tau.

Marautanga

Tau 3

Tautohu, te pānui me te tuhi (hei tohu, hei kupu) me te waihanga haurua, hauru, hauwhā, haurima me ngā hauwaru hei hautanga o te āhua, o tētahi huinga rānei mā te tohatoha ōrite ki ia wāhanga.

Whakatairite me te whakaraupapa hautanga haurua, hauwhā, me ngā hauwaru me te tautohu i ngā hautau ōrite.

Reo Pāngarau

Katoa, haurua, hauwhā, tuawhā, hauru, hauono, hautanga, tau hautanga, tau katoa, hauwaru, ōrite, tauraro, taurunga.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 3

He aha ngā tau kei waenga i te 0 me te 1? Kia rite ki te hoatu i tētahi tautohu ki te raina-tau me te whakamārama he aha te tau hautanga e whakaaturia ana.

Tāngia tō ake raina-tau ka tuhi ai i te tau e whakaaturia ana e koe ki te tautohu.

Ka taea e koe te whakaatu ki tō raina-tau kia whā ngā tau i waenga i te 1 me te 2? Tuhia ki te taha o te tohu he aha te tau e tohu ana rātou.

Hei āwhina i te kaiako

I te wā o te whakarewatanga, pātai atu ki ngā ākonga mēnā he tau kei waenga i ngā tau katoa? Arataki ki tētahi matapakinga o ngā āhuatanga i tūtaki ai rātou ki te hawhe (hei tauira, he pēpi i mua i te kotahitanga, i waenganui i ō rātou ake rā whānau, i te hāwhe haora i te karaka, i te hawhe āporo). Whakawhānuitia te matapakinga ki ētahi atu āhuatanga mā te whakamahi i ētahi atu hautanga.

Me whai raina tau kāore i tohua ki te papamā hei whakamahi i te wā o te akoranga. Whakamahia tēnei i te wā o te whakarewatanga hei whakatau tata kei hea te hautanga e whakaahuatia ana e rātou.

Me whai rīpene pepa kāore i tohua puta noa i te papa, me ngā kāri hautanga nui kua tohua me ngā kupu tau oti me ngā kupu hautanga me ngā tohu.

Whakangāwari i ngā ākonga kia kite i te tīmatanga o te tau, kei roto anake i ngā rārangi tau i whakamahia e rātou ngā tau katoa (ngā tau i hua mai i te tataunga). Ka taea te whakaatu i ngā hautanga e kōrerotia ana e rātou ināianei (ngā tau i hua mai i te ritua ōrite, te wātaki rānei) ki te raina tau. E whakaatu ana tēnei ka whakaarohia hoki ngā hautanga hei tau. I roto i te hononga, whakapā atu ki ngā hautanga (hei tauira, $3\frac{1}{2}$ hei tau whakaranu).

Aroturuki mō ngā ākonga mā te whakamahi i ngā kupu e whakawhāiti ana i te wehewehe, i te wehe rānei i te wehenga ōrite ki ngā wāhanga ōrite.

Kia mōhio ki ngā ākonga e kite ana i te ariā o ngā hautanga hei tau i waenga i ngā tau e tautohe ana. Tukua rātou ki te uaua me te hanga whakaaro mā te kōrero pāngarau me te whakamahi i te whakaae pāngarau me te whakahē pāngarau (hei tauira, e whakaae ana ahau nā te mea...)

Mō te tūmahi takitahi, me whai i te A3 he rangatū o ngā raina-tau kua tohua ki ngā tau oti mai i te 0 ki te 10.

Ngā Whakaaro Matua o te Ao

He maha ngā āhuatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei. Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ko te hautanga e whakaahua ana i te wehenga ($\frac{a}{b} = a \div b$, $a \neq 0$), ā, ka taea te whakamārama i runga i te raina tau mā ngā huarahi e rua. Hei tauira, $\frac{2}{3} = 2 \div 3$. I te raina tau, ka taea te whakamārama i te $2 \div 3$ hei wāhanga e 2 e $\frac{1}{3}$ o te wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te pāhono ia hautanga ki tētahi ira ahurei i runga i te raina tau.

Kāore he hautanga iti rawa, nui rawa rānei i te raina tau.

Wā toha

Tīpakohia ngā ākonga hei tiritiri e āhei ana ki te whakaatu i ngā wāhanga ōrite maha e tohu ana i te awhe o ngā tau hautanga rerekē i runga i te raina-tau nui, kātahi ko ngā ākonga e āhei ana ki te kite me te tā i ngā raina-tau me te tohu i ngā tūnga hautanga i waenga i te 0 me te 1 me te 1 me te 2.

Hono

He aha ngā tauākī pāngarau mā te whakamahi i ngā tau whakaranu ka taea e koe te whakamahi i te raina-tau mō ngā tau i waenga i te 3 me te 4?

Whakamahia te tohu ōrite (=), nui ake, iti iho rānei i ngā tohu (> me te <).

Māku e hoatu he tauira hei tīmata:

$3\frac{1}{2}$ he iti iho i te $3\frac{3}{4}$ [pūkete hei $3\frac{1}{2} < 3\frac{3}{4}$

Whainga Ako: Ka ako ngā mokopuna ki te:

Whakaaturia ngā hautanga ki tētahi raina-tau.

Ngā Tūmahi Takitahi

Tohua ki te raina tau ki te wāhi e whakaaro ana koe ko ngā tau whakaranu e whai ake nei.

$\frac{1}{2}$	$\frac{1}{4}$	$9\frac{1}{8}$
$5\frac{2}{4}$	$4\frac{1}{2}$	$4\frac{3}{4}$
$7\frac{2}{4}$	$8\frac{1}{2}$	$\frac{6}{8}$
$3\frac{4}{8}$	$9\frac{1}{2}$	$2\frac{1}{4}$

Ka taea e koe te tohu ētahi atu tau i te raina-tau?

Marautanga

Tau 3

Tautohu, te pānui me te tuhi (hei tohu, hei kupu) me te waihanga haurua, hatoru, hauwhā, haurima me ngā hauwaru hei hautanga o te āhua, o tētahi huinga rānei mā te tohatoha ōrite ki ia wāhanga.

Whakatairite me te whakaraupapa hautanga haurua, hauwhā, me ngā hauwaru me te tautohu i ngā hautau ōrite.

Kimi hautanga waetahi o tētahi huinga:
h.t., $\frac{1}{4}$ o te 12.

Tāpiri hautau waetahi he ōrite te tau raro:
h.t., $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$.

Whole, half, halves, quarters, fourths, thirds, sixths, eighths, counting numbers, mixed numbers.

Katoa, haurua, hauwhā, tuawhā, hatoru, hauono, hauwaru, tataua nama, tau whakaranu.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 4

Kai te hoko e te whare parāoa he keke panana ki ngā whānau. He ōrite te rahi o ngā keke katoa.

Tokotoru ngā tamariki a te whānau o Jamie hei tiritiri i tētahi keke.

Tokoono ngā tamariki a te whānau o Tarani hei tiritiri i te keke kotahi.

Tokowaru ngā tamariki a te whānau o Daniella ki te tiritiri i tētahi keke.

Tokorua ngā tamariki a te whānau o Tiare hei tiritiri i te keke kotahi.

Tokowha ngā tamariki a te whānau o Timo hei tiritiri i tētahi keke.

Ko ēhea ngā tamariki ka nui ake te keke? Whakamātauria tō whakautu mā te whakamahi i ngā whakaaturanga rerekē e toru neke atu rānei (ngā tau, ngā tātuhī, tētahi raina-tau).

Hei āwhina i te kaiako

I te wā o te whakarewatanga, whakatauiria i te keke hei whakaaturanga tapawhā kia tino mōhio ai ka whakamahia tēnei e ngā ākonga hei whakaaturanga.

Whakangāwari i ngā ākonga kia kite ko te tautapa e tohu ana i te maha o ngā wāhanga kua wehea te katoa, ā, ka whakaaturia e te tau te maha o ngā wāhanga kei a koe o te tapeke.

Tūmanako kia tohu ngā ākonga mā te whakamahi i ngā raina tau me ngā whakaaturanga tapawhā ōrite.

Wā toha

Tīpakohia ngā ākonga hei tiritiri kua whakawhanake i ngā whakaaturanga maha tae atu ki ngā tau, raina-tau, me ngā tātuhī, ā, whakamahia ēnei hei whakaatu i ngā whakataurite i waenga i ngā hautanga rerekē.

Ngā Whakaaro Matua o te Ao

He maha ngā āhuatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei. Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ko te hautanga e whakaahua ana i te wehenga ($\frac{a}{b} = a \div b$, a & b he tau tōpū & $b \neq 0$), ā, ka taea te whakamārama i runga i te raina tau mā ngā huarahi e rua. Hei tauira, $\frac{2}{3} = 2 \div 3$. I te raina tau, ka taea te whakamārama i te $2 \div$ te 3 hei wāhanga e 2 e $\frac{1}{3}$ o te wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te pāhono ia hautanga ki tētahi ira ahurei i runga i te raina tau.

Kāore he hautanga iti rawa, nui rawa rānei i te raina tau.

Hono

Whakapūketetia ngā whakautu mō te tūmahi:

$$1 \div 3 = \frac{1}{3} \qquad 1 \div 8 = \frac{1}{8}$$

$$1 \div 2 = \frac{1}{2} \qquad 1 \div 4 = \frac{1}{4}$$

He aha ngā tauira me ngā pātahitanga e kitea ana e koe?
Ki tōu whakaaro he aha te rongōā?

$$1 \div 6 = \qquad 1 \div 20 = \qquad 1 \div A =$$

Whainga Ako: Ka ako ngā mokopuna ki te:

Wehea ngā katoa ki ngā wāhanga ōrite.
Wehea te tau oti ki ngā hautanga.
Whakataurite me te raupapa i ngā hautanga wae.

Marautanga

Tau 3

Tautohu, te pānui me te tuhi (hei tohu, hei kupu) me te waihanga haurua, hautoru, hauwhā, haurima me ngā hauwaru hei hautanga o te āhua, o tētahi huinga rānei mā te tohatoha ōrite ki ia wāhanga.

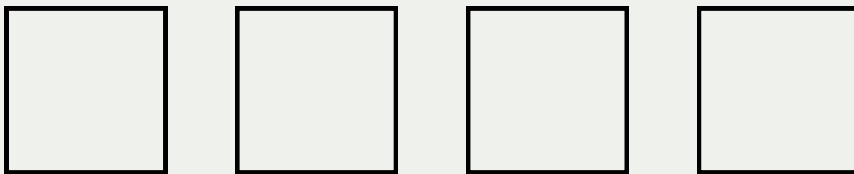
Whakatairite me te whakaraupapa hautanga haurua, hauwhā, me ngā hauwaru me te tautohu i ngā hautau ōrite.

Kimi hautanga waetahi o tētahi huinga:
h.t., $\frac{1}{4}$ o te 12.

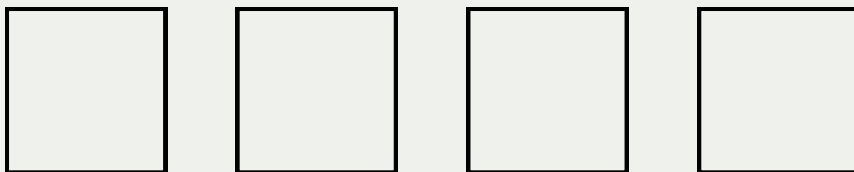
Tāpiri hautau waetahi he ōrite te tau raro:
h.t., $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$.

Ngā Tūmahi Takitahi

E hia ngā huarahi rerekē e taea ai e koe te wehe i ēnei tapawhā ki ngā haurua?



E hia ngā huarahi rerekē e taea ai e koe te wehe i ēnei tapawhā ki ngā hauwhā?



E hia ngā hoahoa rerekē ka taea e koe te hanga he $\frac{3}{4}$ whero me te $\frac{1}{4}$ kikorangi?

Reo Pāngarau

Katoa, haurua, hauwhā, tuawhā, hautoru, hauono, ōrite, tiritiri tika, hauraro, haurunga

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 5

Ka toha a Tama rātou ko Lelei, ko Lily i ngā keke pua'a e 5. He ōrite te rahi o te keke pua'a.

E hia te nui o te whiwhinga o ia tangata?

Ka toha a Tama rātou ko Lelei, ko Lily i ngā keke pua'a e 7. He ōrite te rahi o te keke pua'a.

E hia te nui o te whiwhinga o ia tangata?

Ka toha a Tama rātou ko Lelei, ko Lily i ngā keke pua'a e 4. He ōrite te rahi o te keke pua'a.

E hia te nui o te whiwhinga o ia tangata?

Hei āwhina i te kaiako

Me whai pikitia he pereti keke pua'a kia kitea, kia matapaki rānei ngā ākonga i ngā kai ōrite e kainga ana e ō ākonga.

Whakangāwari i ngā ākonga ki te kite i te hiahia ki te taururuku i te wāwāhitanga o te tūemi tiritiri ki te maha o ngā kaitiritiri. Koinei te pūtake o ngā ākonga e whakawhanake ana i te māramatanga ki te pātahitanga whakarea o te tau me te tautapa i roto i te hautanga.

Aroturuki mō ngā ākonga e whakamahi ana i ngā kupu e pā ana ki te tiritiri ōrite me ngā tuatoru.

Kia mōhio ki ngā ākonga e whakamahi ana i te whakaaro whakarea me te kite i te hononga i waenga i te rima hautoru me te aha.

Wā toha

Kowhiri ngā ākonga e whakaatu ana i tētahi tauria e taunaki ana tā ratou whakapae.

Ki te kore tētahi ākonga e whakaatu ana i tētahi tauira, me whakaatu ki ngā ākonga katoa.

Ngā Whakaaro Matua o te Ao

He maha ngā āhuatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei. Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Hono

Tāhopu i ngā whārite ōrite me ngā whakautu mō ia whārite.

$$4 \div 3 = 1 \frac{1}{3}$$

$$5 \div 3 = 1 \frac{2}{3}$$

$$7 \div 3 = 2 \frac{1}{3}$$

Tonoa ngā ākonga kia kōrerorero i te tauira e kitea ana e rātou. Tonoa rātou kia whakamahi i te tauira hei whakaoti:

$$8 \div 3 =$$

$$10 \div 3 =$$

Whainga Ako: Ka ako ngā mokopuna ki te:

Tiria ngā wāhanga katoa kia ōrite.

Whakaotia ngā raru e pā ana ki te whakawehe i tētahi tau oti ki tētahi hautanga.

Ngā Tūmahi Takitahi

Ka toha a Tama rātou ko Sima, Ko Lelei, ko Lily i ngā keke pua'a e 5. He ōrite te rahi o te keke pua'a.

E hia te nui o te whiwhinga o ia tangata?

Ka toha a Tama rātou ko Sima, Ko Lelei, ko Lily i ngā keke pua'a e 7. He ōrite te rahi o te keke pua'a.

E hia te nui o te whiwhinga o ia tangata?

Ka toha a Tama rātou ko Sima, Ko Lelei, ko Lily i ngā keke pua'a e 9. He ōrite te rahi o te keke pua'a.

E hia te nui o te whiwhinga o ia tangata?

Marautanga

Tau 3

Tautohu, te pānui me te tuhi (hei tohu, hei kupu) me te waihanga haurua, hatoru, hauwhā, haurima me ngā hauwaru hei hautanga o te āhua, o tētahi huinga rānei mā te tohatoha ōrite ki ia wāhanga.

Whakatairite me te whakaraupapa hautanga haurua, hauwhā, me ngā hauwaru me te tautohu i ngā hautau ōrite.

Kimi hautanga waetahi o tētahi huinga:
h.t., $\frac{1}{4}$ o te 12.

Tāpiri hautau waetahi he ōrite te tau raro:
h.t., $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$.

Reo Pāngarau

Katoa, hatoru, ōrite.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 6

Kua hangaia te kuia o Mireka te panikeke, ā, kei te miharo a Mireka ko wai ka whiwhi i ētahi atu mea.

E rua tama e tiritiri ana i ngā panikeke e 3 he ōrite.

E whā tama e tiritiri ana i ngā panikeke E 9 he ōrite.

Me mātua whakarite koe i tō whakaatu e tika ana i ngā huarahi rerekē.

Hei āwhina i te kaiako

I te wā o te whakarewatanga, whakatauiria i te panikeke hei whakaaturanga tapawhā.

Whakangāwari i ngā ākonga ki te kite i te hiahia ki te taururuku i te wāwāhitanga o te tūemi tiritiri ki te maha o ngā kaitiritiri. Koinei te pūtake o ngā ākonga e whakawhanake ana i te māramatanga ki te pātahitanga whakarea o te tau me te tautapa i roto i te hautanga.

Tūmanako kia whakaatu ngā ākonga ki ngā tātuhī, ā, me mātua whakarite kia ōrite te rahi katoa mō ia panikeke ina tātuhī.

Wā toha

Tīpakohia ngā ākonga hei tiritiri e whakawhanake ana i ngā whakaaturanga hei whakatika i ā rātou whakaaro, ā, ka wehe i ngā panikeke katoa ki tētahi rahinga hautanga, tiritiri rānei hei rahinga hautanga.

Hono

Whakamahia ngā whakautu ā ākonga hei tono atu ki ngā ākonga kia hopu i ēnei hei hautanga ōrite me ngā tau whakaranu me ngā hautanga hē.

Tonoa ngā ākonga kia tohu i te 10 waru i roto i tētahi tātuhī, kātahi ka tuhi hei hautanga me te tau oti me te hautanga (hei tauira, $\frac{10}{8} = 1\frac{2}{8}$).

Tukuruatia mō ngā rahinga hautanga rerekē.

Ngā Whakaaro Matua o te Ao

He maha ngā āhuatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei. Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ko te hautanga e whakaahua ana i te wehenga ($\frac{a}{b} = a \div b$, a & b he tau tōpū & $b \neq 0$), ā, ka taea te whakamārama i runga i te raina tau mā ngā huarahi e rua. Hei tauira, $\frac{2}{3} = 2 \div 3$. I te raina tau, ka taea te whakamārama i te $2 \div$ te 3 hei wāhanga e 2 e $\frac{1}{3}$ o te wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te pāhono ia hautanga ki tētahi ira ahurei i runga i te raina tau.

Kāore he hautanga iti rawa, nui rawa rānei i te raina tau.

Whaingā Ako: Ka ako ngā mokopuna ki te:

Tiria ngā wāhanga katoa kia ōrite.

Whakaotia ngā raru e pā ana ki te whakawehe i tētahi tau oti ki tētahi hautanga.

Ngā Tūmahi Takitahi

Kua tunua e Papa he parāoa panana. Ko wai ka kai anō?

E 6 ngā tamariki e toha ana i ngā wāhanga 10 o te pāraoa.

E 8 ngā tamariki e toha ana i ngā wāhanga 12 o te pāraoa.

E 4 ngā tamariki e toha ana i ngā wāhanga e 6 o te pāraoa.

E 5 ngā tamariki e toha ana i ngā wāhanga e 7 o te pāraoa.

Me mātua whakarite koe e whakaatu ana, e whakatika ana i tō whakaaro.

Marautanga

Tau 3

Tautohu, te pānui me te tuhi (hei tohu, hei kupu) me te waihanga haurua, hatoru, hauwhā, haurima me ngā hauwaru hei hautanga o te āhua, o tētahi huinga rānei mā te tohatoha ōrite ki ia wāhanga.

Whakatairite me te whakaraupapa hautanga haurua, hauwhā, me ngā hauwaru me te tautohu i ngā hautau ōrite.

Kimi hautanga waetahi o tētahi huinga:
h.t., $\frac{1}{4}$ o te 12.

Tāpiri hautau waetahi he ōrite te tau raro:
h.t., $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$.

Reo Pāngarau

Katoa haurua, hauwhā, tuawhā, hatoru, hautanga, tau hautanga, tau oti, hauwaru, ōrite, wāhanga, wāhanga, tiritiri tika

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 7

E hiahia ana a Miri ki te tiritiri i ana pae tiakarete ki ōna hoa tokorima.
He hauwhā tā rātou o te pae tiakarete.
E hia ngā pae tiakarete e tiritiri ana a Miri?

E hiahia ana a Miri ki te tiritiri i ana pae tiakarete ki ōna hoa tokowaru.
He hautoru tā rātou o te pae tiakarete.
E hia ngā pae tiakarete e tiritiri ana a Miri?

Hei āwhina i te kaiako

Whakangāwari i ngā ākonga kia kite he taurea o te tau hautanga ka taea e rātou te tāpiri, te whakarea rānei.

Me tohu ngā ākonga mā te whakamahi i ngā tātuihi, raina-tau, hautanga rānei hei tohu i ngā wāhanga o te katoa, me te whakamahi i ngā wāhanga hautanga hei hanga i te katoa.

Wā toha

Tīpakohia ngā ākonga e tāpiri ana i ngā tuawhā katoa, ā, ka whiwhi i ngā hauwhā e ono; tāpirihia rānei ngā tuawhā ka whiwhi i ngā hauwhā e ono, ā, tirohia tēnei e ōrite ana ki te kotahi katoa me te rua hauwhā; whakatikaina rānei te raruraru he $6 \times \frac{1}{4} = 1\frac{2}{4}$, $1\frac{1}{2}$ rānei.

Ki te kore e whakamahia tētahi o ngā whakautu, whakatauirā hei huarahi anō.

Hono

Whakapūketetia te rongoā mō ia tūmahi:

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = 6 \times \frac{1}{4} = \frac{6}{4}$$

$$\frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} + \frac{1}{3} = 9 \times \frac{1}{3} = \frac{9}{3}$$

Me pēhea te hopu i ngā āhuetanga e rua e whai ake nei:

Kei te tiritiri a Miri ki ngā hoa tokotoru. Ka hoatu e ia ki ia hoa $\frac{1}{2}$.

Kei te tiritiri a Miri ki ngā hoa tokoono. Ka hoatu e ia ki ia hoa $\frac{1}{8}$.

Ngā Whakaaro Matua o te Ao

He maha ngā āhuetanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei. Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ko te hautanga e whakaahua ana i te wehenga ($\frac{a}{b} = a \div b$, a & b he tau tōpū & $b \neq 0$), ā, ka taea te whakamārama i runga i te raina tau mā ngā huarahi e rua. Hei tauira, $\frac{2}{3} = 2 \div 3$. I te raina tau, ka taea te whakamārama i te $2 \div 3$ hei wāhanga e 2 e $\frac{1}{3}$ o te wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te pāhono ia hautanga ki tētahi ira ahurei i runga i te raina tau.

Kāore he hautanga iti rawa, nui rawa rānei i te raina tau.

Whainga Ako: Ka ako ngā mokopuna ki te:

Tāpirihia ngā hautanga wae (hauwhā me ngā tuatoru).

Whakareatia te hautanga ki te tau oti.

Ngā Tūmahi Takitahi

E hiahia ana a Miri ki te tiritiri i ana pae tiakarete ki ōna hoa tekau.
He haurua tā rātou o te pae tiakarete.
E hia ngā pae tiakarete e tiritiri ana a Miri?

E hiahia ana a Miri ki te tiritiri i ana pae tiakarete ki ōna hoa tokorima.
He hauwhā tā rātou o te pae tiakarete.
E hia ngā pae tiakarete e tiritiri ana a Miri?

E hiahia ana a Miri ki te tiritiri i ana pae tiakarete ki ōna hoa e 8.
Ko te iwa o rātau katoa he ono o te pae tiakarete.
E hia ngā pae tiakarete e tiritiri ana a Miri?

Marautanga

Tau 3

Tautohu, te pānui me te tuhi (hei tohu, hei kupu) me te waihanga haurua, hatoru, hauwhā, haurima me ngā hauwaru hei hautanga o te āhua, o tētahi huinga rānei mā te tohatoha ōrite ki ia wāhanga.

Whakatairite me te whakaraupapa hautanga haurua, hauwhā, me ngā hauwaru me te tautohu i ngā hautau ōrite.

Kimi hautanga waetahi o tētahi huinga:
h.t., $\frac{1}{4}$ o te 12.

Tāpiri hautau waetahi he ōrite te tau raro:
h.t., $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$.

Tau 4

Whiriwhiri i te hautau waetahi o tētahi rahinga mā te toharite.

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana ngā tauraro, kia 1 te otinga:
h.t., $\frac{3}{8} + \frac{3}{8} + \frac{2}{8} = \frac{8}{8} = 1$

Reo Pāngarau

Katoa, hauwhā, tauwhā, hatoru, ōrite, taurunga, tauraro.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 8

Kei te whakarākai a Leilani i tana keke rā whānau ki te tiēre. E 20 ana jellybeans. E kī ana tōna whaea me wehe e ia te keke ki ngā hauwhā, ā, ka hoatu te maha o ngā pīni tiēre ki ia wāhanga. E hia ngā pīni e purua ana e ia ki ia wāhanga?

Kei te whakarākai a Leilani i tana keke rā whānau ki te tiēre. E 18 ana pīni tiēre. E kī ana tōna whaea me wehe e ia te keke ki ngā tuatoru, ā, ka hoatu te maha o ngā pīni tiēre ki ia wāhanga. E hia ngā pīni e purua ana e ia ki ia wāhanga?

Kei te whakarākai a Leilani i tana keke rā whānau ki te tiēre. E 40 ana pīni tiēre. E kī ana tōna whaea me wehe e ia te keke ki ngā tuarima, ā, ka hoatu te maha o ngā pīni tiēre ki ia wāhanga. E hia ngā pīni e purua ana e ia ki ia wāhanga?

Hei āwhina i te kaiako

During the launch, ensure that you reinforce that the set of jellybeans are one whole as part of developing the context.

Have concrete material available if needed for students to select (e.g., fraction tiles, strips of paper) and counters to represent the jellybeans.

Facilitate the students to notice that they are finding a fraction of a whole even when there are a number of items in that set. Also, draw attention to the denominator as naming what the whole is divided into.

Wā toha

Tīpakohia ngā ākonga hei tiritiri ko wai kua whakamahi i tētahi whakaaturanga kua wehea ki ngā wāhanga hautau, kātahi ka whakamahi i te wehenga ā-wāhanga (hei tauira, $20 \div 4 = ?$) kua whakamahi rānei i te pātahitanga kōaro me te tāpiritanga tukurua, te whakarea rānei (hei tauira, $4 \times ? = 20$).

Ki te kore e whakamahia tētahi o ngā rongoā, whakatauirā hei huarahi anō kua kitea e te kaiako e whakamahia ana i mua.

Ngā Whakaaro Matua o te Ao

He maha ngā āhuatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei. Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ko te hautanga e whakaahua ana i te wehenga ($\frac{a}{b} = a \div b$, $a \& b$ he tau tōpū & $b \neq 0$), ā, ka taea te whakamārama i runga i te raina tau mā ngā huarahi e rua. Hei tauira, $\frac{2}{3} = 2 \div 3$. I te raina tau, ka taea te whakamārama i te $2 \div$ te 3 hei wāhanga e 2 e $\frac{1}{3}$ o te wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te pāhono ia hautanga ki tētahi ira ahurei i runga i te raina tau.

Kāore he hautanga iti rawa, nui rawa rānei i te raina tau.

Hono

Whakapūketetia te rongoā mō ia raru:

$$\frac{1}{4} \text{ o te } 20 = 5$$

$$20 \div 4 = 5$$

$$\frac{1}{3} \text{ o te } 18 = 6$$

$$18 \div 3 = 6$$

$$\frac{1}{5} \text{ o te } 40 = 8$$

$$40 \div 5 = 8$$

He aha ngā tauira me ngā pātahitanga e kitea ana e koe?

He aha te ture mō te kimi hautanga o tētahi huinga?

Whainga Ako: Ka ako ngā mokopuna ki te:

Kimihia ngā hautanga o tētahi huinga

Ngā Tūmahi Takitahi

He pēke 12 tō mīhini, ā, ka tiritiri ōrite koe ki tō hoa.

He aha te hautanga ka riro i a koe?

E hia ngā mīhini ka riro i a koe?

He pēke e 24 ngā mīhini, ā, ka tiritiri ōrite koe ki ngā hoa tokotoru.

He aha te hautanga ka riro i a koe?

E hia ngā mīhini ka riro i a koe?

He aha te hauwhā o te 8?

He aha te hauwhā o te 80?

He aha te haurua o te 10?

He aha te haurua o te 100?

He aha te tuatoru o te 6?

He aha te tuatoru o te 60?

Marautanga

Tau 3

Tautohu, te pānui me te tuhi (hei tohu, hei kupu) me te waihanga haurua, hatoru, hauwhā, haurima me ngā hauwaru hei hautanga o te āhua, o tētahi huinga rānei mā te tohatoha ōrite ki ia wāhanga.

Whakatairite me te whakaraupapa hautanga haurua, hauwhā, me ngā hauwaru me te tautohu i ngā hautau ōrite.

Kimi hautanga waetahi o tētahi huinga:
h.t., $\frac{1}{4}$ o te 12.

Tāpiri hautau waetahi he ōrite te tau raro:
h.t., $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4} \cdot \frac{1}{3}$

Tau 4

Whiriwhiri i te hautau waetahi o tētahi rahinga mā te toharite.

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana ngā tauraro, kia 1 te otinga:

$$\text{h.t., } \frac{3}{8} + \frac{3}{8} + \frac{2}{8} = \frac{8}{8} = 1$$

Reo Pāngarau

Katoa, hauwhā, tuawhā, tuatoru, tuarima, tuaono, wāhanga, tiritiri tika, wehewehe.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 9

Kei te tākaro a Tino me ōna hoa tokotoru ki ngā kākano. E 28 ngā kākano kua kohia e rātau. E ōrite ana tā rātau tiritiri i ngā kākano i waenganui i te tokowhā o rātau. E hia ngā kākano ka riro i a rātau? He aha te hautanga o ngā kākano ka riro i a rātau?

Kei te tākaro a Tino me ōna hoa tokorima ki ngā kākano. E 60 ngā kākano kua kohia e rātau. E ōrite ana te tiritiri a rātau i ngā kākano i waenganui i te 6 o rātau. E hia ngā kākano ka riro i a rātau? He aha te hautanga o ngā kākano ka riro i a rātau?

Kei te tākaro a Tino me ōna hoa e 7 ki ngā kākano. E 40 ngā kākano kua kohia e rātau. E ōrite ana te tiritiri a rātau i ngā kākano i waenganui i te 8 o rātau. E hia ngā kākano ka riro i a rātau? He aha te hautanga o ngā kākano ka riro i a rātau?

Hei āwhina i te kaiako

I te wā o te whakarewatanga, me mātua whakapakari koe he kotahi te katoa o te huinga kākano hei wāhanga o te whakawhanake i te horopaki.

Me whakawātea ngā rauemi raima mēnā e hiahiatia ana mā ngā ākonga e tīpako (hei tauira, ngā tāpa hautanga, ngā tīhore pepa) me ngā kaitatau hei tohu i ngā kākano.

Whakangāwari i ngā ākonga kia kite kei te kitea e rātau tētahi hautanga o te katoa ahakoa he maha ngā tūemi kei roto i taua huinga. Me aro atu hoki ki te tautapa hei whakaingoa i te mea kua wehea te katoa.

Wā toha

Tīpakohia ngā ākonga hei tiritiri ko wai kua whakamahi i tētahi whakaaturanga kua wehea ki ngā wāhanga hautau, kātahi ka whakamahi i te wehenga ā-wāhanga (hei tauira, $20 \div 4 = ?$) kua whakamahi rānei i te pātahitanga kōaro me te tāpiritanga tukurua, te whakarea rānei (hei tauira, $4 \times ? = 20$).

Ki te kore e whakamahia tētahi o ngā rongoā, whakatauiria hei huarahi anō kua kitea e te kaiako e whakamahia ana i mua.

Ngā Whakaaro Matua o te Ao

He maha ngā āhuatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei. Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ko te hautanga e whakaahua ana i te wehenga ($\frac{a}{b} = a \div b$, $a \neq 0$), ā, ka taea te whakamārama i runga i te raina tau mā ngā huarahi e rua. Hei tauira, $\frac{2}{3} = 2 \div 3$. I te raina tau, ka taea te whakamārama i te $2 \div 3$ hei wāhanga e 2 e $\frac{1}{3}$ o te wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te pāhono ia hautanga ki tētahi ira ahurei i runga i te raina tau.

Kāore he hautanga iti rawa, nui rawa rānei i te raina tau.

Hono

Record the solution for each of the problems:

$$\frac{1}{4} \text{ o te } 28 = 7$$

$$28 \div ? = 7$$

$$\frac{1}{6} \text{ o te } 60 = 10$$

$$60 \div ? = 10$$

$$? \text{ o te } 40 = 8$$

$$40 \div 5 = 8$$

$$? \text{ o te } 10 = 2$$

$$? \div ? = ?$$

He aha ngā tauira me ngā pātahitanga e kitea ana e koe?
He aha te ture mō te kimi hautanga o tētahi huinga?

Whainganga Ako: Ka ako ngā mokopuna ki te:

Kimihia ngā hautanga o tētahi huinga

Ngā Tūmahi Takitahi

He aha te hauwhā o te 4?
He aha te hauwhā o te 40?
He aha te hauwhā o te 400?

He aha te haurua o te 20?
He aha te haurua o te 200?
He aha te haurua o te 220?

He aha te hauroru o te 9?
He aha te hauroru o te 90?
He aha te hauroru o te 99?

He aha te hauwhā o te 8?
He aha te hauwhā o te 40?
He aha te hauwhā o te 48?

He aha te hauono o te 6?
He aha te hauono o te 30?
He aha te hauono o te 36?

He aha te hauroru o te 9?
He aha te hauroru o te 30?
He aha te hauroru o te 39?

Marautanga

Tau 3

Tautohu, te pānui me te tuhi (hei tohu, hei kupu) me te waihanga haurua, hauroru, hauwhā, haurima me ngā hauwaru hei hautanga o te āhua, o tētahi huinga rānei mā te tohatoha ōrite ki ia wāhanga.

Whakatairite me te whakaraupapa hautanga haurua, hauwhā, me ngā hauwaru me te tautohu i ngā hautau ōrite.

Kimi hautanga waetahi o tētahi huinga:
h.t., $\frac{1}{4}$ o te 12.

Tāpiri hautau waetahi he ōrite te tau raro:
h.t., $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$.

Tau 4

Whiriwhiri i te hautau waetahi o tētahi rahinga mā te toharite.

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana ngā tauraro, kia 1 te otinga:
h.t., $\frac{3}{8} + \frac{3}{8} + \frac{2}{8} = \frac{8}{8} = 1$

Kimi i te hautanga o tētahi tauoti, he tauoti te whakautu mā te whakamahi i ngā meka whakarea, me ngā meka whakawehe:
h.t., $\frac{1}{4}$ o te 40.

Reo Pāngarau

Katoa, hauwhā, tuawhā, hauroru, haurima, hauono, wahanga, tiritiri tika, wehewehe

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 10

Kei te hanga a Susie i tētahi tāwari hai tākaro. E hiahiatia ana e ia kia 3 mita tāwari angiangi, engari he iti ake ngā wāhanga o tōna whaea hei whakamahi māna.

I te tuatahi ka hoatu e tōna Māmā kia $1\frac{1}{2}$ mita ki a ia. Kātahi ka kitea e ia e 3 ngā $\frac{1}{2}$ anō ngā wāhanga kotahi mita te roa?

E hia katoa tōna tāwari? He nui tōna tāwari hei hanga tāwari, hei tākaro?

Kei te hanga a Susie i tētahi tāwari hai tākaro. E hiahiatia ana e ia kia 3 mita tāwari angiangi, engari he iti ake ngā wāhanga o tōna whaea hei whakamahi māna.

I te tuatahi ka hoatu e tōna Māmā kia $2\frac{1}{4}$ mita ki a ia. Kātahi ka kitea e ia e 3 ngā $\frac{1}{4}$ anō ngā wāhanga kotahi mita te roa?

E hia katoa tōna tāwari? He nui tōna tāwari hei hanga i tētahi tāwari hei tākaro?

Hei āwhina i te kaiako

Me wātea he rauemi raima mēnā e hiahiatia ana hei tīpako mā ngā ākonga (hei tauira, ngā tāpa hautanga).

Whakangāwari i ngā ākonga kia kite kia ōrite ngā hautanga hei tāpiri hautau.

Aroturuki mō ngā ākonga e whakamahi ana i ngā kupu ōrite me te whakaaro whanaungatanga.

Wā toha

Tīpakohia ngā ākonga hei tiritiri kua mōhio ki te hiahia ki te tāpiri i ngā hautanga pēnei mā te whakamahi i ngā tikanga ōpaki me ngā whakaaturanga.

Ngā Whakaaro Matua o te Ao

He maha ngā āhuatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei. Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

He ōrite ngā hohenga o te ao tūturu mō te tāpiritanga me te tangohanga o ngā tau katoa mō ngā mahi me ngā hautanga me ngā ā-ira.

Hono

$$\frac{1}{2} + \frac{1}{2} = \frac{2}{2}$$

$$\frac{1}{4} + \frac{1}{4} = \frac{2}{4}$$

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$$

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{4}{4}$$

He aha ngā tauira e kitea ana e koe?

Ka taea e koe te whakaahua i tētahi ture mō te tāpiri hautanga me ngā tautapa ōrite?

Whainga Ako: Ka ako ngā mokopuna ki te:

Hurihia ngā hautanga ki ngā hautanga ōrite.

Whakaotia ngā raru e pā ana ki te tāpiri hautanga.

Ngā Tūmahi Takitahi

$$\frac{1}{2} + \frac{1}{2} + \frac{1}{2} =$$

$$\frac{1}{4} + \frac{1}{4} =$$

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} =$$

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} =$$

$$\frac{1}{4} + \frac{2}{4} =$$

$$\frac{1}{8} + \frac{3}{8} + \frac{2}{8} =$$

$$\frac{2}{6} + \frac{3}{6} =$$

$$\frac{3}{10} + \frac{1}{10} =$$

$$\frac{2}{10} + \frac{3}{10} + \frac{4}{10} =$$

Marautanga

Tau 3

Tautohu, te pānui me te tuhi (hei tohu, hei kupu) me te waihanga haurua, hatoru, hauwhā, haurima me ngā hauwaru hei hautanga o te āhua, o tētahi huinga rānei mā te tohatoha ōrite ki ia wāhanga.

Whakatairite me te whakaraupapa hautanga haurua, hauwhā, me ngā hauwaru me te tautohu i ngā hautau ōrite.

Kimi hautanga waetahi o tētahi huinga:
h.t., o te 12.

Tāpiri hautau waetahi he ōrite te tau raro:
h.t., $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$.

Tau 4

Whiriwhiri i te hautau waetahi o tētahi rahinga mā te toharite.

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana ngā tauraro, kia 1 te otinga:
h.t., $\frac{3}{8} + \frac{3}{8} + \frac{2}{8} = \frac{8}{8} = 1$

Kimi i te hautanga o tētahi tauoti, he tauoti te whakautu mā te whakamahi i ngā meka whakarea, me ngā meka whakawehe:
h.t., $\frac{1}{4}$ o te 40.

Reo Pāngarau

Katoa, haurua, hauwhā, tuawhā, hauono, hauwaru, ōrite.

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 11

Whakamātauria me te whakatautika i tō whakautu mā te whakamahi i ngā whakaaturanga rerekē e 3 neke atu rānei:

He rite tonu te $\frac{2}{4}$ pae tiakarete ki te $\frac{1}{2}$ pae tiakarete?

He rite tonu te $\frac{1}{8}$ pae tiakarete ki te $\frac{1}{2}$ pae tiakarete?

He rite tonu te $\frac{1}{4}$ pae tiakarete ki te $\frac{2}{8}$ pae tiakarete?

He rite tonu te $\frac{1}{2}$ pae tiakarete ki te $\frac{2}{4}$, $\frac{3}{6}$, $\frac{4}{8}$ pae tiakarete rānei?

He nui ake te $\frac{4}{8}$ pae tiakarete i te $\frac{3}{4}$ pae tiakarete?

He nui ake te pae tiakarete 1 i te $\frac{1}{2} + \frac{1}{2}$ pae tiakarete?

E 2 ngā pae tiakarete nui ake i te $2 \times \frac{1}{2}$ pae tiakarete?

He nui ake te $\frac{5}{8}$ pae tiakarete i te $\frac{3}{8} + \frac{3}{8}$ o te pae tiakarete?

Hei āwhina i te kaiako

Tonoa ngā ākonga kia mahi tahi i ēnei i roto i ā rātou rōpū, takirua rānei, me kōrerorero, ka whakamārama, kātahi ka whakaoti i te mea panuku.

Whakangāwari i ngā ākonga kia mōhio kāore rātou e hiahia ki te whakamahi rauemi, tātuhī rānei i ngā wā katoa mēnā ka taea e rātou te whakamahi i te tuhipoka hei whakamārama me te whakatikatika i ā rātou whakaaro.

Kia mōhio ki ngā ākonga e whakamahi ana i te whakaaro whanaungatanga.

Wā toha

Tīpakohia ngā ākonga hei tiritiri ko wai ka taea te whakamārama me te whakatika i ā rātou whakaaro mā te whakamahi i ngā tikanga ōpaki hei whakaatu i ā rātou whakautu.

Hono

Tuhia ō ake rerenga pono, hē rānei e pā ana ki ngā hautanga.

Ngā Whakaaro Matua o te Ao

He maha ngā āhuatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei. Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ko te hautanga e whakaahua ana i te wehenga ($\frac{a}{b} = a \div b$, a & b he tau tōpū & $b \neq 0$), ā, ka taea te whakamārama i runga i te raina tau mā ngā huarahi e rua. Hei tauira, $\frac{2}{3} = 2 \div 3$. I te raina tau, ka taea te whakamārama i te $2 \div 3$ hei wāhanga e 2 e $\frac{1}{3}$ o te wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te pāhono ia hautanga ki tētahi ira ahurei i runga i te raina tau.

Kāore he hautanga iti rawa, nui rawa rānei i te raina tau.

Whainga Ako: Ka ako ngā mokopuna ki te:

Hurihia ngā hautanga ki ngā hautanga ōrite.

Whakatauritea ngā hautanga ki ngā tautapa rerekē.

Whakaotia ngā raru e pā ana ki te tāpiri, ki te tango hautanga rānei.

Ngā Tūmahi Takitahi

Whakaraupapatia ēnei hautanga mai i te iti rawa ki te nui rawa.

1. $\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{3}$ $\frac{1}{8}$ $\frac{1}{6}$

2. $\frac{4}{8}$ $\frac{2}{4}$ $\frac{3}{6}$ $\frac{1}{2}$

3. $\frac{3}{4}$ $\frac{5}{8}$ $\frac{2}{4}$ $\frac{7}{8}$ $\frac{1}{8}$

4. $\frac{4}{4}$ $\frac{1}{2}$ $\frac{6}{8}$ $\frac{1}{4}$ $\frac{2}{8}$

5. $\frac{1}{2}$ $\frac{2}{3}$ $\frac{1}{6}$ $\frac{1}{3}$ $\frac{3}{6}$ $\frac{5}{6}$

Marautanga

Tau 3

Tautohu, te pānui me te tuhi (hei tohu, hei kupu) me te waihanga haurua, hatoru, hauwhā, haurima me ngā hauwaru hei hautanga o te āhua, o tētahi huinga rānei mā te tohatoha ōrite ki ia wāhanga.

Whakatairite me te whakaraupapa hautanga haurua, hauwhā, me ngā hauwaru me te tautohu i ngā hautau ōrite.

Kimi hautanga waetahi o tētahi huinga:
h.t., o te 12.

Tāpiri hautau waetahi he ōrite te tau raro:
h.t., $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$.

Tau 4

Whiriwhiri i te hautau waetahi o tētahi rahinga mā te toharite.

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana ngā tauraro, kia 1 te otinga:
h.t., $\frac{3}{8} + \frac{3}{8} + \frac{2}{8} = \frac{8}{8} = 1$

Kimi i te hautanga o tētahi tauoti, he tauoti te whakautu mā te whakamahi i ngā meka whakarea, me ngā meka whakawehe:
h.t., $\frac{1}{4}$ o te 40.

Reo Pāngarau

Katoa, haurua, hauwhā, tuawhā, hatoru, tau hautanga, hauwaru, ōrite, taurunga, tauraro

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Tūmahi 12

Kotahi te $\frac{1}{2}$ kapu huka hai hanga i te parāoa rewena.
E ono ngā parāoa rewena e mahia ana e to whaea hai mau ki te marae.
E hia ngā kapu huka e whakamahia ana e ia?

Kotahi te $\frac{2}{3}$ kapu huka hai hanga i te parāoa rewena.
E 9 ngā parāoa rewena e mahia ana e to whaea hai mau ki te marae.
E hia ngā kapu huka e whakamahia ana e ia?

Kotahi te $\frac{3}{8}$ kapu huka hai hanga i te parāoa rewena.
E ono ngā parāoa rewena e mahia ana e to whaea hai mau ki te marae.
E hia ngā kapu huka e whakamahia ana e ia?

Hei āwhina i te kaiako

Tonoa ngā ākonga kia mahi tahi i ēnei i roto i ā rātou rōpū, takirua rānei, me kōrerorero, ka whakamārama, kātahi ka whakaoti i te mea panuku.

Whakangāwari i ngā ākonga kia mōhio kāore rātou e hiahia ki te whakamahi rauemi, tātuhī rānei i ngā wā katoa mēnā ka taea e rātou te whakamahi i te tuhipoka hei whakamārama me te whakatikatika i ā rātou whakaaro.

Kia mōhio ki ngā ākonga e whakamahi ana i te whakaaro whanaungatanga.

Wā toha

Tīpakohia ngā ākonga hei tiritiri ko wai e whakamārama ana, e whakatika ana i ō rātou whakaaro mā te whakamahi i ngā tikanga ōpaki hei whakaatu i ā rātou whakautu.

Hono

He aha ngā tauira ka kitea e koe?

$$\frac{1}{2} + \frac{1}{2} = \frac{2}{2}$$

$$\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$$

$$\frac{2}{3} = \frac{1}{3} + \frac{1}{3}$$

Ka taea e koe te whakamārama he aha koe i tāpiri ai i te tau anake? He aha te tohu o te tautapa?

Whakamahia ngā tapa hautanga kia whakaatu ngā whakaaro matua.

Ngā Whakaaro Matua o te Ao

He maha ngā āhuatanga rerekē e taea ai te whakaahua i ngā tau, tae atu ki ngā hautanga.

He mea hira te katoa ki te whakaingoa hautau. E pātahi ana te hautanga ki te rahi o te katoa, o te wae rānei.

Ka taea te whakaatu i te whakataurite o tētahi wāhanga ki te katoa mā te hautanga.

Ko te hautanga e whakaahua ana i te wehenga o te katoa (rohe, huinga, wāhanga) ki ngā wāhanga ōrite.

Ko te tau o raro i roto i te hautanga e whakaatu ana e hia ngā wāhanga ōrite e wehea ana te katoa, te wae rānei. Ko te tau o runga e whakaatu ana e hia ngā wāhanga ōrite e tohua ana.

Ko te hautanga e whakaahua ana i te wehenga ($\frac{a}{b} = a \div b$, $a \neq 0$), ā, ka taea te whakamārama i runga i te raina tau mā ngā huarahi e rua. Hei tauira, $\frac{2}{3} = 2 \div 3$. I te raina tau, ka taea te whakamārama i te $2 \div$ te 3 hei wāhanga e 2 e $\frac{1}{3}$ o te wae ($2 \times \frac{1}{3}$), e 2 rānei ngā wae katoa ($\frac{1}{3} \times 2$); e pāhono ana ia ki te pūwāhi ōrite i te raina tau.

Ka taea te pāhono ia hautanga ki tētahi ira ahurei i runga i te raina tau.

Kāore he hautanga iti rawa, nui rawa rānei i te raina tau.

Whaingā Ako: Ka ako ngā mokopuna ki te:

Whakaotia ngā raru e pā ana ki te tāpiri, ki te tango hautanga rānei.

Ngā Tūmahi Takitahi

Whakaotia tētahi o ngā Tūmahi Aromatawai:

Aromatawai 1: Ngā hautanga (rohe)

Aromatawai 2: Ngā hautanga (tautuhi)

Marautanga

Tau 3

Tautohu, te pānui me te tuhi (hei tohu, hei kupu) me te waihanga haurua, hatoru, hauwhā, haurima me ngā hauwaru hei hautanga o te āhua, o tētahi huinga rānei mā te tohatoha ōrite ki ia wāhanga.

Whakatairite me te whakaraupapa hautanga haurua, hauwhā, me ngā hauwaru me te tautohu i ngā hautau ōrite.

Kimi hautanga waetahi o tētahi huinga:
h.t., o te 12.

Tāpiri hautau waetahi he ōrite te tau raro:
h.t., $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$.

Tau 4

Whiriwhiri i te hautau waetahi o tētahi rahinga mā te toharite.

Tāpiri, ki te tango rānei i ngā hautau, e ōrite ana ngā tauraro, kia 1 te otinga:
h.t., $\frac{3}{8} + \frac{3}{8} + \frac{2}{8} = \frac{8}{8} = 1$

Kimi i te hautanga o tētahi tauoti, he tauoti te whakautu mā te whakamahi i ngā meka whakarea, me ngā meka whakawehe:
h.t., $\frac{1}{4}$ o te 40.

Reo Pāngarau

Katoa, haurua, hauwhā, tuawhā, hatoru, tau hautanga, hauwaru, ōrite, taurunga, tauraro

Ngā Tumanako

Ngā Rongoā, Ngā Pōhēhētanga

Aromatawai 1 (Rohe)

E kī ana a Willow ka taea e ia te whakamatau he ōrite ki . $\frac{3}{5}$ $\frac{6}{10}$

E whakaae ana, e whakahē ana rānei koe ki a ia? Whakamāramatia he aha koe i whakaae ai, i whakahē rānei.

He aha ngā hautanga e mōhio ana koe e ōrite ana tētahi ki tētahi?
Whakamāramatia me pēhea koe e mōhio ai.

Aromatawai 2 (Tautuhi)



I te kura e whakatō kākano ana ngā akomanga. Kei a rātou:

Kotahi hauwhā ($\frac{1}{4}$) o te pēke e 32 kākano.

Kotahi te tuaono ($\frac{1}{6}$) o te pēke e 36 kākano.

Kotahi te rima ($\frac{1}{5}$) o te pēke e 35 kākano.

Ko tēhea pēke kei a ia te nuinga o ngā kākano? Whakaaturia ō whakaaro.