

Te Kaupae 1 Ngā Putanga Ako o te Wāhanga Ako Hangarau

He rauemi tautoko i te Pou Tarāwaho mō te Hangarau

He aha ngā Putanga Ako ā-Wāhanga Ako, me pēhea hoki taku whakamahi?

Ko tā ngā Putanga Ako ā-Wāhanga Ako he tautohu i ngā mōhiotanga me ngā pūkenga me mātua whai e ngā ākonga e rite ai ia mō te aromataawai. Nā ngā Paerewa Paetae i ārahi ngā Putanga Ako ā-Wāhanga Ako. Me whakamahi ki te taha o ngā rauemi NCEA katoa.

Kāore ngā Putanga Ako ā-Wāhanga Ako e whakakapi i tētahi o ngā tuhinga o mua. E whai wāhi atu ana ki tēnei ngā Tautuhinga Aromataawai ā-Waho me ngā Tikanga Aromataawai. Me whakamahi i te katoa o ngā rauemi NCEA e mārama katoa ai te tangata ki tēnā, ki tēnā o ngā here o ngā Paerewa Paetae, e whakamahere ai hoki i tētahi hōtaka tōtōpū o te whakaako, o te ako, o te aromataawai hoki. Kaua ngā Putanga Ako ā-Wāhanga Ako e whakamahia mō ngā whakataunga a te kaiaromataawai. Ko te Paerewa Paetae me ngā Taunakitanga Aromataawai mō ngā Ngohe Aromataawai ā-Roto ka whakamahia mō aua whakataunga.

Ka whakamārama ngā Putanga Ako ā-Wāhanga Ako, i te taha o ētahi atu tuhinga tāpua, ki ngā kaiako ngā mea me whai wāhi ki ā rātou hōtaka o te ako me te whakaako, me ngā pūkenga o ngā ākonga me hihira e rātou, i te aromataawai e whakatata atu ana. Ehara i te mea me ūrite te wā whakaako ki ngā Putanga Ako ā-Wāhanga Ako katoa.

Me tūhono ngā mahi akoako katoa ki ngā ao o ngā ākonga i Aotearoa me Te Moana-nui-a-Kiwa. I te nuinga o te wā, ka kōwhiri ngā kaiako, ngā ākonga rānei i ngā horopaki. Nā reira, kāore ngā horopaki e tautohua i ngā Putanga Ako ā-Wāhanga Ako i ngā wā katoa. Ka tukua pea he tauira hei whakaahua i ngā kaupapa me ngā horopaki, engari ehara i te mea me mātua whai.

E āhei ana ngā ākonga ki te whai wāhi atu ki ngā mahi whakaako e tautoko ana i a rātou ki te eke ki ngā taumata tiketike o te eke paetae. Kei te hāngai te nuinga o ngā putanga ako ki te taumata o Paetae. Heoi, kua whai wāhi hoki ngā putanga ako o ngā taumata eke paetae o runga ake.

Ko te kawatau, ka noho ngā mōhiotanga me ngā pūkenga i ngā Putanga Ako ā-Wāhanga Ako hei tūāpapa i ia Paerewa Paetae. Ka whakawhirinaki atu ngā ākonga ki aua akoranga i te wā o te aromataawai. E tika ana kia mōhio ko te aromataawai he tukanga tīpako noa, nā reira kāore e aromatawaihia ngā mea katoa ka whakaakona.

Level 1 Hangarau Subject Learning Outcomes for Assessment

Companion to Hangarau Learning Matrix

What are the Subject Learning Outcomes and how can I use them?

Subject Learning Outcomes identify the knowledge and skills that students need to be ready for assessment. Subject Learning Outcomes are informed by the Achievement Standards. They should be used in conjunction with the full suite of NCEA materials.

Subject Learning Outcomes do not replace any documents. This includes the External Assessment Specifications and Conditions of Assessment. All NCEA materials need to be used to fully understand the requirements of each Achievement Standard and to plan a robust teaching, learning, and assessment programme. Subject Learning Outcomes should not be used to make assessor judgements. The Achievement Standard and the Assessment Schedule for Internal Assessment Activities are used to make such judgments.

Student Learning Outcomes, alongside other key documents, make clear to kaiako what to include in their teaching and learning programmes and what student capabilities to check for, in the lead up to assessment. Each Subject Learning Outcome does not need the same amount of teaching time.

All learning should connect with students' lives in Aotearoa New Zealand and the Pacific. Teachers or students usually select the contexts. As such, contexts are not always specified in the Subject Learning Outcomes. Examples may be provided to illustrate topics and contexts, but they are not prescriptive.

Students are entitled to teaching that supports them to achieve higher levels of achievement. Subject Learning Outcomes mainly align with outcomes for the Achieved level. However, outcomes for higher levels of achievement are also included.

The knowledge and skills in the Subject Learning Outcomes are the expected learning that underpins each Achievement Standard. Students will draw on this learning during assessment. It is important to note that assessment is a sampling process so not everything that is taught will be assessed.

Paerewa Paetae 1.1 (92052): Te tūhura i tētahi hangarau taketake (Ngā Whiwhinga 4)

Ngā mea kei te aromatawaihia	Ngā Putanga Ako
Te whakamārama i te āhua o te mātauranga Māori i te Hangarau Explain the features of Māori indigenous knowledges and knowledge systems in Technology	<p>Ka mōhio te ākonga ki:</p> <ul style="list-style-type: none"> whakaahua i ngā mātauranga Māori i te hangarau: ko ngā kōrero tuku iho, ko ngā tukanga, ko ngā tikanga, ko ngā kupu, ko ngā rawa. <i>describe Māori indigenous knowledges and knowledge systems in technologies: [in particular] oral history, processes, customs, vocabulary, resources.</i> tautohu i ngā hangarau taketake Māori. <i>identify Māori indigenous technologies</i> whakamārama i te whakamahinga o ngā hangarau taketake Māori. <i>explain the uses for/of Māori indigenous technologies</i>
Te tūhura i ngā āhuatanga o te hangarau taketake a te Māori Explore the features of Māori indigenous technologies	<p>Ka mōhio te ākonga ki:</p> <ul style="list-style-type: none"> tūhura i ngā mahi hanga i tētahi momo hangarau taketake Māori. <i>explore ways to construct a type/s of Māori indigenous technologies.</i> whakaahua i ngā āhuatanga o ngā hangarau taketake pērā i ērā ka whakamahia i ngā momo hangarau: pēnei i te raranga, i te whakairo, i te tāmoko, i te hao ika, i te tāhere manu, i te kohi mātaitai. <i>describe the features of Māori indigenous technologies used when/with; weaving, carving, tattooing, fishing, bird snaring, shellfish gathering.</i>

Paerewa Paetae 1.2 (92053): Te tūhura i tētahi tukanga hangarau (Ngā Whiwhinga 4)

Ngā mea kei te aromatawaihia	Te Putanga Ako Whāiti
Te whakamārama i nga wāhanga me ngā āhuatanga o ngā tukanga hangarau Explain the parts and features of technological processes	<p>Ka mōhio te ākonga ki:</p> <ul style="list-style-type: none"> • whakaahua i tētahi, i ētahi tukanga hangarau rānei ka whāia ki te whakaputa hanga Hangarau. <i>describe one or more technological processes to follow to produce a technological solution.</i> • whakaahua i ngā mātauranga Māori i ngā tukanga hangarau: pēnei i te whakapapa Harakeke me ngā mahi raranga; i te kōrero tuku iho rānei mō te wehenga o Ranginui rāua ko Papatūānuku. <i>describe Māori indigenous knowledges and knowledge systems in technological processes like; the whakapapa of harakeke and it's use in weaving; or the oral traditions regarding the separation of Ranginui and Papatūānuku.</i>
Te whakamārama i te whaitake o te tukanga i ngā mahi hangarau Explain the importance of process in building technologies	<p>Ka mōhio te ākonga ki:</p> <ul style="list-style-type: none"> • tūhura i ngā āhuatanga o ētahi tukanga hangarau, pēnei i te tukanga hoahoa whakaaro, pērā i ērā e whakamahia ana i te marau Hangarau Matihiko. <i>explore the features of some technological processes like the design thinking process for example used in the Digital Technologies curriculum.</i> • whakaahua i ngā wāhanga o te tukanga Hangarau <i>describe the steps/parts of a technological process.</i> <p>Koinei tētahi tauira o tētahi tukanga hangarau me ūna wāhanga:</p> <ol style="list-style-type: none"> 1. Te hiahia/take 2. Te rangahau, te tauāki 3. Te hanga, te tauira 4. Te whakamātau, te whakahou 5. Te hua

	<p><i>Here is an example of a technological process and its parts:</i></p> <ol style="list-style-type: none"> 1. <i>The need/issue (identify)</i> 2. <i>Research and brief</i> 3. <i>The solution, the prototype</i> 4. <i>Testing and refining</i> 5. <i>The product</i>
Te whakaahua i te wāhi ki te hangarau i ngā mahi whakaea i ngā hiahia o te tangata Describe the role of technologies in meeting the needs of people	<p>Ka mōhio te ākonga ki:</p> <ul style="list-style-type: none"> • tūhura i ētahi ara tautohu i ngā hiahia o te tangata hei whakaea mā tētahi tū Hangarau. <i>explore ways in which you identify the needs of people that can be addressed with a technological solution.</i> • tautohu me te whakaahua i ētahi tauira o ngā hanga hangarau ka whakaea i ngā hiahia o te tangata. <i>identify and describe examples of technological solutions that meet the needs of people.</i> • whakaahua i te āhua o ngā mahi o ngā tauira hanga hangarau hei whakaea i ngā hiahia o te tangata. <i>describe the ways in which the examples of technological solutions work to meet the needs of people.</i>

Paerewa Paetae 1.3 (92054): Te whakamārama i te rawa hangarau (Ngā Whiwhinga 6)

Ngā mea kei te aromatawaihia	Te Putanga Ako Whāiti
<p>Te whakamārama i te wāhi ki te mātauranga Māori i roto i ngā rawa hei whakaputa hanga hangarau Explain the place of Māori indigenous knowledges and knowledge systems in resources used to produce technological solutions</p>	<p>Ka mōhio te ākonga ki:</p> <ul style="list-style-type: none"> te whakamārama i te wāhi ngā mātauranga Māori i te wā e whiriwhiri rawa hangarau ana ki te whakaputa hanga Hangarau. <i>explain the place of Māori indigenous knowledges and knowledge systems in the process of selecting resources to produce technological solutions.</i> te whakaahua i ngā rawa hangarau taketake tuku iho a te Māori mai i ngā kōrero tuku iho, tae atu ki ngā rawa hanganga. <i>describe Māori indigenous technological resources from oral traditions to resources to build.</i>
<p>Te whakatakoto i ōna whakaaro ki te wāhi ki te hangarau i ngā mahi tiaki i te oranga tonutanga o te taiao Present their ideas about how technologies contribute to the work needed to ensure the long-term health of our environment</p>	<p>Ka mōhio te ākonga ki:</p> <ul style="list-style-type: none"> te whakaahua i ōna whakaaro ki ngā hanga hangarau kei tō tātou ao e manaaki ana, e takahi ana hoki i tō tātou taiao. Hei tauira, ko te mahi hīnaki - hei hopu tuna - me hanga i tētahi hīnaki me ngā rawa toitū (rawa māori, rawa hou rānei), me mārama ki te pānga o ngā rawa ki ngā koiora katoa i te taiao wai māori, me mārama hoki ki te roa o te ora o te hīnaki (mēnā he poto noa iho tana ora, ā, he rawa e whakamahia ana ki te hanga ehara i te rawa toitū, me aha?). <i>describe, in their own words, the ways in which different technological solutions of our time help and/or hinder the long-term health of our environment. Making hīnaki for catching tuna, for example - it should be built with sustainable materials (natural and/or contemporary resources), its impact on all living things in a freshwater environment should be clear, the lifetime of the hīnaki (if it only has a short lifetime and the resources used are not sustainable, then what?).</i>

	<ul style="list-style-type: none"> te whakamārama i te pānga o ngā whakatau mō ngā rawa hangarau ka whakamahia ki te whakaputa hanga hangarau ki te oranga tonutanga o te taiao. <i>explain the ways in which decisions around resources selected to build technological solutions can impact the long-term health of our environment.</i>
Te whakamātau i te painga o ngā rawa hangarau ki te hanga hangarau mā tētahi tukanga, mā tētahi wāhanga rānei o te tukanga hangarau Test the benefits of resources in building technological solutions using a process or as a part of a technological process	<p>Ka mōhio te ākonga ki:</p> <ul style="list-style-type: none"> te tautohu i ētahi rawa hangarau ka whakamahia ki te whakaputa hanga hangarau. Kei te āhua o te tū hanga ka whakaputaina. <i>identify resources to be used to produce a technological solution. These will depend on the type of technological solution to be produced.</i> te whakamātau i ngā rawa kua tautohua mō te hanga hangarau ka whakaputaina ka whakatau ai i te/ngā rawa e tika ana. <i>test the resources identified and their appropriateness for the technological solution to be produced.</i> te whakamārama i te pai o ngā rawa mō te hanga me te taiao. <i>explain the beneficial nature of the resources to both the product and the environment.</i>

Paerewa Paetae 1.4 (92055): Te whakaputa hanga hangarau (Ngā Whiwhinga 6)

Ngā mea kei te aromatawaihia	Te Putanga Ako Whāiti
<p>Te toro ki ngā mātauranga Māori hei whakaputa i tētahi hanga hangarau Engage with Māori indigenous knowledges and knowledge systems to produce a technological solution</p>	<p>Ka mōhio te ākonga ki:</p> <ul style="list-style-type: none"> te whakamārama i ngā āhuatanga o te hanga hangarau ka whakatairanga i ngā mātauranga Māori. Ka kitea pea aua āhuatanga i roto i te tukanga hanganga, i ngā rawa ka whakamahia, i ngā kōrero tuku iho e hāngai ana, i te hiahia rānei kua tautohua. <p><i>explain the features of the technological solution that promote Māori indigenous knowledges and knowledge systems. These could be seen in the technological process, the resources used, the relevant oral traditions or the identified need.</i></p>
<p>Te whiriwhiri i tētahi tukanga hangarau ki te whakaputa i tētahi hanga hangarau Select a technological process to produce a technological solution</p>	<p>Ka mōhio te ākonga ki:</p> <ul style="list-style-type: none"> te whai i tētahi tukanga hangarau e tika ana hei hoahoa, hei whakaputa hanga hangarau hoki. Me āta kimi, me āta whakarite rānei i tētahi tukanga e tika ana mō te momo hanga. <p><i>follow the best technological process to design and produce a technological solution. You'll need to find or develop a process that is appropriate for the type of solution.</i></p> <p>Koinei tētahi tauira o tētahi tukanga hangarau me ūna wāhanga:</p> <ol style="list-style-type: none"> 1. Te hiahia/take 2. Te rangahau, te tauāki 3. Te hanga, te tauira 4. Te whakamātau, te whakahou 5. Te hua

	<p><i>Here is an example of a technological process and its parts:</i></p> <ol style="list-style-type: none"> 1. <i>The need/issue (identify)</i> 2. <i>Research and brief</i> 3. <i>The product, the prototype</i> 4. <i>Testing and refining</i> 5. <i>The solution</i>
Te whiriwhiri i ngā rawa e tika ana mō te hanga kei te whakaputaina Select the correct resources for the technological solution being produced	<p>Ka mōhio te ākonga ki:</p> <ul style="list-style-type: none"> • te whakamātauhiā ētahi rawa kia kitea te mea e tika ana (he wāhanga hoki tēnei o te tukanga hangarau) ki te hanga i te hanga hangarau ka whakaputaina. <i>test resources to determine which should work best to build the technological solution (this is also a part of the technological process).</i>
Te whakaputa i tētahi hanga hangarau ka whakaea i ngā hiahia o te kaiwhakamahi Produce a technological solution that addresses the needs of the user	<p>Ka mōhio te ākonga ki:</p> <ul style="list-style-type: none"> • te whakaputa hanga Hangarau. <i>produce a technological solution.</i>