

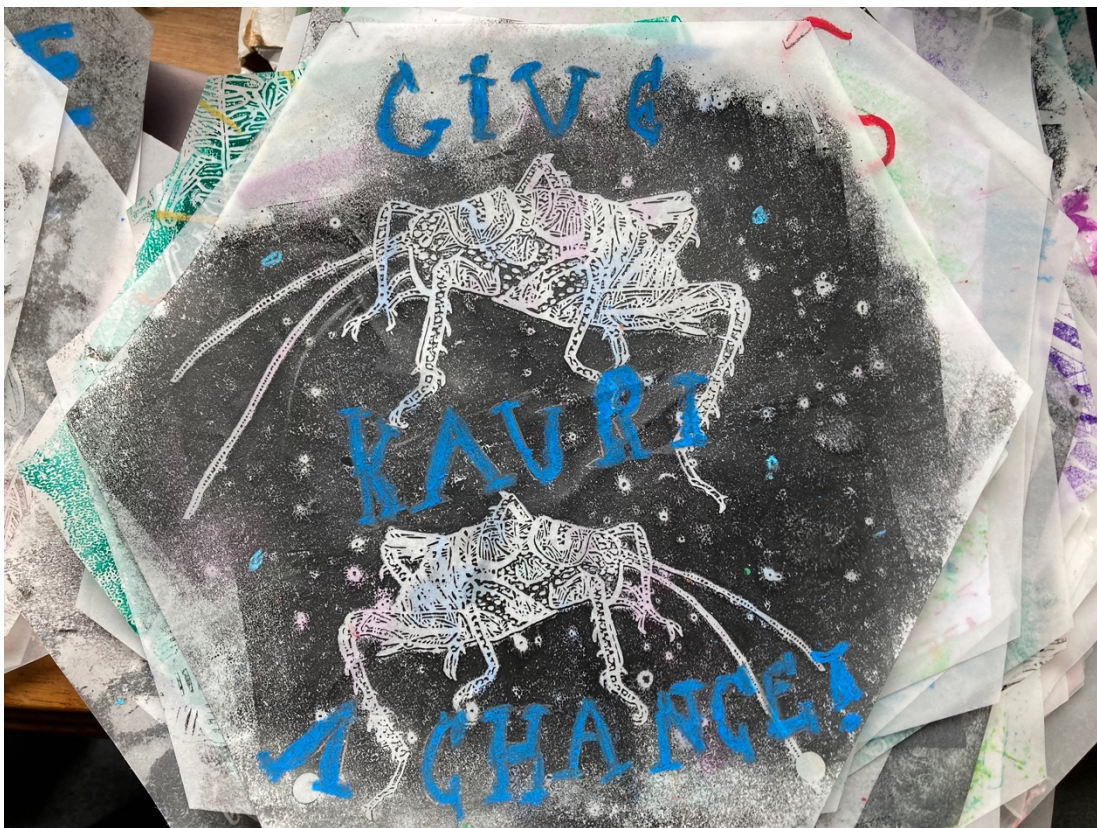
NEW ZEALAND'S  
BIOLOGICAL  
HERITAGE

Ngā Koiora  
Tuku Iho

National  
**SCIENCE**  
Challenges

# Toitū te Ngahere

Uplifting forest health through the arts,  
sciences and mātauranga Māori



Lesson sequences to support learning about  
ngahere ora-forest health,  
kauri dieback and myrtle rust  
for primary school years 4-6.

## About Toitū te Ngahere

Toitū te Ngahere, the Arts in Schools for Forest Health project, was a collaborative research project involving university researchers, five primary schools and their communities, independent artists, scientists and mātauranga experts. The project set out to explore the ways in which the creation of arts projects can support children's, teachers' and communities' awareness, engagement and understanding of kauri dieback and myrtle rust.

Issues of forest health are highly relevant to students and their communities where kauri dieback is destroying kauri, and myrtle rust is devastating taonga species such as ramarama, pohutukawa and manuka. Often children and young people feel disempowered, disenfranchised and overwhelmed by public information about ecological crises.

Complex, socio-environmental issues, like forest health, need to be addressed through collaboration across multiple disciplines. Through Toitū te Ngahere students were connected with experts in different disciplines, to explore their relationship to their local ecosystem and the diseases that endanger it. With their teachers, the students undertook inquiry projects, interweaving mātauranga Māori, the arts and the social and environmental sciences to explore locally relevant questions and issues related to forest health. They designed arts-based projects for both immediate and long-term impact, enabling them to contribute to public debates about forest management, to foster public understanding and buy-in to changing environmental management of the ngahere. Students created artworks to be shared publicly in their community and at the University, which raised awareness of forest health in a locally relevant way. In so doing, they acted collectively as kaitiaki and science communicators about forest health in their local rohe.

The lesson sequences presented here were developed at the end of the project, based on activities developed and led by a range of project collaborators. Part 1 invites students to learn about their local area and local ngahere-forest. Part 2 explores forests as habitats and ecosystems and the ecological and human effects of kauri dieback and myrtle rust. Part 3 provides a guide and examples for designing an arts-based project responding to forest health issues that are relevant to your school and community.

Toitū te Ngahere was part of the research theme [Mobilising for Action](#) within [Ngā Rākau Taketake](#), New Zealand's Biological Heritage National Science Challenge. Find out more here: <https://www.mobilisingforaction.nz/research-ra1-4>

These lesson sequences were created by Aubrey O'Grady, Hannah Neville, Molly Mullen, Marie McEntee, Mark Harvey, Christina Houghton and Ariane Craig Smith as part of the Toitū te Ngahere collaborative research project with Konini School, Kauri Park School, Mulberry Grove School, Kaitoke School and Te Kura o Okiwi between 2021 and 2023.

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<b>Phase 1 – Your local area</b>		
<b>Curriculum Area/s:</b> Science, Social Sciences, The Arts.		
<b>Curriculum Level/s:</b> Level 2-3; Phase 2 (years 4-6)		
<b>Duration:</b> 3 Lessons		
<b>Achievement Objectives/Progression Outcomes for sequence</b>		
<p><b>Curriculum Area 1:</b> Science (2007)</p> <p><i>-L2: Nature of Science – Investigating in science:</i> Extend their experiences and personal explanations of the natural world through exploration, play, asking questions, and discussing simple models.</p> <p><i>-L2: Living World – Life processes:</i> Recognise that all living things have certain requirements so they can stay alive.</p> <p><i>-L2: Living World – Ecology:</i> Recognise that living things are suited to their particular habitat.</p> <p><i>-L3: Nature of Science – Investigating in science:</i> Build on prior experiences, working together to share and examine their own and others' knowledge.</p>	<p><b>Curriculum Area 2:</b> Social Sciences (2023)</p> <p><i>-Understand – “Tuia I runga, tuia I raro, tuia I roto, tuia I waho, tui ate muka tangata” – Interactions change societies and environments.</i></p> <p><i>-Know – “Te tūrangawaewae me te taiao” – Place and environment.</i></p>	<p><b>Curriculum Area 3:</b> The Arts (2007)</p> <p><i>-L2: Visual Arts – Communicating and interpreting:</i> Share the ideas, feelings, and stories communicated by their own and others' objects and images.</p> <p><i>-L3: Visual Arts – Communicating and interpreting:</i> Describe the ideas their own and others' objects and images communicate.</p>
<p><b>Key Competencies:</b></p> <p><i>-Relating to others:</i> This lesson sequence gives children opportunities to relate to people, including visitors, to work in groups, and to consider different points of view on how we understand and relate to place and environment, and what is considered of value or important.</p>		
<b>Lesson 1: Local Knowledge</b>		
<p><b>Learning Intentions:</b></p> <p>- We are learning about our local area and local ngahere from mana whenua and/or pūrākau that are significant to this place.</p>	<p><b>Success Criteria:</b></p> <p>-Understand local pūrākau and why it is significant.</p>	<p><b>Resources/Equipment:</b></p> <p>-A member of the local iwi or hapū to share pūrākau, or pūrākau local/relevant to your school or area to share to the class.</p> <p>-Paper for writing and drawing.</p> <p>-Pens, pencils, crayons, and materials for artwork.</p> <p><b>Safety considerations:</b></p> <p>-Outside organisation/person involved in visiting the school.</p>

<p><b>Launch:</b> Begin with a brief discussion of what they already know about local whakapapa. Discuss what questions they could ask the visitor to help them with their ngahere ora-forest health project.</p> <p><b>Main Activity:</b> Reading/sharing of a pūrākau, preferably local to the area the school is in, by the teacher or a visitor. Encourage students to ask the visitor questions while they are present.</p> <p>After the visit/reading, launch a class discussion about the pūrākau. <i>Potential teacher question prompts:</i> “Is anyone already familiar with this pūrākau?” “Do you know what pūrākau can be used for?” “What does this pūrākau tell us? What does it tell us about the world around us?” “Did you notice any connections to this area, where the school is or where you live?” “Were there any moments in this pūrākau that resonated with you?” “Do you feel like there is a message in this pūrākau that you can take on?”</p> <p><b>Follow up:</b> Draw or write a piece based on the pūrākau told (For example, draw or write about what the place this pūrākau takes place it might be like), draw what they imagine a key character saw at a key moment or draw what they think happened after the end of the story.</p>	<p><b>Teacher Notes:</b> It is recommended that the pūrākau is told by a visitor who is knowledgeable of the area, such as a member of the local iwi or hapū.</p> <p>If you are unable to get a visitor in or unable to find a local pūrākau, this may be a suitable option: <a href="https://polynesia.com/blog/maori-legend-how-the-kiwi-bird-lost-his-wings">https://polynesia.com/blog/maori-legend-how-the-kiwi-bird-lost-his-wings</a></p> <p>If a visitor is present, engage in authentic class discussion here.</p> <p>This activity can require either detailed work or more simplistic work, depending on the time frame available to the class. The aim is for students to demonstrate their understanding of the pūrākau mentioned.</p>
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**Lesson 2: Our Place, Our School**

<p><b>Learning Intentions:</b> -We are learning to visually represent the places in our school that are the most important to us. -We are thinking about how we are connected with the place and environment of our school. -We are learning to use our senses to appreciate and notice things about the natural world around us.</p>	<p><b>Success Criteria:</b> -Create a map of our school and justify the map choices.</p>	<p><b>Resources/Equipment:</b> -Materials for the maps: large pieces of paper, sticky notes, glue, pencils, pens, crayons, vivids/markers, smaller pieces of paper, scissors.</p> <p><b>Safety considerations:</b>-When exploring ‘taste’, ensure it is only done with teacher supervision and with things we already know are edible (vegetables, fruits, herbs, etc that are growing in the school garden). Or, choose to omit this sense from the activity.</p>
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<p><b>Launch:</b>  Ask students if anyone can name the five senses: sight, hearing, touch, taste, smell.  Do the sensory warm-up outlined in detail below<sup>1</sup>.  Ask students to pay attention to and see if they can use their five senses to describe things as you walk around the school.</p> <p><b>Main Activity:</b>  Walk around the school and engage in natural conversation with students. Let the students decide where to go. Teachers may prompt students to notice certain things such as: <i>“Does anyone remember what sort of tree that is? What other trees do we have around our area?”</i> Teachers may also prompt students to think of less obvious places in the school grounds: <i>“Is there anywhere important in the school that we have not visited yet?”</i></p> <p>Back in class, divide students into groups of 3 or 4. Discuss what a landmark is. Ask the group to write the landmarks in their school down.  Ask the children about their favourite places around the school and school grounds. After a few minutes of discussion, ask each student to write down their favourite place on a sticky note.  As a class, the favourite places are grouped (by sticking them on a whiteboard example) and then read out. Discuss these places and whether they are the same or different to the landmarks.  <i>Potential teacher questions:</i>  “Is there anything we notice about the places we listed as favourites? And those you listed as landmarks?”  “Why are the landmarks important?”  “Why are your favourite places important?”  “Who uses these different places in the school and what for?”  “Are there any places we are missing?”</p> <p>In groups again, they can add to their list of landmarks with any places in the school and school grounds that they now think are important.</p> <p>Students are now tasked with creating large maps using the landmarks and any other places they feel are important in the school. In their groups, they are instructed to create the school on paper. This could be through drawing, writing, symbols. It is up to the students how they decide to design their map.</p> <p>You could look at different kinds of maps for inspiration.</p> <p><b>Follow up:</b></p>	<p><b>Teacher Notes:</b></p> <p>When speaking about ‘taste’, discuss with students the danger of tasting the environment. Perhaps and agree whether there is anything in the school grounds that they can safely taste. Or, choose to omit this sense from the activity.</p> <p>Try to keep minimum teacher led input for this. The idea is to get students noticing and talking about their surroundings and for the teacher to get a ‘student-eye’ view of the school.</p> <p>Try to avoid providing input about the landmarks or mapping choices the students are making. We want to see the environment from their perspectives.</p> <p>It is okay if the maps are not finished. Display them in a place where students can continue adding to them throughout the rest of the module.</p> <p>Reserve 15 minutes at the end of the lesson for this.</p>
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Regardless of completion levels, bring students back together and go around the groups for students to present their maps. Students will tell the class:

- What each part means.
- Their favourite part to make for the map.
- Why they chose to layout the map the way they did.
- Is there anything on the map that connects to the pūrākau they heard or from the visitor?

Individually, choose one place from their map and do a piece of descriptive writing about the sensory experience of that place, drawing on what they noticed on the walk. These pieces of writing could be added to or linked to their maps.

- Discuss what they could do next with their maps.

**Revisiting the lesson:**

Encourage students to add to their maps over time. Bring in the idea of ‘imagination’ as a way we ‘sense’ or relate to a place. Add an addition to the maps that focuses on what students wish the school had now or what they imagine it might be like in the future. These may be added to the map with different colours of paper to distinguish between what is there, what they would like to be there and what they imagine will be there in the future.

The maps created in this lesson will be useful in Phase 2 when learning about food chains. It may be useful to briefly outline what a food chain is during this lesson or during a follow up lesson. Draw students’ attention to the maps they created and make the comparison between ngahere food chains and school ‘food chains’. Questions to ask: Who or what is part of a ‘foodchain’ in our school? What role do they play in the school food chain? How do they interact with others and the wider school environment?

**Lesson 3: Ngahere sensory walk**

**Learning Intentions:**

- We are learning to use our senses to appreciate and notice things about the natural world around us.
- We are learning how people can affect the natural environment.
- We are collecting information about the ngahere by observing the natural world.

**Success Criteria:**

- Use four senses to notice features in/around the ngahere/bush.
- Understand why we move consciously and carefully through the ngahere/bush.
- Understand some signs that a ngahere is healthy.

**Resources/Equipment:**

- Nature Journals (made before the lesson by students)<sup>2</sup>, worksheets<sup>3</sup> and pens/pencils. (please note that worksheets should be glued into workbooks before or after going on the walk)

**Safety Considerations:**

- Consider whether the ngahere being visited is protected and who cares for it.
- Appropriate procedures must be carried out. Like shoes must be clean and sanitised before

		<p>entering the ngahere/bush and when leaving if it is a kauri forest.</p> <ul style="list-style-type: none"> <li>-Students and teachers should be aware of the health of the environment and leave the ngahere/bush as it was when they entered.</li> <li>-If leaving the school for the trip, appropriate RAMS should be completed.</li> <li>-When exploring the senses, taste should not be explored due to unknown environmental factors.</li> </ul>
<p><b>Preparation</b>  <b><i>Before the ngahere visit</i></b>  Students can make their own nature journals to capture their observations during the visit. Instructions for making a nature journal can be found in the resources section below<sup>2</sup>.</p> <p>Repeat or recap the sensory warm up.  Introduce students to the worksheet<sup>3</sup> about senses and stick or copy this into their nature journals.  “What sort of things do we expect to see? Hear? Smell? Touch? In the ngahere?”</p> <p>Facilitate a class discussion about the ngahere  Potential teacher questions:  “Who has been to this ngahere before?”  “Is there anything that makes it special?”  “Did we learn anything about this ngahere or the area it's in from the pūrākau or visitor?”  “Do you know what could be growing in this ngahere?”  “Does anyone know how old this ngahere is?”  Talk about, or find out, who is involved in looking after it.</p> <p>Prepare for someone to take some photos of the ngahere you visit.</p> <p><b><i>At the start of the ngahere visit</i></b>  Talk to students about safety considerations when going into a ngahere environment.  -Don't touch or break anything; Leave everything as you found it.  -Clean and sanitise shoes before going in and when coming back out to prevent spread of diseases (if in a ngahere with kauri).  -Don't wander off alone, stick with your group/adult and to the track.  -Do they need to follow any tikanga before going into the ngahere?</p>		<p><b>Teacher Notes:</b></p> <p>Encourage students to speak about what they know. Write any comments about ngahere ora-forest health on the board.</p>

<p><b>Main Activity:</b>  Consider spreading groups of children, with an adult, at intervals along the track so each notices things in a different setting.</p> <p>Have students work individually to limit discussion noise. Encourage quiet working to fully notice and be in the environment, discourage loud and startling sounds that could distract and disturb the environment.</p> <p>Students and teacher should write or draw things as they encounter them, using their nature journals/worksheet.</p> <p><b>Follow up:</b>  As a class, discuss what you noticed. These noticings could be organised around each of the senses.  Was there anything they noticed that could be a sign that the forest is healthy or unhealthy?  Research indicators of a healthy ngahere.  Listen to a recording from a healthy or old-growth ngahere, like this one from Kapiti Island:  <a href="https://youtu.be/3upDFBcoqBw?si=fLfa9Td2S8LL7sPE">https://youtu.be/3upDFBcoqBw?si=fLfa9Td2S8LL7sPE</a>  How does it compare to the sounds they heard in the ngahere they visited?  Look at any photos they took and compare them to photos or paintings of a healthy ngahere.</p> <p>Students could write, draw, or embody through movement and sound, what they wish or imagine the ngahere will be like in 5, 10, 50, 100 years time, if people continue to protect and care for it.</p>	<p>Remind students not to taste things on their own for safety. Remind students to check with an adult before they touch anything. Follow tikanga and expert guidelines for the place you are visiting.</p>
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## Phase 1 resources

### <sup>1</sup> Senses Warm Up

Begin by standing in a circle as a whole group and explaining we will warm up our senses. Start by asking the students what our senses are, not giving a specific number to see if they have any less-thought-of senses they would like to add. Touch, sight, smell, taste and hearing should come up, but there might also be ideas around imagination, sensory movement, feelings etc.

Before we get started discussing these senses, we need to warm up our tinana and tune into each sense individually. Below is a template example of gently engaging with each sense and connecting them to our bodies. Alternatively, you can ask the students for examples of how they would like to warm up each sense and get one person to lead each activity.

<b>TOUCH</b>	Fingers to fingers tapping. Tap your thumb to the point of each finger on the same hand, and see if you can get a good rhythm going. Then place your fingers on the very top of your head and pitter-patter them down your face, across your chest, along your arms, back to your puku and all the way down your legs.
<b>TASTE</b>	Run your tongue along your teeth, top and bottom. Then put your tongue out as far as you can and say a small tongue twister (e.g. Red Leather, Yellow Leather); now do the same with your tongue to the left, now to the right!
<b>SMELL</b>	To wake up our smell, let's take in three big breaths, in and out through our nose. See if you can feel the air you're breathing in going all the way down to your puku and back up again: Ha ki roto (breathing in), Ha ki waho (breathing out)
<b>HEARING</b>	For this one, we need to go absolutely silent. Close your eyes, and this time let's pitter-patter our fingers in a circle from our chin up over our ears to the top of our heads. Can you hear the sound of your fingers before you touch your ears? Now cup your ears to exaggerate hearing and see if you can hear anything beyond the school or classroom.
<b>SIGHT</b>	Keeping your head still, can you move your eyes around from the top to the sides and bottom in a circle? Now place your arms out in front of you, psalm together, before slowly separating them to your sides while still looking straight ahead. See how far your arms can go back before you lose sight of them!

Once all these have been discussed, have fun and see if anyone can do all the activities simultaneously!

If other senses are brought up, ask the students how they think we could warm them up. For example, how could we warm up our imagination?

Below are examples of connecting these senses back to Te Taiao in Aotearoa. You could discuss these as you warm up that sense or use it as a jumping-off point to start a later kōrero around nature's senses.

<b>Pekapeka Ears</b>	Pekapeka have larger ears than megabats found overseas. They use echolocation and can hear the reflection of sound. In Te Ao Māori, the Pekapeka represents the interwoven nature of two worlds; the living and the spirit, the seen and the unseen.
<b>Kārearea Eyes</b>	Eight times as powerful as human eyes!
<b>Kiwi Nose</b>	The kiwi has nostrils right at the end of its long beak, meaning it can smell its kai underground!
<b>Wētā Taste</b>	They have structures on the sides of their mouths that allow them to taste without biting into anything!
<b>Kekeno touch</b>	Seals have highly sensitive whiskers that help them find kai. Their whiskers can sense movement in the water up to hundreds of metres away, even if they are moving themselves!

<sup>2</sup> Making a nature journal: <https://www.doc.govt.nz/globalassets/documents/getting-involved/students-and-teachers/learning-in-nature-activity-cards/learning-in-nature-activity-cards-english.pdf>

### <sup>3</sup>Senses worksheet

<p>What can I see?</p>	<p>What can I hear?</p>
<p>What can I smell?</p>	<p>What can I touch? (What might I have been able to touch?)</p>
<p>What do you wish or imagine you could see/hear/smell/touch/taste in the ngahere if you came back in five years time?</p>	

<b>Phase 2 – Ngahere Ora – Forest Health</b>		
<b>Curriculum Area/s:</b> Science, Social Sciences, The Arts.		
<b>Curriculum Level/s:</b> Level 2-3; Phase 2 (years 4-6)		
<b>Duration:</b> 5 Lessons		
<b>Achievement Objectives/Progression Outcomes for sequence</b>		
<p><b>Curriculum Area 1:</b> Science (2007)</p> <p><i>-L2 – Nature of Science - Investigating in science:</i> Extend their experiences and personal explanations of the natural world through exploration, play, asking question, and discussing simple models.</p> <p><i>-L3 - Nature of Science – Investigating in science:</i> Build on prior experiences, working together to share and examine their own and others’ knowledge.</p> <p><i>-L2 – Living world – Life processes:</i> Recognise that all living things have certain requirements so they can stay alive.</p> <p><i>-L2 – Planet Earth and beyond – Interacting systems:</i> Describe how natural features are changed and resources affected by natural events and human actions.</p>	<p><b>Curriculum Area 2:</b> Social Sciences (2023)</p> <p><i>-Understand – “Tuia i raro, tuia i roto, tuia i waho, tui ate muka tangata”</i> - Interactions change societies and environments.</p> <p><i>-Know – “Te tūrangawaewae me te taiāo”</i> - Place and environment.</p> <p><i>- Do – “Te ui pātai whaihua hei ārahi tūhuratanga whaitake”</i> – Asking rich questions to guide worthy investigations. I can: Ask a range of appropriate questions to help focus on investigation on social issues and ideas.</p> <p><i>-Do – “Te whakairo huatau”</i> – Thinking conceptually. I can: Define and explain concepts that are relevant to what I am learning about, using relevant examples.</p>	<p><b>Curriculum Area 3:</b> The Arts (2007)</p> <p><i>-L2 – Drama – Developing practical knowledge:</i> Explore and use elements of drama for different purposes.</p>
<p><b>Key Competencies:</b></p> <p><i>-Thinking:</i> This lesson sequence gives students opportunities to engage in creative and critical thinking to find out and make sense of information and ideas about forests, living creatures in forests and forest health. The tasks require them to express curiosity, ask questions, actively seek answers and information and problem solve.</p>		
<b>Lesson 1: What is in the ngahere?</b>		
<p><b>Learning Intentions:</b></p> <p>-We are learning about important features of our ngahere and what lives there.</p>	<p><b>Success Criteria:</b></p> <p>- Children can identify and describe features of a forest habitat and identify what they would find living in the ngahere.</p>	<p><b>Resources/Equipment:</b></p> <p>-Resources on Forest Layers<sup>1</sup></p> <p>-Photos and nature journals from forest visit</p> <p>-Paper, pencils, crayons, markers, pens, paint</p> <p>-Devices/books for drawing references</p>
<p><b>Launch:</b></p> <p>Find out what the children already know about the ngahere by discussing the ngahere they have visited, including the school visit. “What lives in the ngahere in Aotearoa?”</p>		<p><b>Teacher Notes:</b></p>

<p>Look at the photos from the ngahere they visited and their nature journals as a reminder. What living things did they see in the forest they visited? What is likely to live in their local ngahere that might not live elsewhere in Aotearoa? Write their suggestions on the board.</p> <p><b>Main Activity</b>  Students will be creating an art piece of a ngahere, labelling each layer and what they may find living in that layer.  Look at and discuss the resources that show the layers of the forest: forest floor, undergrowth, sub-canopy, canopy, and emergent layer<sup>1</sup>.  In small groups the children plan and draw a ngahere.  Give them copies of the photos taken on their visit to help them plan what to include, or another good image of a ngahere.  They could begin by drawing pencil lines to represent the forest layers and then plan what they need to include in each layer.  Once they have an initial plan and sketch, use books or web-resources about Aotearoa ngahere to research what plants, fungi and animals would be living in the ngahere they have drawn. This can inform another phase of planning and sketching.  Once they are satisfied with their sketch, they can paint/colour and label their picture.</p> <p><b>Follow up:</b>  Discussion: What have they learnt about the ngahere and the things that live there that they did not know before. What factors might affect what grows or lives in the ngahere in our region? Why do you think it is important for us to know about our ngahere ecosystem?</p> <p><b>Linking activity:</b>  In Phase 1, students created a map of the school environment and were encouraged to revisit this whenever they received new information or noticed something new. Can they see any similarities or connections between their school maps and their drawings of the ngahere? Is there anything that they now know might live in local ngahere that they might also find in their school grounds?</p>	<p>Use the Forest Layers resources listed below if unfamiliar. There are other resources available that you may wish to use, these particular ones are specific to Aotearoa.</p> <p>Students may require devices or books to help them with their drawings.</p>
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**Lesson 2: What do plants and trees in the ngahere need to survive?**

<p><b>Learning Intentions:</b>  -We are learning about the different parts of a plant and what it needs to survive.</p>	<p><b>Success Criteria:</b>  - Children can identify the different parts of a plant and what a plant or tree needs to survive.</p>	<p><b>Resources/Equipment:</b>  -Botanical illustrations of Aotearoa plants and trees  -Nature journals  -pencils, coloured pencils or paint.  -Devices/books for researching specific plant species.  -What plants need to grow resource<sup>2</sup></p>
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**Launch:**

Have a potted plant, a photo of a plant or a drawing of a plant to look at.  
 What parts of the plant do they already know?  
 What do they know about what the different parts of the plant do?  
 Are there any parts of the plant they do not know about? How could they find out?  
 Use devices, books, or expertise from someone in your school to help name the different parts of the plant and understand what the parts do.

**Main Activity**

Each child chooses a favourite plant or tree that lives in the ngahere in their region.  
 Begin by looking closely at an actual example of that plant or a good photograph.  
 Make drawings/sketches of their plant and the parts of the plant in their nature journal.  
 Do a leaf rubbing if they can get a leaf.  
 Look together at botanical drawings for inspiration.  
 Use their knowledge about parts of plants to label their drawings/rubbings.  
 Can they find out the Te Reo Māori and scientific names for their plant? Does it have any other names?

Discuss as a class what they think their plants need to grow and survive.

Watch the video How plants grow for kids<sup>2</sup>, use a book or resource that you know of to learn more about what plants need to grow and survive.

What new questions or information can they now add to their nature journal about their plant? For example, why might the plant's leaves be the shape they are?

**Follow up**

Students continue to research their plant and record what they find in their nature journals.  
 What can they find out about what humans use their chosen favourite plant/tree for?  
 What can they find out about what other species have a connection to their plant e.g. that eat it or grow on or around it?  
 What plant family does their plant or tree belong to?

**Lesson 3: Ngahere relationships - food chains**

<b>Learning Intention:</b>	<b>Success Criteria:</b>	<b>Resources/Equipment:</b>
-We are learning about food chains in the Aotearoa ngahere	-Understand what a food chain is and what food chains are present in their ngahere	-Pictures of the ngahere that they made in Lesson 1 -Diagrams of food chains -Stickers or blank card badges -Nature journals
<b>Launch</b> Introduce or recap the parts of a food chain: Producers, consumers and decomposers. Look at the children's pictures of the ngahere from the first lesson, what producers, consumers and decomposers can they see in their pictures? Look at diagrams of food chains, what do they notice? What do they not know or understand about food chains? What do they think the arrows represent (transfer of energy from the organism being eaten to the one doing the eating)?		

<p><b>Main activity</b>  Play food chain tag<sup>4</sup>  Students are assigned to be producers, consumers or decomposers.  You need Four consumers, six decomposers, and everyone else is a producer.  Once they have their role, they can make a sticker or badge showing what organism they want to be in that category, choosing something that would live in an Aotearoa Ngahere e.g. Producer: Puriri Tree, Consumer: Kereru, Decomposer: huhu larvae. They could practice how to move like their organism.</p> <p>In the game, students move around in a defined area e.g. around the hall or a clear classroom space. Consumers want to eat the producers; they do this by tagging them. Producers need to avoid the consumers, but if they get tagged, they must either sit down or freeze (choose what works). Decomposers can eat/tag the frozen or sitting (dead) producers, this regenerates them into new producers, so they can rejoin the game.</p> <p><b>Follow up</b>  Find out what food chains the tree/plant they chose in Lesson 2 would be part of and draw and label the food chain in their nature journal.</p>	<p>You can vary the speed that this game is played at. Playing it in slow motion might make it easier to pay attention to the dynamics between the different roles. You could also have a sound you make to pause the game and prepare questions to ask the students to encourage them to reflect on what is happening for the organism that they are playing.</p>
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**Lesson 4: Threats for forest health: Myrtle Rust and Kauri Dieback**

<p><b>Learning Intention:</b>  -We are learning about threats to ngahere health, the effects of myrtle rust, and kauri dieback, and what we can do to help.</p>	<p><b>Success Criteria:</b>  -Know how myrtle rust and kauri dieback can spread, the effects of these diseases on plants and food chains and how to help prevent the spread.</p>	<p><b>Resources/Equipment:</b>  -Resource about Myrtle Rust and Kauri Dieback or a visitor/expert talking about one or other pathogens.  -Food chain tag stickers/badges  - Myrtle Rust Video<sup>5</sup>  - Kauri Dieback Video<sup>6</sup></p> <p><b>Safety Considerations:</b>  -Consult the School Safety policy and procedures if a visitor or expert is visiting.</p>
<p><b>Preparation</b>  Before this session, explain that you will have a visitor who knows about diseases that make trees and plants sick. Or, that you will be watching videos about diseases that affect Aotearoa plants. Prepare questions for the visitor or for them to have in mind and reflect on when they watch the videos.</p> <p><b>Launch:</b>  Have a discussion to introduce the idea that, like people, plants and trees can get sick.</p>		<p><b>Teacher Notes:</b></p>

<p>Explain that you will play the food chain tag game again, but this time there is an extra complication, a disease has been spread to the forest which can kill the trees and stop new trees growing.</p> <p>Set up the game as before with Producers, Consumers and Decomposers. This time, also select one child to be the pathogen.</p> <p>Remind them of the game instructions and explain that they will play as before but this time, the student who is the pathogen is also going to tag as many of the tree Producers as they can. If someone is tagged by the pathogen, they must leave the game area/move to the edge, and so do any other tree Producers within arm's distance of the Producer that was tagged. Producers who are tagged by the Pathogen, rather than a Consumer, cannot rejoin the game.</p> <p>Introduce the scene: We are a beautiful ngahere in Aotearoa. There are many types of trees in this ngahere. All the trees are lovely and healthy, with all members of the ngahere whanau having what they need to survive. But one day, the ngahere is struck by a disease.</p> <p>At the end of the game reflect on what happened. Who is left over? What might this mean for our ngahere now and for the other members of the ngahere family? Did this feel like a fair game? Let them know we will visit it again later.</p> <p><b>Main Activity:</b> Have a myrtle rust and kauri dieback expert visit or Zoom the class. Alternatively, use the videos on Myrtle Rust and Kauri Dieback. Facilitate a discussion based on the prepared questions.</p> <p><b>Follow up:</b> Potential follow up questions “Can you tell me what Myrtle Rust and Kauri Dieback both do?” “How are they spread?” “What are we able to do about it?” “What have we learnt so far that tells us why we should care about what happens to the Kauri and Myrtle trees?”</p> <p>Students could draw a diagram to show the life cycle of one of the pathogens</p>	<p>Myrtle Rust Video<sup>5</sup> Kauri Dieback Video<sup>6</sup></p> <p>There is an example in the Kauri Protection resource<sup>7</sup></p>
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**Lesson 5: How kauri dieback kills kauri trees**

<p><b>Learning Intention:</b> -We are building on what we learnt about what plants need to grow and survive by learning</p>	<p><b>Success Criteria:</b> -Know how plant diseases like kauri dieback affect the health of trees.</p>	<p><b>Resources/Equipment:</b> Kauri Protection resource Plastic straws Pins</p>
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<p>how kauri dieback kills kauri trees.</p>		<p>Cups Water/Juice Timers Nature journals or paper and pencils to take notes.</p>
<p><b>Launch:</b> Recap what they learnt about what plants and trees need to grow and survive. What have they found out so far about how myrtle rust and kauri dieback make plants sick? What are they interested in knowing more about?</p> <p><b>Main activity</b> Organise the class into 5 groups. Each group has a cup of juice/water and a straw. Each straw has a different number of pin holes in it above the juice/water line (each representing a different stage of infection). On a signal, one member of each group tries to suck up all the juice in their cup through the straw. Someone else in the group times them and writes down the time. Compare the time taken by each group to suck up all the juice.</p> <p>Discuss how the holes in the straws represent the rotten tissues in the kauri, and how this affects the uptake of water and nutrients from the soil.</p> <p>Discussion: Why does the quality of the soil and water in a ngahere matter?</p> <p><b>Follow up</b> Who has a role in protecting and caring for our ngahere? Find out what actions people are taking or could take to protect the ngahere from kauri dieback and/or myrtle rust. Can they find any information about research being done into these diseases?</p> <p>The sequence above could also be extended with a range of hands-on science activities that explore science and water quality.</p>		<p><b>Teacher Notes:</b>  This activity is from the Kauri Protection resource<sup>7</sup>.</p> <p>Make the holes in the straws before the lesson.</p>
<p><b>Lesson 6: Mātauranga Māori, plants and human health and wellbeing (how plant diseases can affect people)</b></p>		
<p><b>Learning Intention:</b> -We are learning about the significance of the plants in our ngahere for Māori and for human health.</p>	<p><b>Success Criteria:</b> -Identify plants used for rongoā and kai, what they are used for, the tikanga surrounding them, and their significance.</p>	<p><b>Resources/Equipment:</b> -Devices -Photos of plants -Source of expertise about plants used for rongoā and kai<sup>3</sup> -Paper, felts, markers, pens, crayons, pencils (for presentation).</p>
<p><b>Launch:</b></p>		<p><b>Teacher Notes:</b></p>

<p>Ask students “What is rongoā?” and “What are some types of kai or rongoa that we may find in our ngahere/bush or school?”</p> <p>Share pictures of plants that are important for rongoā and kai that you have taken from around the area. (Or, if you are able to, speak to an expert or visit a mara kai or rongoā garden)</p> <p>Ask students to identify the plants and “What are these plants used for?” Ask if they know the significance of these plants and what the tikanga behind using these plants is.</p> <p><b>Main Activity:</b> This can be done individually or in groups. Students pick a plant used for rongoā and/or kai (find out together first if there is any tikanga that need to be followed when doing this). For each plant, students need to create a presentation for the class. These presentations can be created in a variety of ways, it could be a drawing, a poster, a slideshow, a performance.</p> <p>Each presentation must include:</p> <ul style="list-style-type: none"> <li>-A title</li> <li>-A sketch of the plant</li> <li>-What is the plant used for? What is the traditional Māori use?</li> <li>-Where is it found?</li> <li>-What growing conditions does the plant require?</li> <li>-What is the conservation status of the plant?</li> <li>-What are the threats to this plant’s survival?</li> <li>-What is the tikanga behind collecting the plant?</li> <li>-Is there any other usages you can find for it? How is it used or represented in toi Māori?</li> <li>-One fun fact about the plant.</li> </ul> <p><b>Follow up:</b> Students present their findings to the class. Why does it matter to people if plants get sick with diseases like kauri dieback and myrtle rust?</p>	<p>Have a list of native plants in your area that are important for rongoā and kai available in case of low engagement. Seek advice from someone with this expertise in advance if needed.</p> <p>If your school allows homework, you may ask students to take pictures of plants they know of and bring them in/have them emailed to you. If homework is against policy, you may wish to take the class for a walk at an earlier time and take photos with them, or you may take them in advance.</p> <p>Encourage students to try free hand drawing their sketch by looking at the plant or a picture of the plant and copying it. Avoid tracing.</p>
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## Phase 2 resources

<sup>1</sup> Forest Layer Resources: <https://nzconservation.wordpress.com/tag/forest-layers/#:~:text=A%20typical%20New%20Zealand%20bush,canopy%2C%20canopy%20and%20emergent%20layer.&text=The%20forest%20floor%20is%20typically,land%20snails%20and%20velvet%20worms>

and

<https://teara.govt.nz/en/diagram/11652/layered-forest>

<sup>2</sup> What plants need to grow resource: <https://youtu.be/5hSC1-dcFhQ?si=L-pvB1eVIW9NTSkN>

<sup>3</sup> Plants used for rongoā: <https://www.sciencelearn.org.nz/resources/185-rongoa-maori> and <https://www.canopy.govt.nz/ngahere-maori/species/rongoa/>

<sup>4</sup> Food chain tag: <https://www.scienceworld.ca/resource/food-web-tag/>

<sup>5</sup> Myrtle Rust Video: <https://www.youtube.com/watch?v=8IEAs3viVyE>

<sup>6</sup> Kauri Dieback Video: <https://www.youtube.com/watch?v=8uz8ocAYUKA>

<sup>7</sup> Further Kauri Dieback resources: <https://www.kauriprotection.co.nz/assets/Documents-PDFs/School-Resources/Kauri-Protection-School-Resource.pdf>

<b>Phase 3 – Arts-based inquiry</b>		
<b>Curriculum Area/s:</b> Science, Social Sciences, The Arts.		
<b>Curriculum Level/s:</b> Level 2-3; Phase 2 (years 4-6)		
<b>Duration:</b> Unspecified – Inquiry Project		
<b>Achievement Objectives/Progression Outcomes for sequence</b>		
<p><b>Curriculum Area 1:</b> Science (2007)</p> <p>-L2- <i>Nature of Science – Participating and contributing:</i> Explore and act on issues and questions that link their science learning to their daily living.</p> <p>-L2-<i>Living World – Life Processes:</i> Recognise that all living things have certain requirements so they can stay alive.</p> <p>-L2- <i>Living World -Ecology:</i> Recognise that living things are suited to their particular habitat.</p> <p>-L3- <i>Nature of Science- Participating and contributing:</i> Use their growing science knowledge when considering issues of concern to them. AND explore various aspects of an issue and make decisions about possible actions.</p> <p>-L3- <i>Living World – Life Processes:</i> Recognise that there are life processes common to all living things and that these occur in different way.</p> <p>-L3- <i>Ecology –</i> Explain how living things are suited to their particular habitat and how they respond to environmental changes, both natural and human-induced.</p>	<p><b>Curriculum Area 2:</b> Social Sciences (2023)</p> <p>Understand: <i>Tuia i raro, tuia i roto, tuia i waho, tui ate muka tangata.</i> Interactions change societies and environments.</p> <p>Know: Te tūrangawaewae me te taiao -Place and environment.</p> <p>Do: Te ui pātai whaihua hei ārahi tūhuratanga whitake – Asking rich questions to guide worthy investigations. I can: Ask a range of appropriate questions to help focus on investigation on social issues and ideas.</p> <p>Do: Te whakairo huatau – Thinking conceptually. I can: Define and explain concepts that are relevant to what I am learning about, using relevant examples.</p>	<p><b>Curriculum Area 3:</b> The Arts (2007)</p> <p>Dependent on chosen inquiry projects. See examples above each lesson story for The Arts Curriculum links.</p>
<b>Resources/Equipment needed in this Lesson Sequence:</b>		
<p>-Any materials that may be needed for students' chosen project.</p> <p>-Pencils, pens, paper (for generating and mind mapping ideas).</p> <p>-Examples of other school projects:</p> <p>Kauri Park School Story Map:  <a href="https://storymaps.arcgis.com/stories/2e9122c30219452c89d16f0a0e9e1095">https://storymaps.arcgis.com/stories/2e9122c30219452c89d16f0a0e9e1095</a></p> <p>Te Uru Gallery:  <a href="https://www.mobilisingforaction.nz/ra1-4-teuru">https://www.mobilisingforaction.nz/ra1-4-teuru</a></p> <p>The book sent with these plans is another example of an arts inquiry from Toitū te ngahere.</p>		
<b>Learning Intentions:</b> -We are learning how to use art to	<b>Success Criteria:</b>	<b>Key Competencies:</b>

<p>take action and help promote ngahere ora.</p>	<p>-Complete a project about forest health. -Share the project with the/a community.</p>	<p><i>Participating and contributing:</i> This inquiry project gives children opportunities to collaborate and develop their skills at being a good group member. They will also take part in a creative project that will be shared with a community beyond the class/school. This is a form of action taking with the aim of making a difference to support the ngahere ora-forest health.</p>
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### Inquiry Lesson Introduction

<p><b>Launch:</b> Discussion: What have we learnt about our ngahere and about ngahere ora? What have we learnt about threats to ngahere ora-forest health? What have we learnt about what people can do/are doing to help and protect the ngahere? What would you want to communicate and share with others about what you learned? What could we do, or ask others to do, to help our local ngahere?</p> <p>If you were to pick an art form, what could you use, and why would you choose that?</p> <p>Show students examples of other similar projects where the arts have been used to raise awareness and take action in relation to ngahere ora. Students will need to pick or think of an arts project they would like to do and will then work together as a whole class or in small groups on the same project.</p> <p>Help them evaluate their ideas. They could consider: What do they want to achieve? Who do they want to involve? Which idea seems most important to their school, area and community? Which idea might make the most difference in their community? What are they most interested in? Which could they realistically carry out?</p> <p><b>Main Activity:</b> Students further develop the idea for the arts project they would like to work on. They draft ideas of what materials they may need, what tasks they need to carry out, what skills or knowledge they need to develop or access.</p> <p><b>Follow up:</b> End with students confirming what project they have decided on. Decide on a way to keep track of their notes and creations as their project develops. Discuss how we could share our projects and who with, once they've been completed.</p>	<p><b>Teacher Notes:</b> Generate lots of possible ideas with students.</p> <p>As this is an inquiry project, let students consider various ideas before deciding which one they want to work on.</p> <p>See the resource below for a process to consider and decide on an artform<sup>1</sup></p> <p>When students are beginning their projects, set aside device time for students to research examples of art like the ones they are creating. This way they can have more of an idea of what they are creating.</p>
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<p><b>Examples:</b> Below are a series of lesson stories sharing projects that have been carried out by other schools and which you could take ideas from or adapt with your students</p>	
<p><b>Lesson Story 1: Soundscape</b></p>	
<p><b>Achievement Objectives (aside from overarching)</b> The Arts (2007) -L2- Understanding music – Sound arts in context: Explore and share ideas about music from a range of sound environments and recognise that music serves a variety of purposes and functions in their lives and in their communities. -L3- Understanding music – Sound arts in context: Explore ideas about how music serves a variety of purposes and functions in their lives and in their communities.</p>	<p><b>Resources/Equipment:</b> -Recording devices -Instruments to make music with.</p> <p><b>Background Learning:</b> -Knowledge of how to compile audio. -Knowledge of how to create music sounds.</p>
<p><b>Learning Experience:</b> Students in both School A and School B created a soundscape for their project. These can be found at <a href="https://www.mobilisingforaction.nz/ra1-4-teuru">https://www.mobilisingforaction.nz/ra1-4-teuru</a></p> <p>Students walked through their ngahere and recorded different natural sounds, such as rivers, waterfalls, birds, and insects. They then combined these with voice recordings and music to express their experience of being in the ngahere.</p> <p>These recordings were shared at a local gallery and online for people to listen to when they went into a ngahere.</p>	<p><b>How this can be adapted:</b> -Students can decide on a message they would like to convey through their soundscape. -Students could then brainstorm a list of potential sounds they may want to find or make and record. -Students can record different sounds create their own soundscape.</p>
<p><b>Lesson Story 2: Drama Production</b></p>	
<p><b>Achievement Objectives (aside from overarching)</b> The Arts (2007) -L2 – Drama – Understanding drama in context: Identify and describe how drama serves a variety of purposes in their lives and in their communities. -L2-Drama- Developing practical knowledge: Explore and use elements of drama for different purposes. -L2-Drama- Developing ideas: Develop and sustain ideas in drama, based on personal experience and imagination. -L2- Drama- Communicating and interpreting: Share drama through informal presentation and respond to elements of drama in their own and others' work. -L3- Drama – Developing ideas: Initiate and develop ideas with others to create drama. -L3- Drama – Communicating and interpreting: Present and respond to drama, identifying ways in which elements, techniques, conventions, and technologies combine to create meaning in their own and others' work.</p>	<p><b>Resources/Equipment:</b> -Prop materials.</p> <p><b>Background Knowledge:</b> -Knowledge about scriptwriting -Knowledge about acting/performing</p>
<p><b>Learning Experience:</b> Students at School B created different productions about how myrtle rust spreads. They created their own props, including yellow spores symbolising myrtle rust.</p>	<p><b>How this can be adapted:</b> -Students could make a play about myrtle rust or kauri dieback and how it spreads.</p>

<p>Each group then recorded their play and they were shared at a school open evening and at a local gallery. The product of their work can be found here: <a href="https://www.mobilisingforaction.nz/ra1-4-teuru">https://www.mobilisingforaction.nz/ra1-4-teuru</a> .</p> <p>School A had an expert come in and help them start to write a script for their school production. They planned their production with their teachers over six weeks, with a choreographer to help with their dances. The play was performed to other children in the school, a local kindergarten and parents and whānau.</p>	<p>Or about people who are caring for or protecting a ngahere.</p> <p>-Students could plan by writing down: Who are their characters? When and where is it set? What is the main message you want to convey? How are you going to make your play interesting? What is the mood of your play going to be? Are your characters speaking? What are their lines? Are you going to include music?</p> <p>-Students can devise their own scripts. They may want to compose their own music or choreograph dances too.</p> <p>-Students may record their plays to share with the further community.</p>
<p><b>Lesson Story 3: Stop Motion</b></p>	
<p><b>Achievement Objectives (aside from overarching)</b> The Arts (2007)</p> <p>-L2- Visual Arts – Understanding the visual arts in context: Share ideas about how and why their own and others’ works are made and their purpose, value, and context.</p> <p>-L2- Visual Arts – Developing practical knowledge: Explore a variety of materials and tools and discover elements and selected principles.</p> <p>-L2- Visual Arts – Communicating and interpreting: Share the ideas, feelings, and stories communicated by their own and others’ objects and images.</p> <p>-L3- Visual Arts – Developing practical knowledge: Explore some art-making conventions, applying knowledge of elements and selected principles through the use of materials and processes.</p> <p>-L3- Visual Arts – Developing Ideas: Develop and revisit ideas, in response to a variety of motivations, observations, and imagination, supported by the study of artists’ works.</p>	<p><b>Resources/Equipment:</b></p> <p>-Paper, pens, markers, crayons (for backgrounds) -Found materials -Props/ materials to make props (clay? Playdough? Paper?)</p> <p><b>Background Knowledge:</b></p> <p>-Knowledge of how to produce a stop-motion animation. -Knowledge of what a stop motion animation may look like. -Knowledge of how to create a storyboard or a script.</p>
<p><b>Learning Experience:</b> Students at School C created a stop motion video of the pūrākau ‘The Kauri and the Whale’.</p> <p>First, they created a storyboard of the pūrākau. Then they learnt how to use an app to make stop motion videos. They then drew/painted backdrops for each scene and made the characters and props from modelling clay.</p>	<p><b>How this can be adapted:</b></p> <p>-Students can choose a pūrākau that expresses the importance of caring for the ngahere. This could be the one told at the beginning of phase 1.</p>

<p>They made three videos. The first scene is of Tāne Mahuta and his sons Kauri and Tohorā, and Tohorā wanting to explore the ocean but Kauri not going with him. The second scene is Kauri and Tohorā exchanging farewell gifts. The third and final scene is of Kauri and Tohorā both being in danger because of human actions but the people realise the connection between nature and themselves and begin to try and save both the Kauri and the Tohorā.</p> <p>The final videos and the storyboard and other artwork were shared with the wider community at a public event.</p>	<ul style="list-style-type: none"> <li>-Consider whether this is appropriate to do with the pūrākau you plan to use, seeking guidance as needed.</li> <li>-Students can decide on how they will tell the story by writing a script or creating a storyboard.</li> <li>-Students can find and create the props and backgrounds for their scenes.</li> <li>-Students can compile their pictures to create a stop motion animation and edit to add captions.</li> <li>-They can plan how to share their videos and who with.</li> </ul>
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**Lesson Story 4: Art Display**

<p><b>Achievement Objectives</b> The Arts (2007)</p> <ul style="list-style-type: none"> <li>-L2- Visual Arts- Understanding the visual arts in context: Share ideas about how and why their own and others’ works are made and their purpose, value, and context.</li> <li>-L2- Visual Arts- Developing practical knowledge: Explore a variety of materials and tools and discover elements and selected principles.</li> <li>-L2- Visual Arts- Developing ideas: Investigate and develop visual ideas in response to a variety of motivations, observation, and imagination.</li> <li>-L2- Visual Arts- Communicating and interpreting: Share the ideas, feelings, and stories communicated by their own and others’ objects and images.</li> <li>-L3- Visual Arts- Developing practical knowledge: Explore some art-making conventions, applying knowledge of elements and selected principles through the use of materials and processes.</li> <li>-L3- Visual Arts- Developing Ideas: Develop and revisit visual ideas, in response to a variety of motivations, observation, and imagination supported by the study of artists’ works.</li> <li>-L3-Visual Arts- Communicating and interpreting: Describe the ideas of their own and others’ objects and images communicate.</li> </ul>	<p><b>Resources/Equipment:</b></p> <ul style="list-style-type: none"> <li>-Materials for chosen art form – dependent on project, school, and children.</li> </ul> <p><b>Background Knowledge:</b></p> <ul style="list-style-type: none"> <li>-Knowledge about ink print making</li> <li>-Knowledge about Mural making</li> <li>-Knowledge about Story map making.</li> </ul>
<p><b>Learning Experience:</b> School A created prints to go on display at Te Uru. The exhibition can be seen here: <a href="https://www.mobilisingforaction.nz/ra1-4-teuru">https://www.mobilisingforaction.nz/ra1-4-teuru</a></p> <p>First, these students collected leaves from the school grounds to use in their prints. A karakia was said to uphold tikanga while collecting.</p> <p>The artist working with the school had a collection of plates to print that the students chose from. Each plate had pictures of flora and</p>	<p><b>What can be taken from this:</b></p> <ul style="list-style-type: none"> <li>-When creating art pieces, think of what materials could be collected. Could things like leaves be used?</li> <li>-Uphold tikanga when collecting natural resources, who could provide guidance with this?</li> </ul>



<p>fauna which the artist told stories about. The students were then taught how to make an ink print.</p> <p>After their ink print was created, students were asked to add words or phrases to their print. Initially, students used simple phrases such as “save the forest”, but they were then encouraged to think about how the different parts of the ngahere ecosystem might be feeling about the forest and the threats of kauri dieback and/or myrtle rust. Students then came up with more creative words and phrases using emotive language.</p> <p>The artworks were shared with a public audience at an art gallery.</p> <p>This process fed into other inquiry project activities, such as the letter-writing and mural processes outlined below.</p>	<p>-Encourage students to think deeply about the meaning behind their pieces. What do you want people to feel? What do you feel? How do you think others already feel?</p> <p>Encourage them to think like a tree, a bird, or a plant. How can they use colour and symbolism to convey meaning or emotion?</p> <p>-Students may want to create a story map of the process behind their project.</p>
<p><b>Lesson Story 5: Writing</b></p>	
<p><b>Achievement Objectives</b></p> <p>English (2023)</p> <p>-L2-Speaking, Writing, and presenting- Purposes and audiences: Constructs texts that demonstrate a growing awareness of audience and purpose through appropriate choice of content, language, and text form. AND expects the texts they create to be understood, responded to, and appreciated by others.</p> <p>-L3- Speaking, Writing, and presenting – Purposes and audiences: Constructs text that show a growing awareness of purpose and audience through careful choice of content, language, and text form.</p> <p>The Arts (2007)</p> <p>-L2- Visual Arts- Communicating and interpreting: Share the ideas, feelings, and stories communicated by their own and others’ objects and images.</p> <p>-L3- Visual Arts- Communicating and interpreting: Describe the ideas their own and others’ objects and images communicate.</p>	<p><b>Resources/Equipment:</b></p> <p>-Pens, paper</p> <p>-Contacts</p> <p><b>Background Knowledge:</b></p> <p>-Knowledge of how to write a letter, poem, or story.</p>
<p><b>Learning Experience:</b></p> <p>School A was situated next to a ngahere that had been closed due to kauri dieback. The school community wanted to know more about why it was closed and for how long. The school engaged with the local Council to find out more.</p> <p>Students learned about how to write a formal letter.</p> <p>Students generated questions based on what they wanted to know about the ngahere that had been closed. They drew on their prior knowledge about kauri dieback. They compiled their questions into a letter which was then answered by the Council.</p> <p>The school organised for a representative from the Council to visit the school and answer their questions.</p> <p>The answers they received fuelled other projects dedicated to bringing awareness of Kauri Dieback to the community, including a mural making project, described in detail on this Story Map:</p>	<p><b>How this may be adapted:</b></p> <p>-Students may choose to write a letter to the Council, a local organisation, or local media asking questions about their local ngahere. If they don’t have questions, they may choose to write a letter as a form of communication bringing awareness.</p> <p>-Students may choose to write a poem or a creative piece of writing as a method to inform others about ngahere health.</p> <p>-To link this to the arts, students may create a way to</p>

<a href="https://storymaps.arcgis.com/stories/2e9122c30219452c89d16f0a0e9e1095">https://storymaps.arcgis.com/stories/2e9122c30219452c89d16f0a0e9e1095</a>	display their writing (wall presentation, story map, presentation)
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**Phase three resource**

**<sup>1</sup>Discussing and deciding on an artform:**

Do the senses warm up from Phase 1. Following this warm-up, write each sense on a large paper sheet or square on the whiteboard. You could also get students to work in groups for this next part of the activity, getting them to draw up a graph with columns for each sense.

TASTE	TOUCH	SMELL	SIGHT	HEARING	IMAGINATION

We now want to consider different art forms that may fit these categories.

- What senses are involved when making and/or participating in a specific art form?
- What senses are ignited when being an audience member of an art form?

You could give prompts to begin with, for example, clay, cooking, theatre, music, zines, photography, etc. Obviously, many art forms will fit into multiple categories; some might fit in all of them! If some examples are quite broad, we can prompt them to be more specific; the theatre could be broken down into acting, costume, set, script writing etc. This can be done as a whole group discussion with someone writing or simply lay the sheets of paper out around the room and ask students to travel between them writing ideas.

This aims to help students understand the many different ways it is possible to engage in art. Knowing how these art forms connect to our senses can assist in students developing an outcome they would like to see or feel when discussing ideas on how to creatively share their knowledge and feelings around ngahere ora.

This could work multiple ways and is something that could keep being built upon. If the senses are on sheets of paper on the walls somewhere, students could keep adding to it throughout the year.

Here are a few examples of ways we could continue on from this activity

- Ask students to share the art forms that really interest them
- Ask which ones they feel would be great to use in this programme
- Examples of art forms they have engaged in before?
- Examples of art forms they know of around their area
- How can we use these art forms together? e.g. photographing a painting? Using clay to make a musical instrument?
- Are there any art forms that you feel connect to the Pūrakau that the visitor shared with us?