

'Tiakina te Wao Nui a Tiriwa hei oranga mōu'
Treasure the vast domain of Tiriwa and in turn
you shall benefit

Given by Te Kawerau a Maki as the Whakatauki for this Resource

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Te Māori ki te Wao Nui a Tāne

Māori and the Forest

Programme description

Traditionally the forest provided Māori with many of their everyday needs for survival. Discover what they used from the forest for building materials, medicine, food and clothes. Learn how Māori built traps to catch rats, birds and fish and how they preserved their food. Hands-on experiences such as: fire-making, bird calls, kōauau (flute playing), making teas and tasting them will assist your students to explore this topic.

Key concepts

- Traditional Use of the Forest
- Traditional medicinal use of plants
- Traditional fire-making
- Traditional food for Māori

Through this unit of study, students will be given the opportunity to explore and to learn traditional Māori uses of the forest.

While the focus and starting point of this particular resource may seem to be narrow there is potential to cover many other relevant topics in-depth, eg. myths and legends of the forest, traditional conservation practices of Māori and other uses of birds besides food.



He Whakapūmahara

Pūataata ana ngā roi ki ngā kamo
mō koutou te hunga, kua mene ki te pō

Kua kuhu atu koutou ki te tatau pounamu
ka kapakapatū whetū i te rangi

Tērā ia, ko Matariki e tiaho mai nei ki te whenua
E hora nei tō koutou māramatanga ki a Papatuanuku

Tēnei te mihi kau atu ki a koutou
i waiho iho i ā koutou taonga
Te wairua o ā koutou mahi
hei whakaakoranga
mā ngā whakatupuranga o tēnei reanga

Ko tēnei taonga ka tohia atu hei whakamaumaharatanga
ki a koutou, ō mātou mātua, ō mātou tūpuna

Ā, ki ngā atua hoki o te ao tukupū

“He tānga kākaho te kitea atu te oioi i te hau
Tēnā ko te tānga manawa e kore e kitea”

Reflections

Tears well up in my eyes
for you all assembled in the hereafter.

You are now at eternal peace
and glitter like stars in the heavens above.
Just as Matariki shines down on the land,
evidence of your wisdom remains all around.

We salute you all
who bequeathed gifts
and the spirit in which you did so
remains an example for these generations.

This [resource] is dedicated in remembrance
to you all, our parents and ancestors,
and all the sentinels of the universe.

“The lean of a reed can be seen as it's blown by the wind, but
the leanings of the heart are not so evident”

Aotearoa

Changes in a New Land

The ancestors of Māori first arrived in Aotearoa about 1000yrs ago from eastern Polynesia. They used ngā ara whetū (star paths), te rā (the sun), te ara moana (ocean currents) and the prevailing winds to navigate their way to Aotearoa.


The land they found was a very different one to their former tropical homeland and unlike anything they had experienced before. Aotearoa was much larger and more complex with high mountains, volcanoes, deep lakes and swift rivers. The climate was markedly different too; colder, with more pronounced seasonal changes. In order to survive they had to make significant adjustments to their lifestyle and the plants they ate and used. For example, plants brought from their homeland like kūmara, hue (gourd), uhi (yam), taro, tī kōuka (tropical cabbage tree) and the paper mulberry tree either didn't survive or did grow but were less productive.

They found much of Aotearoa covered with dense forest. Some plants resembled familiar ones they had left behind but many were different and new.

Forest trees provided Māori with unlimited timber for a wide range of uses such as tōtara for carving, canoes and house structures. A wide range of edible plants and berries like hīnau, tawa, karaka, taraire, miro and pātangatanga were found, which could supply an abundance of food in different seasons.

For sickness and injury, plants provided essential remedies. Knowledge of medicinal plants for more common ailments would have been generally well known by all. The tohunga (acknowledged specialist), however, would have been sought after to treat more serious illnesses and injuries.

Fabrics made from plants provided essential clothing. Bark cloth from the introduced paper mulberry tree proved unsuccessful in some places so suitable alternatives were found, like hoihere (lacebark) and kōrari (flax), kuta (rush), pīngao (low-growing coastal flax), kiekie and tītī (from the tī kōuka family). Other essential items needed for daily life such as whāriki (mats), kete (bags), taura (rope) and kupenga (fishing nets) were also made of kōrari.



The forest was a spiritual place to Māori. Tāne was the creator of life. All forms of life on land like the birds and trees were believed to have descended from him and so were related. Performing special karakia or elaborate rituals were therefore necessary to remove Tāne's tapu or sacredness before many plants and animals could be killed or collected. Transgression of its rules invited dire punishment or even death.

Animal life was abundant, new and very different. The coast of Aotearoa provided fish, shellfish, marine mammals and seabirds; rivers and lakes provided eels, fish and kōura while forests supported a vast array of birds particularly ground dwelling species that were easily caught. Māori brought with them the skills to make traps and lures for hunting and quickly learnt to adapt this knowledge to harvest these new resources.

Initially, animals were the main food source for Māori as they lived a nomadic existence, hunting, fishing and food gathering. They were entirely dependent on the seasonable cycles of their natural world.

As their population began to grow and their main food resources became more difficult to find, the Māori staple food, lifestyle and settlement pattern began to change. Horticulture became increasingly more widespread and was accompanied by the development of more permanent settlements.

Kūmara proved to be the most valuable crop and became an important part of the lives of Māori. Stonewalls were built around their often extensive gardens for shelter and in some places soils were modified to enhance their crop production. Rua (storage pits) were developed in which kūmara could be stored over winter to maintain seed stock for the following growing season.

Māori adapted well to their new homeland over the centuries. With the arrival of Europeans came new materials and food, such as iron and potatoes. Māori rapidly incorporated these new introductions into their way of life. They were people in tune with their environment and made the most of their available resources.

Rongoa Māori

Medicines of the Māori

Programme description and focus

Through observation, discussion and hands-on experiences in the park, students will explore traditional cures for wounds and sicknesses that could be gained through a range of plants such as:

Kawakawa



Makomako



Kūmarahou



Tītoki



Nikau



Mānuka



Mamaku



Koromiko



Tarata



Kahikatea



Rimu



Māhoe



NOTE: It is important not to attempt any traditional remedies without expert advice and guidance

Links to the New Zealand Curriculum

Vision - Our vision is for students to be:

Connected

Connected to Tāne Māhuta (forest) and its unique biodiversity.

Principles - This programme encourages:

Cultural diversity

By learning about Māori local history and traditional uses of the forest.

Future Focus

By exploring significant future focused issues as, sustainability of New Zealand's unique biodiversity.

Values - Students will be encouraged to value:

Ecological Sustainability

Caring for the forest, its plants' medicinal uses and unique biodiversity.

Diversity

Traditional uses of the forest.
The forest as a resource.

Key Competencies

Students are given opportunities to become competent at:

Thinking: Use new knowledge to inform or shape their understanding of how people view and use places differently.

Managing self: Following instructions, knowing when and how to act independently.

Language, Symbols and text: Use new language, including Māori plant names, terms and vocabulary.

Relating to others: Being an active listener, sharing ideas, cooperating with their peers.

Social Sciences Achievement Objectives

Students will gain knowledge, skills and experiences to:

Level 2

- Understand how cultural practices reflect and express people's customs, traditions and values.
- Understand how places influence people and people influence places.

Level 3

- Understand how people view and use places differently.
- Understand how people make decisions about access to and use of resources.

Level 4

- Understand how people pass on and sustain culture and heritage for different reasons and that this has consequences for people.

Kawakawa

Has a wide range of medicinal and spiritual uses:

- The leaf and bark were cures for cuts, wounds and pains in the stomach.
- Leaves were chewed to freshen breath and relieve toothache, or reduced to a pulp in hot water and applied to the face when swollen.
- The hot liquid from the kawakawa leaves was also a treatment for serious bruises and colds.
- A steam bath was made using the leaves and used to treat rheumatism and aches and pains.



Kūmarahou

The leaves were boiled and the liquid taken internally as a relief for:

- tuberculosis, asthma, bronchitis and colds,
- for skin diseases,
- for steam baths and people suffering from kidney trouble.



Mamaku

Put to several uses by Māori:

- The pith of the trunk was eaten after being baked in a hāngi.
- The gum was smeared onto cuts to stop bleeding and was also chewed as a treatment for diarrhoea.
- Pith from young fronds was used as a treatment for boils, abscesses and as a poultice. The curly young fronds were applied to wounds and skin irritations.



Tītoki

Tītoki was an important source of oil for Māori:

- Fruits were collected and the red flesh was removed before the seeds were crushed to extract the green oil which had many uses, such as being applied to sores, chapped skin, bruises, painful joints and in the ears to relieve earache. It was taken internally as a laxative.



Tī Kōuka

- The tips of young branches were stripped of bark and leaves, steamed and used as a nutritious vegetable (a kind of porridge was made from the sundried, ground pith and inner roots). The tap roots were used in the same way.
- Liquid from boiled leaves was used for dysentery and diarrhoea.
- Sap from the leaves was used to heal open wounds, cracks in the skin, and sores.
- The inner shoot and top of the stem were boiled and eaten by nursing mothers and were also given to children for colic.
- Regarded as a sign of fertility and regarded as a magic plant by Māori because of its ability to grow again from cut stumps.



Tarata

- The bark and leaves of this tree were used as a bath to relieve arthritic joints.
- The gum was eaten to freshen breath.
- It was also used as glue in securing the lashings of fishing lines.
- The fragrant resin was used as an aphrodisiac.



Pukatea / Puketea

- Buttresses of pukatea trunks were often used for carving elaborate figureheads on canoes.
- The outer rind of the pukatea bark was steeped in water and used as a lotion for skin sores.
- Pukatea bark was also used as a remedy for toothache and stomach complaints.



Kōwhai

- The flowering of this tree meant the end of winter for Māori.
- The inner bark was scraped from the tree, soaked in boiling water and used to bathe bruises and to soothe internal blood clots.
- The bark was also boiled and the water drunk as a remedy for colds and sore throats.



Māhoe / Hinahina

- Māori carried fire from place to place by carrying smouldering māhoe sticks in a stone container.
- Inner bark was shredded and packed over burns.
- Sores and scabies were soothed with boiled leaves and the liquid was used to bathe rheumatic joints.



Makomako / Mako

- Māori found the juice from the berries of this tree very palatable.
- Water from boiled leaves of makomako was used as an antiseptic or made into a poultice. It was also used as a treatment for rheumatism. Warmed leaves were applied to burns to help them heal. A concoction from bark soaked in cold water soothed sore eyes.



Patē / Patatē / Patete

- The wood was used as tinder in the kindling of fire.
- A patē leaf was placed between the lips of bird hunters and the sound attracted birds.
- The berries, leaves and sap were all used by Māori as a treatment for skin complaints.



Kahikatea / Kahika

- Its long straight trunks made it ideal for making canoes.
- Soot of the kahikatea heartwood was used in tāmoko 'traditional tattooing'.
- Its gum resin was chewed.
- Chips of the wood were soaked in boiling water and this drunk as a tonic.
- Leaves were boiled and the liquid drunk as a treatment for urinary complaints.



Mānuka

- Mānuka wood was used to make canoe decking, canoe poles, fish hooks, fishing rods, eel pots, garden implements and weapons of war.
- The mānuka was, and still is today, a very important medicinal plant.



- The leaves were infused in water and the vapour used as an inhalant for head colds, asthma, bronchitis, hayfever and blocked sinuses. The liquid was also drunk to help kidneys and bladder work more effectively.
- Leaves and bark were boiled and the liquid applied to relieve pain such as stiff backs and to treat swellings and wounds.
- Seed capsules were boiled and the liquid used externally to reduce inflammation.
- Young shoots were chewed and swallowed for the treatment of dysentery.
- Pieces of bark were boiled until the water darkened in colour. This water was drunk to relieve constipation.
- Today mānuka honey is highly valued for its medicinal properties.



Koromiko

- Plants were widely used in ritual ceremonies and as a healing plant for many complaints and illnesses.
- For the treatment of dysentery and diarrhoea, koromiko leaves were boiled and the juice was drunk.
- The young buds were eaten as a cure for general stomach complaints.



Horopito

- Was one of the plants used by the tohunga to drive away evil spirits.
- The leaves and young branches were bruised, soaked in water and the lotion used to treat skin complaints, heal wounds and bruises.
- The fresh leaves were also chewed as a remedy for toothache.



Rimu

- Pulped inner bark was applied to burns.
- Gum, dissolved in water and drunk, stopped internal bleeding.



He Ngohe Ako

Learning Activities

Suggested before visit activities:

1. Complete a brainstorm

"What we already know about traditional Māori use of plants for healing".

2. Find out

What the words tohunga and karakia mean and complete these sentences

- A tohunga is

-
- A karakia is

-
- A tohunga would use a karakia to
-

3. Arrange class visits

to a pharmacy and to a Health/Herbal shop. Guide students to prepare questions that will help them to compare different kinds of medicines and how they are prepared today.

Suggested activity to be completed during park visit:

4. Make leaf and bark rubbings

Where possible of the following native trees. (Remember to label your rubbings)

Kawakawa	Kūmarahou	Nīkau	Mamaku
Tarata	Kohekohe	Makomako	Tītoki
Mānuka	Koromiko	Kahikatea	Māhoe

After park visit activities:

5. Make a display of rubbings in class

that will encourage students to identify each of the trees and their medicinal uses.

6. On a map of your local area

plot where some of the above list of plants can be found.

7. Learn a simple karakia that could be said before taking a traditional medicine.

Many Māori medicines were made from plants

Find what would have been used to cure the following sicknesses.
One has been done for you.

Sore throat	<i>Boil kōwhai bark and drink the water</i>
Toothache	
Bleeding from a cut	
Earache	
Hayfever	
Asthma	

A. Draw an outline of a Māori man and a Māori woman then draw items of clothing they would each have worn:

- 1. Women** wore tāmoko (traditional Māori tattoo) around the chin and lips, they wore neck and ear ornaments, flax capes and sandals of plaited flax
- 2. Men** wore tāmoko (traditional Māori tattoo) on face, thighs and buttocks. They wore neck and ear pendants, a flax cape covered with feathers, plaited flax loincloth and sandals

B. Around the person write some common sicknesses and their cures:

(eg. sore eyes, toothache, upset stomach, cuts, battle wounds).

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Whakaritea he Kōrero mō te Rongoa Māori:

Present information about traditional medicines as:

- a. **A newspaper report**
(Include a headline to capture attention!).
- b. **An advertisement!**
What is your product? What sickness can it help?
Where is it found? Who can use it? How is it used?
- c. **A pamphlet**
Use clear titles, illustrations and pictures to present your information.
- d. **A cartoon strip or a short play**
Show the dialogue between a tohunga and a sick person.
- e. **A dvd/film documentary**
Record movie clips of medicinal plants and share information about the plants through your presentation.

Tahi, rua, toru, whā, rima

Write five questions

you would like to ask an expert about traditional Māori medicines.

List five places

where you could find plants for traditional medicines.

Record five recipes

for cures. See example.

Write five facts

you have learned about traditional Māori medicines.

Draw the different leaves from five trees

that can be used to heal / help people.



To help cure a cold

You will need:

- kawakawa leaves
- water
- a cooking pot & fire

What to do:

1. Put leaves in the cooking pot
2. Cover with water & bring to boil
3. Drain off liquid while hot
4. Drink to help relieve cold

He Whakapā atu ki te Tohunga Rongoa

Contact with an expert in Māori Medicine

It's a fact that in the past the forest has been a place to find medicine and healing.
Today many people are again going to the forest for help.

Complete your own research about this fascinating topic.
Use this Mahere Mahi (Work Plan) to help you get started.

Mahere Mahi - Work Plan

Name: _____

Date work started: _____ Date work finished: _____

Main theme / topic: _____

My research / investigation / experiment will be about:

My main question is:

Other questions I need to ask are:

Some key (important) words I need to think about are:

Things I plan to do to find the answer:

I can get information and help from:

(Possible sources: people, written material, photographs,
computer / electronic media etc.)

My work will be presented to:

I am going to present / share my work in the following ways:

Personal goals I have for this study are:

Other ideas / plans / brainstorm

Work plan seen by:

Pupil: _____ Teacher: _____

Comments/Suggestions:

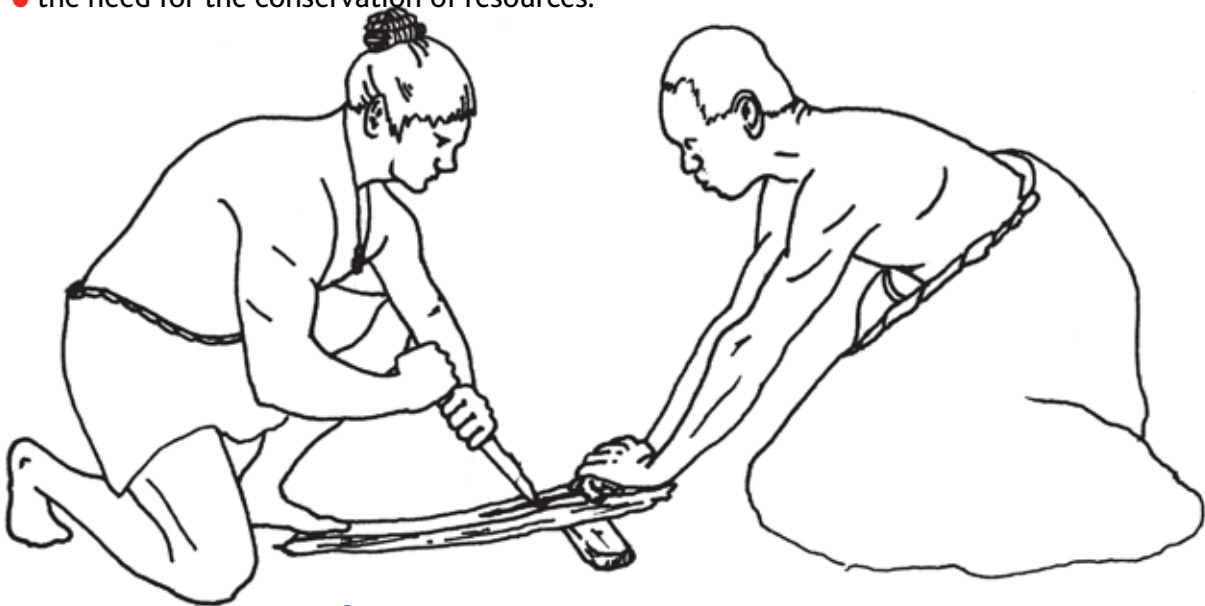
Te Mahi Hika Ahi

Traditional Fire Making

Programme Description and Focus

Through demonstration and hands-on experiences in the park environment students will explore:

- traditional methods of fire making by Māori
- identification of types of wood (trees) most suitable for fire making
- the need for the conservation of resources.



He Kōrero Tautoko Background information

- Kaikōmako, māhoe, patē and hoihere are some examples of wood used for fire making.
- The fire making process was known as hika. It involved a stick that Māori called a kaurimarima being rubbed briskly onto a flat piece of wood called the kauahi. The holder of the stick was called kai-pupuri-o-te-kauahi and the act of rubbing, hika. The tinder in which the spark caught was called kaurehu.
- The fire maker knelt by the kauahi and holding the kaurimarima firmly in both hands, rubbed it vigorously along the groove in the kauahi. The friction which was created in this way soon generated enough heat to start a fire. Sometimes this process was helped along by adding kindling material such as pūtawa, a hard, woody fungus. Under the right conditions an expert could start a fire in a few minutes.
- Māori were careful to conserve their fires for as long as possible. They made slow burning torches from bark, dried leaves of the cabbage tree or from resinous woods such as rimu heartwood. Such torches would burn for 3 to 4 hours and could be carried from place to place. Torches were also made from kōkari (dried stalks from mature flax plants).

He Ngohe Ako

Learning Activities

1. Where do we use fire? List your ideas.
2. Complete an ideas web "Good and bad fire".
3. On a map of the world show where fire occurs naturally.
4. Make a list of 'fire' words. Include as many sounds and smells as possible.
5. Experiment to find different conditions that fire needs to burn.
6. In traditional fire making some wood is more suitable than others. Why? Which? Present this information on a wall chart.
7. Draw a flow diagram of how to start a fire.
8. Draw another flow diagram describing the traditional Māori method for lighting a fire. (Invite an expert fire maker to demonstrate). Find out the meaning of these words and include them in your flow diagram. Hika, kaurimarima, kaurehu and kai-pupuri-o-te-kauahi.
9. Tapu fire for ritual use had to be specially kindled by a man and a woman. Investigate this and present your information as a role play.
10. Find out how the use of fire has changed in the last 50, 100, 150 and 200 years.
11. Complete a brainstorm "Why fire was so important to Māori".
12. Read and then retell the story of "How Māui found the secret of fire".
13. Design and make a fire carrier.
14. List the safety rules for fire.
15. Write instructions for making a hāngi. Create a menu.
16. Use koru patterns for spiralling smoke and flickering flames in fire pictures. Use warm and cold colours.
17. Use the 'scratch-back' method to draw fire scenes, i.e. apply layers of brightly coloured crayon and pastel. Paint over it with black paint and then scratch out line patterns.
18. Investigate methods and materials used to start fires in other cultures. Compare and contrast to Māori traditional fire making practices.

Ngā Manu o te Wao Nui a Tāne

Birds of the Forest

He Hōtaka Whakaaturanga Arotahi Programme description and focus

Through observation, discussion and hands-on experience in the park environment, students will explore:

- The important role of native birds in our forests.
- Identification of fruit producing forest trees.
- Methods used for trapping manu, including the use of bird calling.

He Kōrero Tautoko Background information



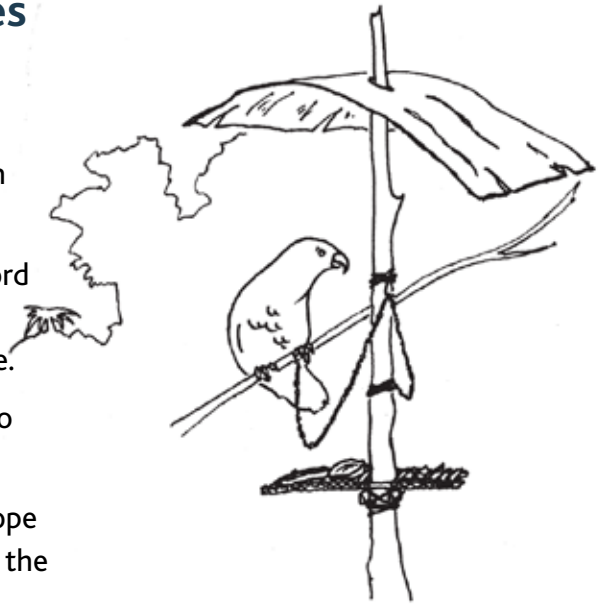
Waka kūkupa - Pigeon trough trap

The fruit of miro is enjoyed by kūkupa and is eaten in great quantities, especially from April through to June. Eating the berries made kūkupa very thirsty. Māori used to set waka kūkupa (a water trough with a set of noose snares) in the branches of miro and other fruit bearing trees to catch them.

As kūkupa became thirsty they went to the traps for water. They had to put their head through a noose to drink the water. When they withdrew, the noose tightened and trapped them. Kūkupa were cooked whole without being gutted. The berries flavoured the meat.

Mutu kākā - Bird snaring perches

- This trap was used by trappers hiding in trees.
- The snare was mounted on a long pole, which was fixed to a camouflaged platform on which the trapper sat.
- In one hand the trapper held the end of the cord or rope and in the other a tame decoy parrot which was poked and prodded to make a noise.
- The noise of the parrot attracted other birds to the perch area.
- As the bird landed the trapper pulled on the rope and tightened a loop attached to the perch so the bird couldn't escape.



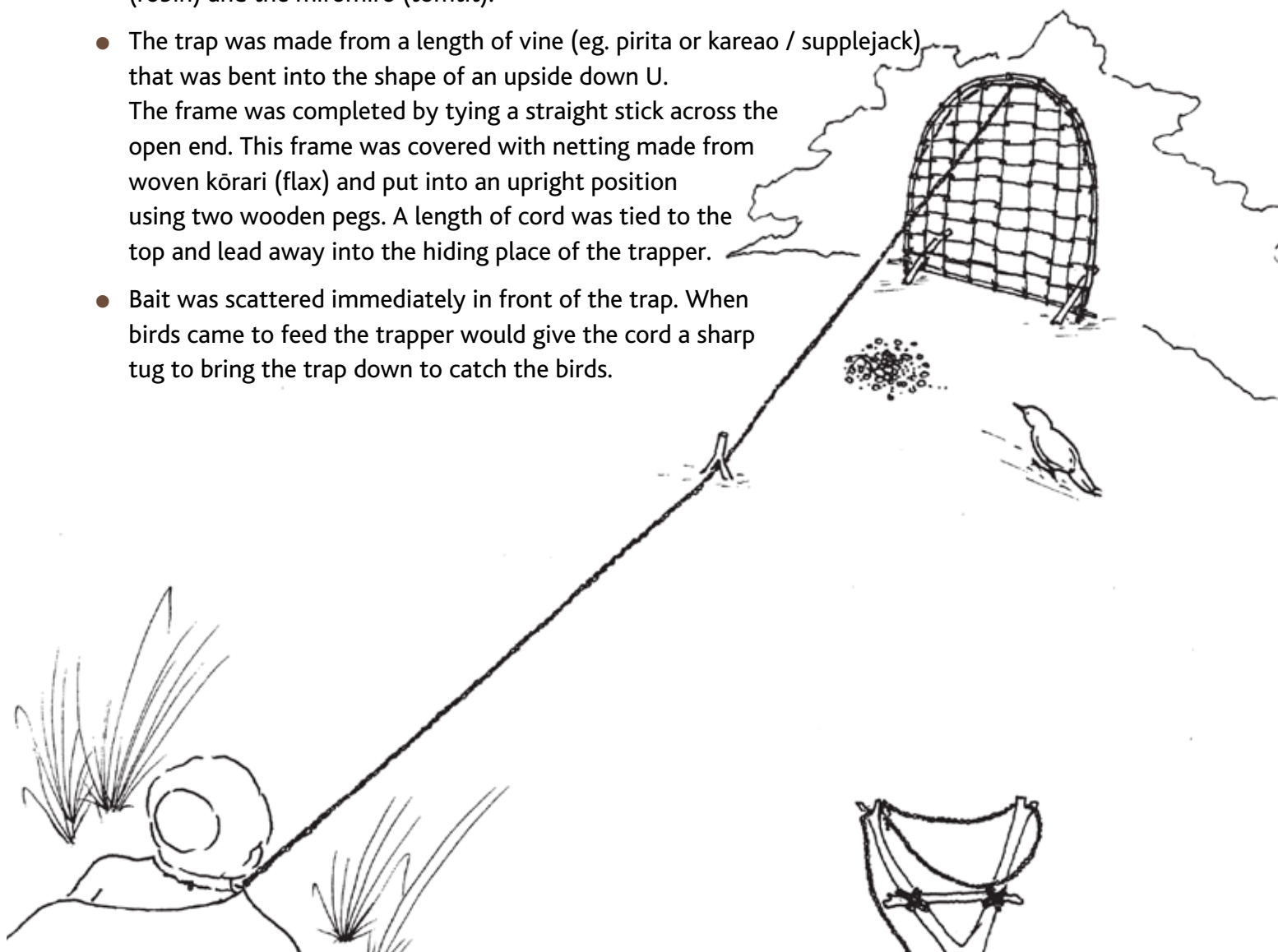
Pāwhere weka - The wooden lure

- Trappers would hide amongst the bushes imitating the call of the weka with a small flax whistle called a whakapai or karanga weka
- The weka would be attracted by the sound and would walk into a snare that was placed in front of a lure of a weka's wing tied to the end of a stick. Sometimes the rattle of a bunch of leaves was used to attract the weka
- The weka would put its head through the snare to get a closer look and with a quick tug the trapper would pull the snare tight around the weka's neck.



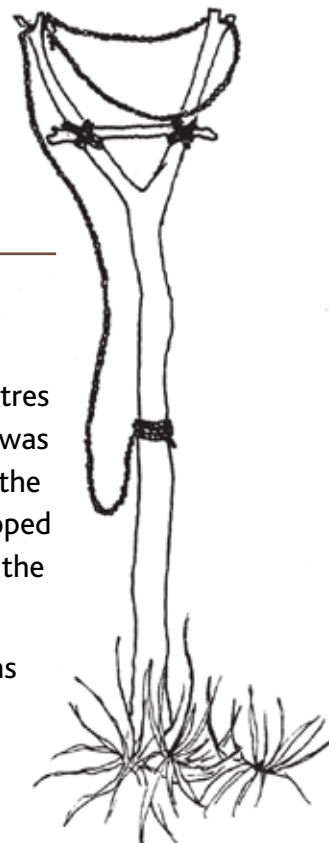
Kōrapa manu - The small bird trap

- This trap was used to capture small birds such as the koreke (quail), the karuwai (robin) and the miromiro (tomtit).
- The trap was made from a length of vine (eg. pirita or kareao / supplejack) that was bent into the shape of an upside down U. The frame was completed by tying a straight stick across the open end. This frame was covered with netting made from woven kōrari (flax) and put into an upright position using two wooden pegs. A length of cord was tied to the top and lead away into the hiding place of the trapper.
- Bait was scattered immediately in front of the trap. When birds came to feed the trapper would give the cord a sharp tug to bring the trap down to catch the birds.



Taraha kāhu - The hawk trap

- This trap was made using a strong forked mānuka stick about 2 metres long that was stuck into the ground. A small piece of straight stick was tied across the bottom of the prongs to hold the bait and to space the prongs apart. A noose was laid across the top of the prongs and looped down just above the bait. The end of the noose cord was tied onto the main trunk of the stick, below the bait.
- When the kāhu swooped down into the wind to seize the bait it was caught around the body and was unable to struggle free.



Fascinating fact

Karanga manu - Bird calls

Traditionally leaves and different grasses were used for making bird callers that helped to trap birds. Some people were so skilled they could attract birds by whistling with their mouths.



Ngā Manu o te Wao Nui a Tāne Birds of the forest

An example of the learning centre approach

- a. **Draw pencil sketches** of native birds and trees and use them to make a collage.
- b. **Write a mihi** to use before sharing your work.
- c. **Design** and make bird feeders.
- d. **Label the parts** of the kūkupa in Māori.
- e. **Collect lots of different bark** and leaf rubbings that kūkupa feed on.
- f. **Paste rubbings onto card** and match the Māori tree name with the leaf and seeds.
- g. **Label the parts** of the tree in Māori.
- h. **Make a quiz** from the labels or a game of snap.
- i. **Research** to find what types of traps are used for conservation today.
- j. **List and illustrate** different traditional techniques used by Māori for catching and hunting birds.

Ngā Wahanga o te Manu - Parts of the bird

On the drawing of the kūkupa below label the following parts:

ngutu - beak

kakī - neck

korokoro - throat

parirau - wing

hiore - tail

māhunga - head

waewae - legs

karu - eye

huruhuru - feathers

uma - breast

matimati - toes

matihao - claws

tinana - body



Te Tautū Manu - Bird spotting

Match the bird name to the outline:



Pūkeko - Swamp Hen

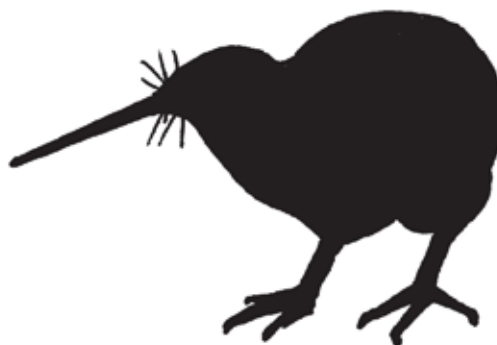
Kūkupa / Kereru - New Zealand Pigeon

Tūī - Parson Bird

Tīrairaka / Pīwakawaka - Fantail

Kiwi

Koukou / Ruru - Morepork



Mix and match

Match the Māori name with the English:

Pūkeko

Kāhu

Kūkupa / Kereru

Poaka

Tīrairaka / Piwakawaka

Tauhou

Makomako

Pīpīwharau

Tūi

Koukou / Ruru

Riroriro

Kōtare

Fantail

Kingfisher

Silvereye

Grey Warbler

Morepork

Parson bird

Shining Cuckoo

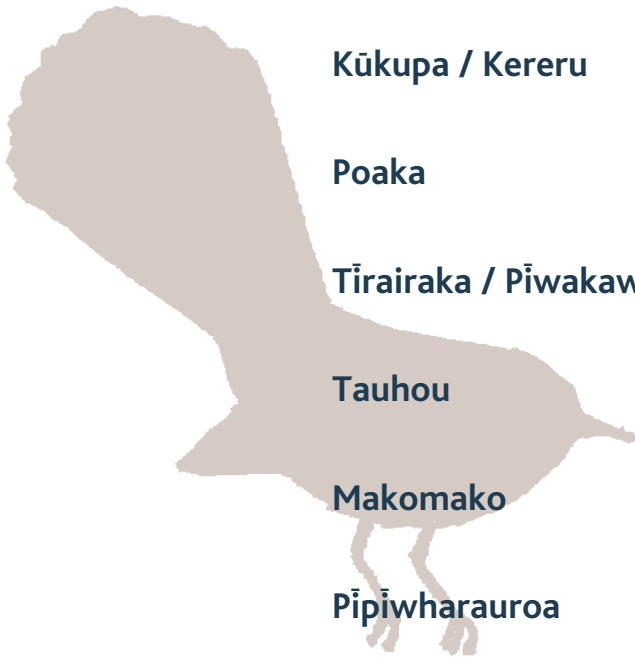
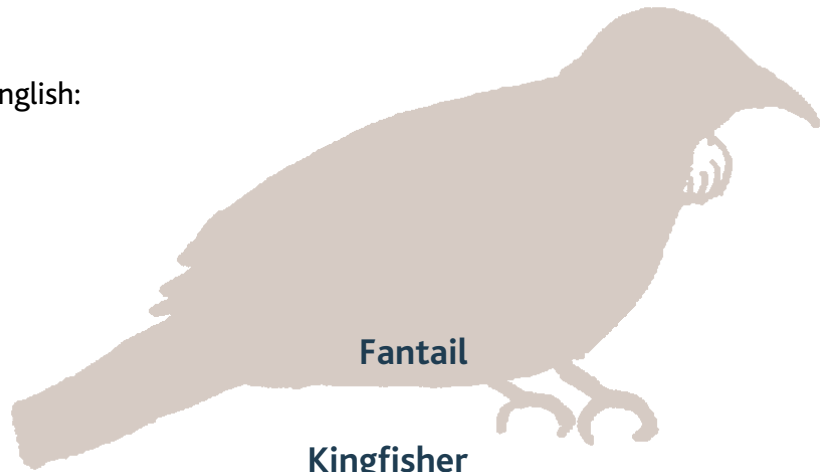
Bellbird

New Zealand Pigeon

Harrier Hawk

Swamp Hen

Pied Stilt



Te Rākau

Use the list of words to label the parts of the tree

manga - branch

pakiaka - roots

kākano - seed

hua - berry

kākano - berry

rau - leaf

kirirākau - bark

purapura - seed

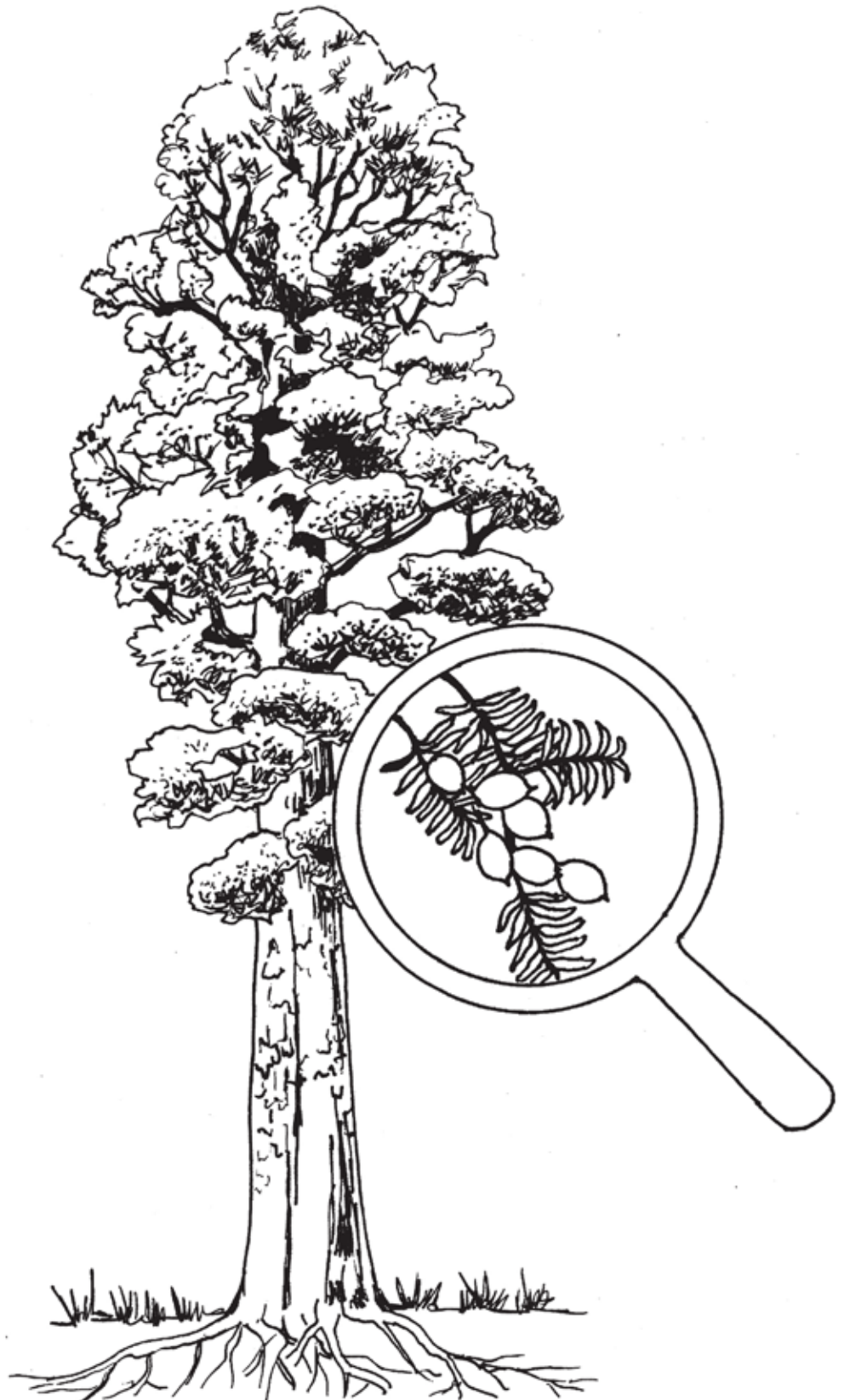
manawa - heart

oneone - soil

tinana - trunk

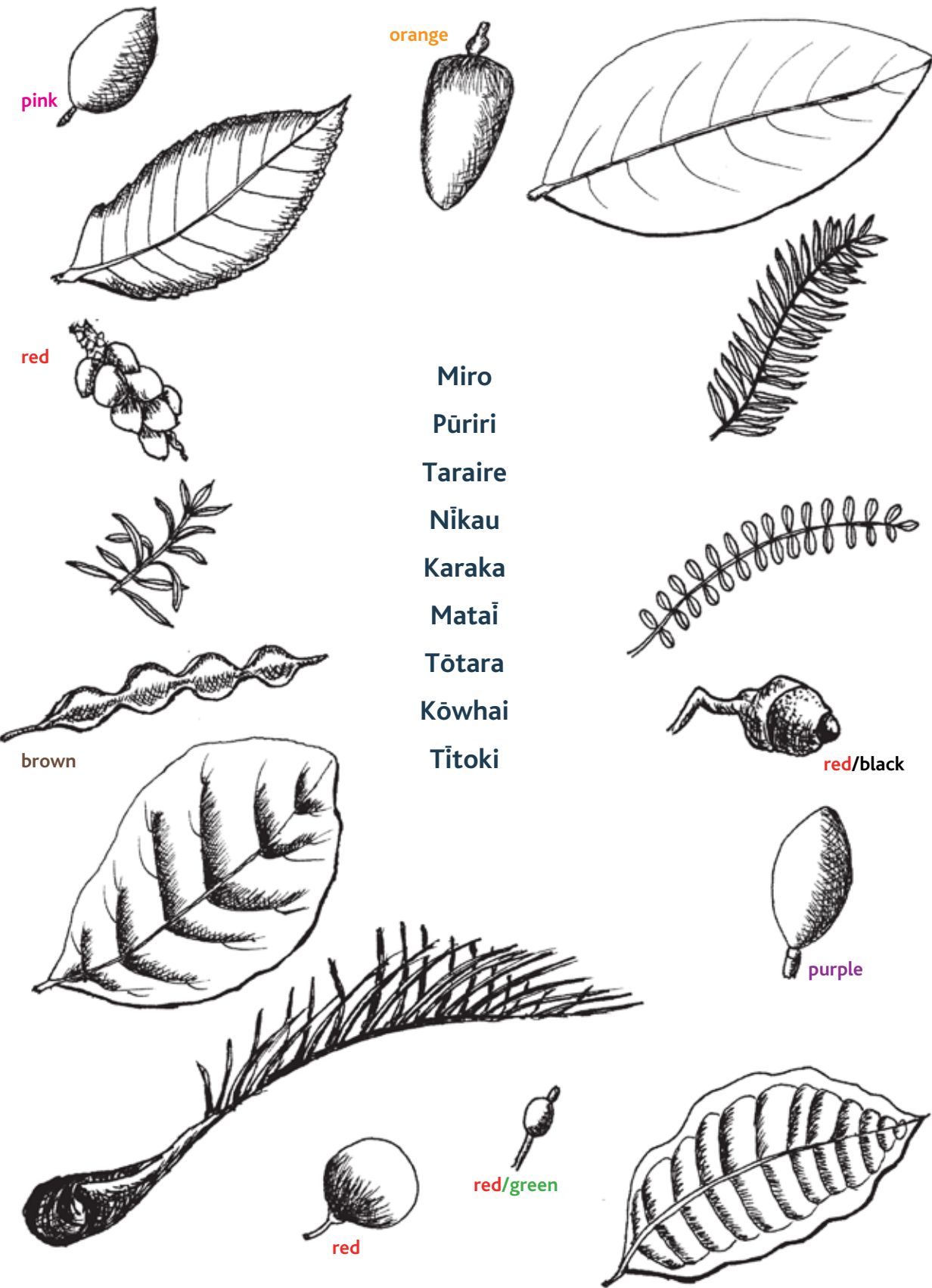
pūtaka - base

kāuru - crown

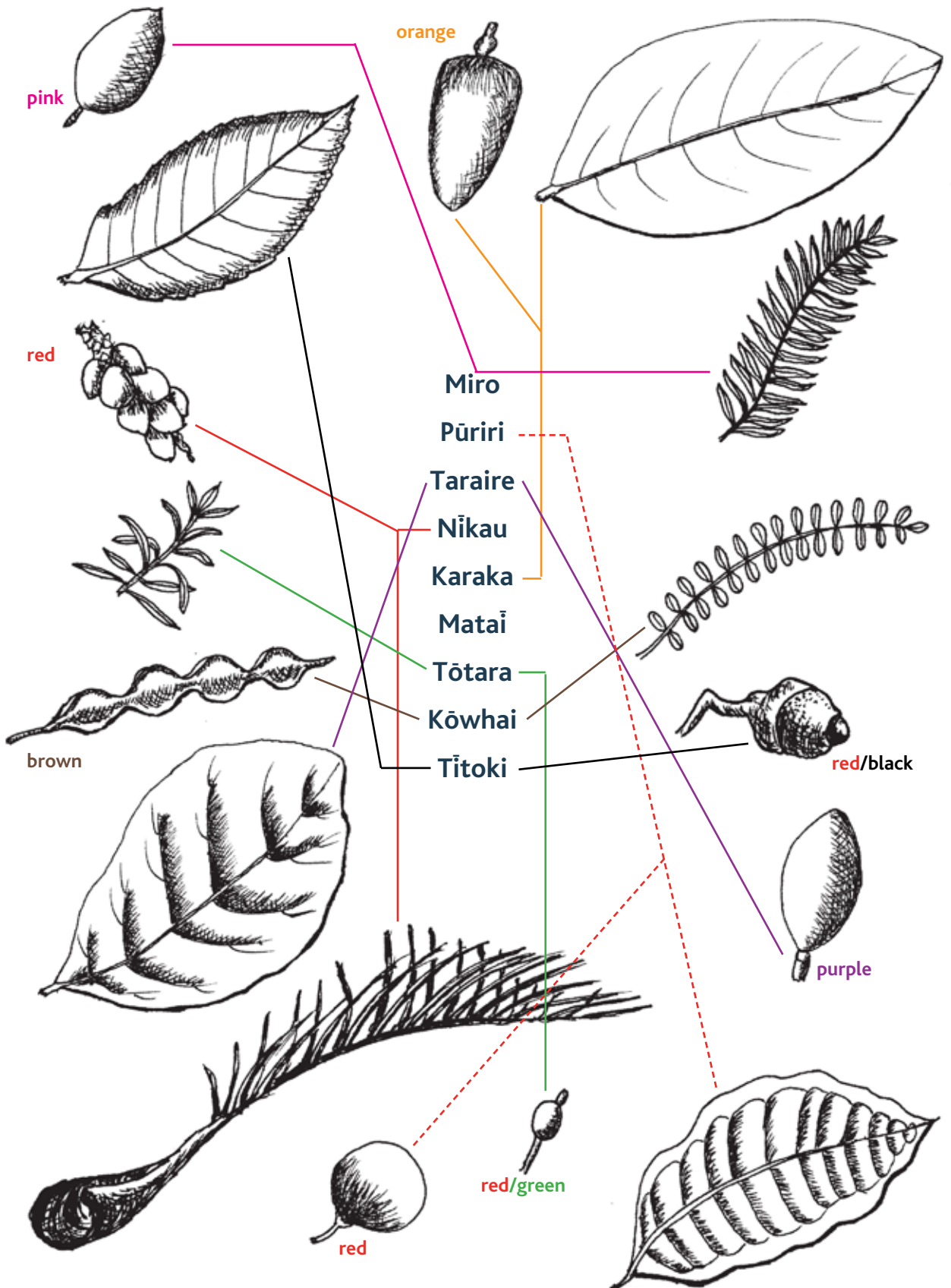


Ko Tēhea Tēhea? - Which is which?

Match the Māori name of the tree with the leaf shape and then with its seed shape.
Find leaf and seed graphics for:



Solution for page 31



He Titiro Whakamuri Looking at the past

Present the following work on a wall chart or as a model:

- a. **Draw (or make models of)** different methods used by Māori in the past for bird hunting eg. Bird spear.
- b. **Explain (or demonstrate)** how the traps were used.
- c. **Māori hunters** carefully followed certain rites which were very important to them. Find out what these hunting rites were and include this information in your work.



He Titiro ki Nāianei Looking at today

How can we encourage native birds back to our forests?

- a. **Design and make a bird feeder that you could use to attract kūkupa.**
Try using bamboo, pot plant holders and string! Page 34 provides a step-by-step process to plan your design.
- b. **Experiment to discover what other birds like to eat.**
Try different recipes and keep a record of who likes to eat what.
For example:
Feed tūi and silvereyes with 2 tablespoons of honey and sugar / 500mls of water.
(Check with organisations such as Forest and Bird, Department of Conservation or Auckland Council that you're not giving the birds anything that is harmful to them).
- c. **Make a sound recording of different birds of the forest and then try creating some bird calls of your own.**
Experiment with different leaves to see which makes the 'best' call.
Create your own bird callers, eg. polystyrene on a bottle, wet cork on glass or use your own mouth!

He Ngohe - Bird activities

Choose one of the following
to design and make:

- a. A bird feeder to use
in the school grounds
or at home
- b. A nest box
- c. A hide for serious
bird watching
- d. A kite based on the
shape of a bird



Complete your task step by step

1. Write down what your challenge is.
2. Draw a plan of what you're going to do.
3. Make a list of the materials you think you will need.
4. Show your work to someone who can give you more suggestions and helpful advice.
5. Amend plan and materials list as required.
6. Get busy. If you find that your plan doesn't work...
go back and change your plan until you have completed the task.
7. Share what you've done with a small group / the class / the syndicate /
your family / anyone who would like to see it.

Protect our Native Birds – A good idea or not?

Use rating cards for students to respond to statements such as:

"Clearing land for housing is more important than protecting the bush for birds."

"All kākūka should be protected from being hunted for food."

"Māori should be able to practise traditional hunting methods".

"It's ok to trap and catch birds."

"Kākūka aren't important birds now."

Teacher prepares cards with:

Strongly
Agree

Agree

Not Sure

Disagree

Strongly
Disagree

1. Cards are placed in different places around the room.
2. Make a statement to the students,
eg. "All kākūka should be protected from being hunted for food."
3. Students place themselves according to their opinion.
4. Each group holds a discussion and then appoints one person to report to the class.
5. Students are then given the opportunity to change their opinion based on what they have heard from others.

Appendix



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Kātahi te Tino Orotā!

What a Pest!

Traps

- Find out about traps that were used in the past to catch animals for food.
- Refer Appendix Tāwhiti Kiore (rat trap). Compare with traps now used for conservation purposes (eg. snap traps for rats).



Your task is to design a magpie trap.



We wouldn't dream of making a trap to catch the kāhu today but there is a need to trap a bird that is becoming more and more of a pest – **the magpie!**

Your work should include a description of how the trap operates and what materials could be used in its construction. It should be reliable, easy to make and camouflaged.

Find information to complete the chart below:

<i>Te Kararehe</i>	<i>He aha i orotā ai ki te manu</i>	<i>Ko te ara whakatika</i>
Animal	Why it is a pest to birds	How it can be controlled
<i>Tia</i> Deer		
<i>Paihama</i> Possums		
<i>Toata / Wihara</i> Stoats/ Weasels		
<i>Kiore</i> Rats		
<i>Makipae</i> Magpies		
<i>Poti Puihi</i> Feral Cats		

He Whakatauākī

Proverbs



Rākau Rangatira

Tū Teitei i te Wao Nui

Ki te Kore Koutou

Mā Wai e Mihi te Rā

Chiefly Trees

Standing Tall in the Forest

Without you

Who will greet the Sun

Copy and illustrate one of the sayings.

- Create some beautiful borders using traditional Māori patterns and designs.
- Now design your own sayings and patterns.

He kura kauri -

He kura tangata

The kauri is precious -
so too is man



Me he korokoro tūī

Like the throat of a tūī

*The tūī is famous for its song -
the voice of a good speaker or singer
can be compared with that of the tūī.*



Pūriri

E tū Pūriri

Stand tall Pūriri

Torohia ō peka

Stretch forth your branches

Awhi mai, awhi atu

We'll exchange embraces

Tātou, tātou e

And subsist in harmony



He kākā wahanui

A loud mouthed kākā

This saying can be used to describe a talkative person or a revered orator.

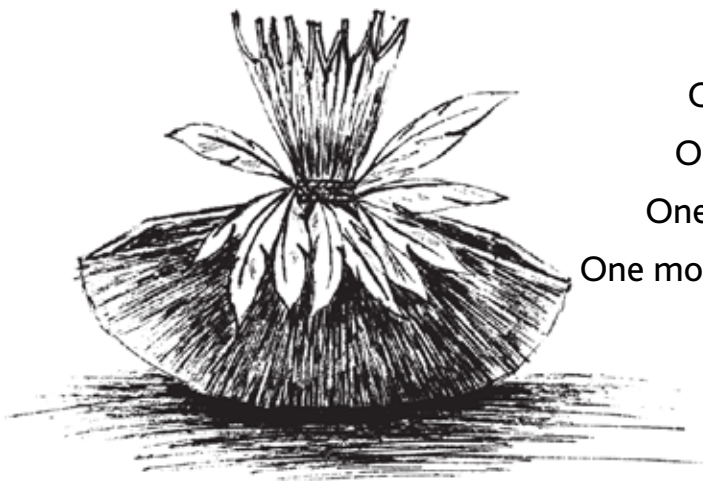
He Tīmatanga

Ko te hīkoi tuatahi - te tīmatanga o ia haerenga

Kotahi te kākano - ko te Wao Nui a Tāne

Kotahi te patawai - ka rere he awa

He wā takitaro - he tīmatanga mutunga kore



At start

One step is the start of each journey

One seed is the start of a great forest

One drop of water is the start of a river

One moment in time is the start of eternity

Tōtara

Tōtara e tū whakahirahira nei

Ko koe i tohia mai

Hei rākau mahi i o mātou waka nui

Kia whakareireia koe ki te whakairo

Ko tō hiako hei kete pupuri kai

Ka mihi atu



Forest Flora of
New Zealand by
Kirk Large antique
lithographs from
1889

Tōtara

Tōtara so tall and strong

You were chosen

As the log from which we will make our great canoe

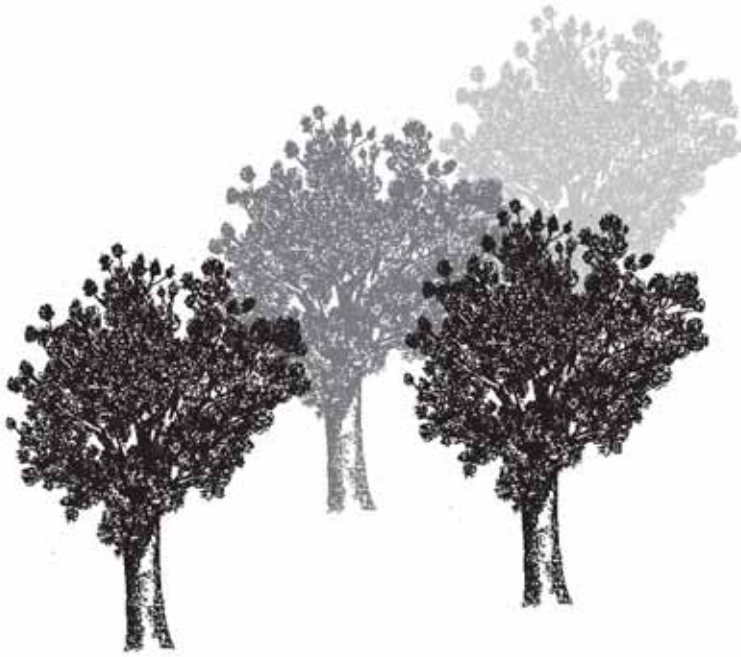
May your wood be dressed with elaborate carving

And your bark be fashioned into receptacles in which we will keep food

Thank you.

Tīmatanga

*Te kauri e tū whakahī nei
Te matua o te wā,
Ināianeī, i mua
Kōrerotia mai ngā kōrero paki
Mō te koiora, mano tau ki muri
Ko koe te matua,
Ko koe hoki te matua tupuna o te Wao Nui a Tāne*

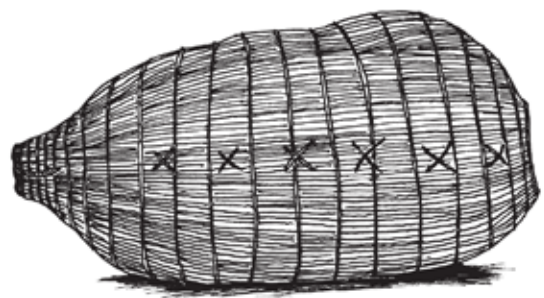


At large kauri

Kauri standing proud
Father of time
Present and past
Tell us the tales
Of life as it was a
millennium ago
You are both father and
progenitor of the forest

Kiekie

*Kiekie, pīngawingawi pakari hoki
Tukua mai ō rau hei rarangatanga
Ko ō aka-ā-rangi hei kupenga hao kai
Ko ō hua hei kai*



Kiekie

Kiekie, supple and strong
Lend us your leaves for us to weave
Give us your aerial roots that we may fish
Allow us your fruits so we may eat.

Nga Tama a Māia-Poroaki

The sons of Māia-Poroaki

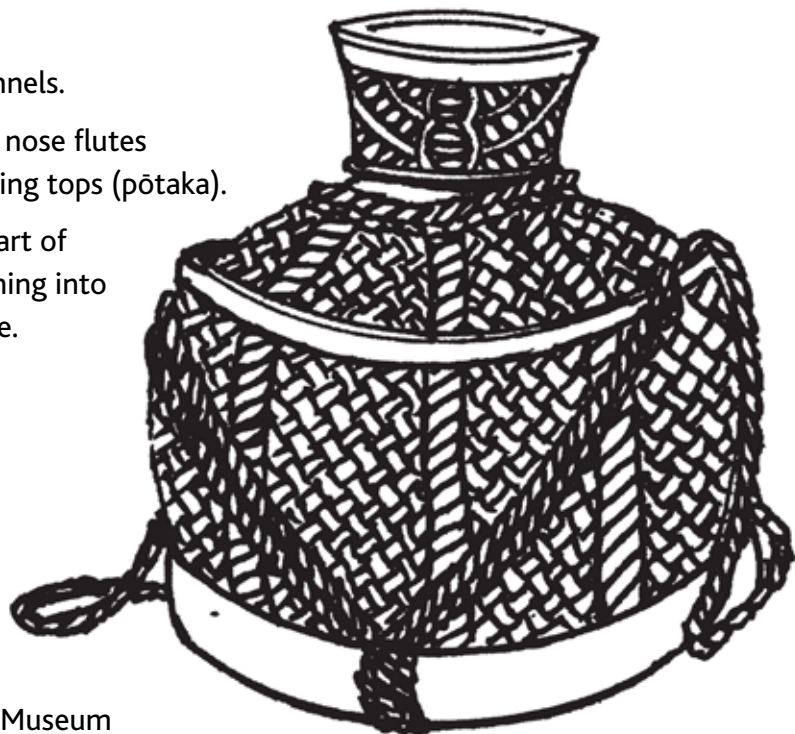
Hue (gourd) is a tropical plant introduced to Aotearoa (New Zealand) by early Māori. The first hue to arrive in Aotearoa from Hawaiki was brought by Māia-Poroaki. Tradition says he hid himself in a gourd named Te Ika-roa-a-Rauru and crossed Te Moana-nui-ā-Kiwa (the Pacific Ocean) to flee from his brother-in-law. On his arrival Māia-Poroaki successfully grew the seeds. He took care to bend them into different shapes as they grew and named them:

- Hine-kōtuku-rangi (his mother's name – a gourd with a curved neck).
- Te Ika-roa-a-Rauru (an elongated shape).
- Pūmatao (no stem or neck).
- Tawake-piri (shaped like a top).
- Pōnotinoti (a very small variety).
- Te Karure (another tiny variety).

Besides being a food source, the hue was also used as a pāpapa or ipu hue (water carrier) and a tahā huahua (long-term food preserving container). When used as a food preserving container, the hue contents were completely sealed in the fat of the animal being stored, for example bird or kiore fat. This method allowed the contents to be stored for a year or more.

Other uses:

- Dried stems were used for funnels.
- Small hue were used to make nose flutes (kōauau ponga ihu) and spinning tops (pōtaka).
- Young children practised the art of tāmoko (tattooing) by scratching into the fresh green skin of the hue.



Source: Auckland War Memorial Museum

Pōtaka

Whipping top

The whipping top game was a game played by both the young and the old time Māori. It was a game of skill and coordination and was played on hard level ground known as the marae pōtaka.

Tops were made of different types of timber such as mānuka, pohutukawa, tōtara and mataī. Some tops were even made from stone and some from small gourds known as pōtaka hue.



Another type of top was the pōtaka kukume, or humming top. These tops made a wailing sound (wheo) and this was sometimes likened to the sound of people mourning their dead.

The kare or tā (whip) was made from finely stripped kōrari (flax) which was knotted at the butt end and then tied to a 50 cm long stick.

The pōtaka was spun by tightly wrapping the lash of the whip around the upper body of the top. This was then pulled vigorously causing the whip to unwind and thus the top to spin. The top would continue to spin once it touched the ground.

Games were played with the pōtaka such as making them jump over kārangi (small mounds or ridges). Sometimes the tops were whipped from a starting point to a stake placed in the ground and then back to the starting point. The first person to return would be the winner. Another game played would be who could keep their pōtaka spinning the longest.

Find out:

- Find out which other cultures have spinning tops. What types of materials are the tops made from and what is used for the whips?
- What other cultures have customs associated with tops?
- Try making a top out of a block of timber. In the past Māori shaped their tops using a toki (adze) and a fret stone but today a lathe and sand paper is used to do the same job.

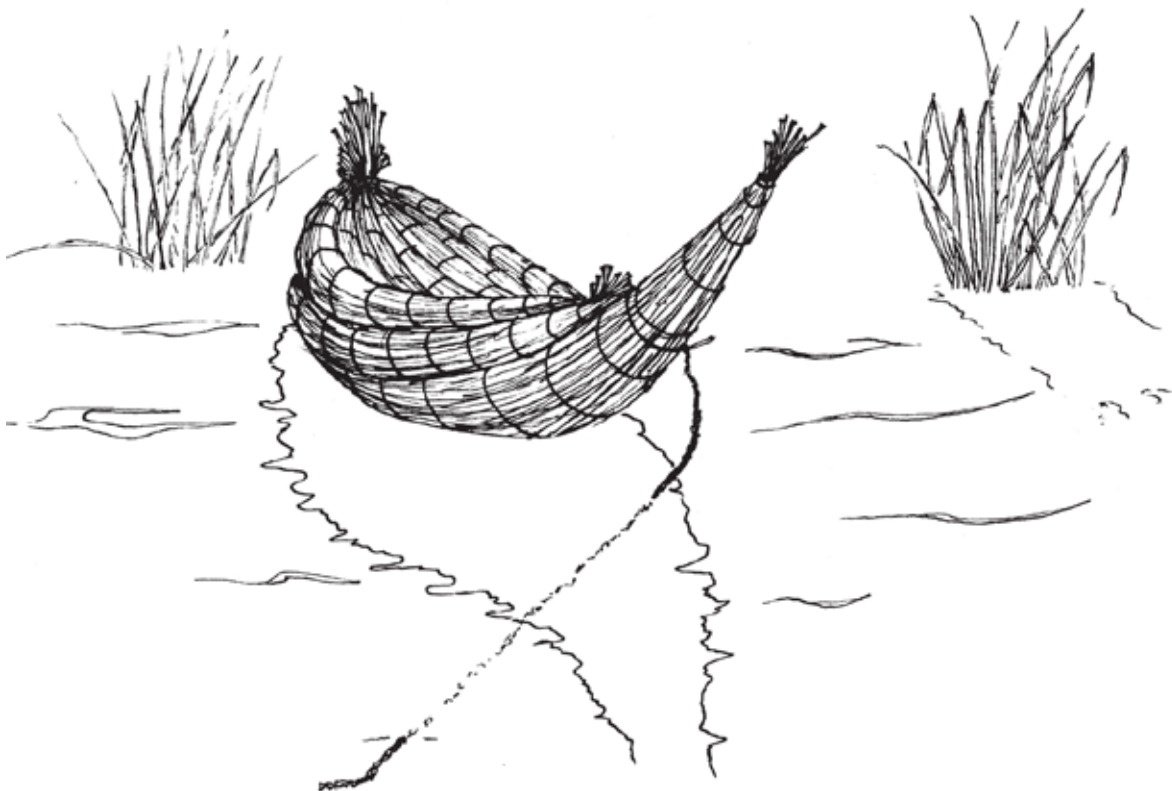
Mōkihi

A mōkihi is a waka made from the reed known as raupō (*Typha orientalis*). It was made by tying bundles of freshly picked or dried raupō together with strips of kōrari (flax) or rolled muka (inner fibre of kōrari). Mōkihi could be made in various sizes to navigate both rivers and lakes.

Māori also crossed waterways using rafts. These were made by lashing kōkari together, which are the dried flower stalks of kōrari. Māori were not alone in making boats from reeds. Other cultures such as the Ancient Egyptians also made them.

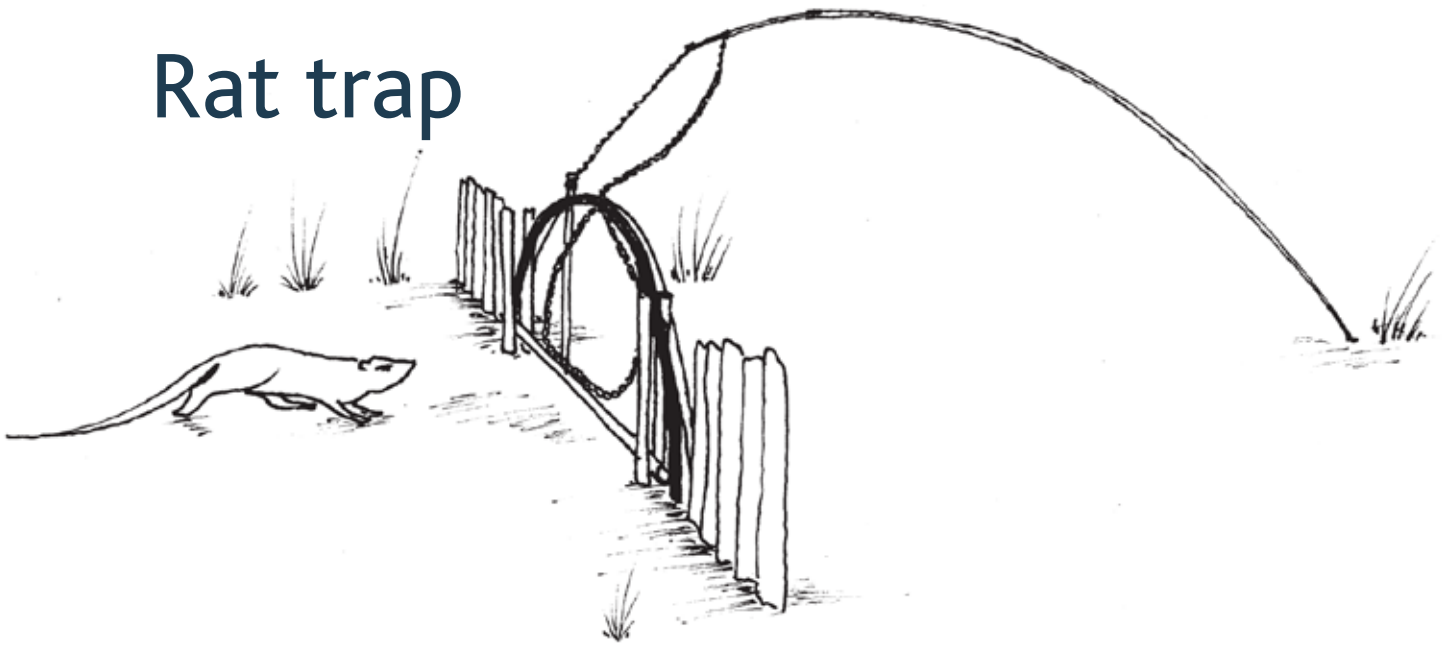
Activities:

- Investigate what other cultures made boats from reeds.
- Try making a mōkihi (model boat) using natural materials such as kōkari, the dried flax flower stalks and flax or even raupō.



Tāwhiti Kiore

Rat trap



- The kiore is the Polynesian rat that was introduced to New Zealand by Māori as a food source. The kiore were mainly vegetarians and ate different kinds of forest berries such as taraire, kahikatea, tawa, hīnau, and patatē etc. They were also known to eat eggs and young hatchlings. Kiore also loved the flower bracts and the fruit of kiekie, which was also a favoured food of Māori. The Māori stopped the kiore from eating the fruit by pulling the long leaves of the kiekie up and over the fruit and then tying them in a knot. This was done when the fruit was still green. At a later stage when the fruit was ripe the leaves were cut away to get at the succulent fruit.
- Māori made different types of traps such as the tāwhiti pokipoki to capture the kiore, These were single entrance traps. There is also the rua torea or pit trap. As the name suggests it was made by digging a hole in the ground to about 1.5 metres in depth and under-cut to stop the kiore from climbing out. Around the top inside walls short lightweight sticks were pushed into the ground. These protruded horizontally into the centre of the pit and on the end berries were placed ready for eating. When the kiore stepped out on the stick its weight would push the stick down and the kiore would fall into the pit.
- The tāwhiti kiore was a trap that was set on a kiore run, a track made by the kiore through constant use. The trap was set across the track and required no bait. The kiore would pass through the trap setting off a trip stick and this would release a noose, which would tighten around the kiore's body.
- Once cooked kiore were stored in their own fat inside the tahā huahua (gourd).
- The rats we see today are the ship rat and the Norway rat. They were introduced by European settlers and probably came as stowaways onboard their ships. These rats are known to be far more aggressive than the kiore and pose a great threat to our native bird life, as they are agile climbers and have a smart intelligence to match.

He Ngohe Ako Anō

Other learning activities

An achievable goal for this particular study could be that each student will learn to give a greeting in Māori before sharing their work, such as:

Tēnā koe Whaea / Matua. Tēnā koutou e aku hoa.

Hello Miss / Sir. Hi to all of you, my friends.

- a. **Keep a dictionary** (possibly picture) of Māori words that will be used throughout the study. (It is important to spend time on pronunciation. Refer to Matariki 1 pp 34-36).
- b. **Take the class for a tree walk** in the school grounds and then in the neighbourhood. Make a list of the trees seen and sort into native and non-native. Have the class work together to make a mural/map of the trees in the area. Label with the Māori and English names.
- c. **Make a list or a picture collection of berries students eat.**
Discuss berries that birds like to eat. Where are these found? Which trees are good for birds? (Important note: remind students that many berries are poisonous to them and must not be eaten).
- d. **Identify some of the fruit producing trees** that are a source of food for kūkupa, eg. miro, pūriri, nīkau, tī kōuka, karaka, taraire, tawa and porokaiwhiri. Collect leaves and bark rubbings from the group of trees identified for this study. Make a display that will encourage students to identify each of the trees.
- e. **Learn the Māori and English names of birds.**
Collect pictures of birds and match to names.
- f. **Make a list of birds we eat now.** Use this list to make up a picture board naming each of the birds. Compare with birds that were traditionally eaten by Māori in the past.
- g. **Collect feathers.** Discuss their differences. How are they used by people today? How were they used by Māori in the past? Use flax to weave the feathers into headbands and wristbands/masks.
- f. **Make up a story** about going for the first time to look for the miro tree to catch kūkupa.
- g. **Collect native seeds** of the trees that encourage kūkupa (and other native birds) and grow them!

He Mahere Whakahuahua mō te Ororo Māori

Pronunciation chart of the Māori syllables

A	ha	ka	ma	na	pa	ra	ta	wa	nga	wha
E	he	ke	me	ne	pe	re	te	we	nge	whe
I	hi	ki	mi	ni	pi	ri	ti	wi	ngi	whi
O	ho	ko	mo	no	po	ro	to	wo	ngo	who
	A		E		I		O		U	
U	hu	ku	mu	nu	pu	ru	tu	wu	ngu	whu

Teacher resources

Adams, Nancy M	N.Z. Native Trees
Bacon, Ron	Māori Legends (The Creation Stories) retold by
Crowe, Andrew	Native Edible Plants of New Zealand
Crowe, Andrew	Which Native Tree
Kauta, Glenda	Māui in the Underworld (Māori translation by Marana Te Tai)
Ray, Stephen and Murdoch, Kathleen	In the Forest
Ryan, P.M.	The Revised Dictionary of Modern Māori

References

Adams, Nancy M	N.Z. Native Trees
Bacon, Ron	Māori Legends (The Creation Stories) retold by
Best, Elsdon	Forest Lore of the Māori
Buck, Sir Peter - Te Rangi Hīroa	The Coming of the Māori.
Crowe, Andrew	Native Edible Plants of New Zealand
Crowe, Andrew	Which Native Tree
Gillies, Bill	Ngā Manu i Runga i te Rākau
Jackson, Amanda	Ngā Tamariki a Tāne
Kauta, Glenda	Māui in the Underworld (Māori translation by Marana Te Tai)
Orbell, Margaret	The Natural World of the Māori
Ray, Stephen and Murdoch, Kathleen	In the Forest
Ryan, P.M.	The Revised Dictionary of Modern Māori
Walker, Ranginui	Ka Whawhai Tonu Mātou – Struggle Without End