**NZQA**

**Approved**

Achievement standard: 91302 Version 2

Standard title: Evaluate sustainable food related practices

Level: 2

Credits: 5

Resource title: Foraging in the forest

Resource reference: Home Economics VP-2.4 v2

Vocational pathway: Primary Industries

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| Quality assurance status | These materials have been quality assured by NZQA. NZQA Approved number A-A-02-2015-91302-02-8186 |
| Authenticity of evidence | Assessors/educators must manage authenticity for any assessment from a public source, because learners may have access to the assessment schedule or exemplar material.Using this assessment resource without modification may mean that learners’ work is not authentic. Assessors/ educators may need to change figures, measurements or data sources or set a different context or topic to be investigated or a different text to read or perform. |

Vocational Pathway Assessment Resource

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Learner instructions

# Introduction

This assessment activity requires you to evaluate the sustainable practices of sourcing, gathering and preparing food foraged from the New Zealand bush by considering the social, economic and environmental implications of those practices.

You are going to be assessed on how comprehensively you evaluate the social, economic and environmental implications of sourcing, gathering and preparing food foraged from the New Zealand bush, and draw justified conclusions.

The following instructions provide you with a way to structure your work so you can demonstrate what you have learnt and achieve success in this standard.

Assessor/educator note: It is expected that the assessor/educator will read the learner instructions and modify them if necessary to suit their learners.

# Task

You are employed as a farm worker on a farm surrounded by significant amounts of native bush. The owner of the farm already has groups that use the bush for hunting. You have shown an interest in native food products available in the bush area and suggest that foraging for food products, then preparing and serving them could be another possible way the farmer could diversify. The farmer asks you to investigate this further and provide him with a report on its sustainability.

Investigate whether it is currently sustainable to source, gather, and prepare food foraged from the New Zealand bush.

Consider the following questions:

* What are the benefits and limitations of these activities?
* What are the opportunities and challenges presented by these activities?
* What are the social, economic and environmental implications of the practices at local and national level?

Present your conclusions in a report.

## Step 1: Developing questions

Develop some questions to help you focus on the social, economic and environmental implications of whether foraging for food in the New Zealand bush is a sustainable food practice. As you need to evaluate those implications, it is a good idea to use these as headings for your investigation. See Resource A for some sample broad questions to get you started.

## Step 2: Investigating

Do some research and collect information on the edible plants (flora) and animals (fauna) that you can find in your selected bush area. Identify which plants are harmful or poisonous. You might decide, for example, to focus on aruhe (fern root), puha, huhu grubs, pikopiko, **kōwhitiwhiti** and horopito.

You also need to research the traditional methods for preparing and cooking these foods along with other foods found in the bush. Resource B has some suggestions.

Prepare some of the foraged foods. Consider the preparation time involved, equipment available in the farm kitchen and skills required. Complete a sensory evaluation.

Before starting your evaluation, it might be useful to organise your information under headings, using a SWOT (strengths, weaknesses, opportunities and threats) chart. This will help you sort your information so you can justify your conclusions about foraging for foods as a sustainable food practice.

Remember to focus on food practices and include connections to well-being.

## Step 3: Completing your evaluation and drawing conclusions

You need to present your evaluation in a report.

You need to evaluate the:

* benefits and limitations, opportunities and challenges arising from the sustainable food practice of foraging for food in New Zealand’s native bush
* social, economic and environmental implications of acquiring food in this way. Consider the implications at a local and national level. Provide evidence to support your evaluation
* significance of social, economic and environmental implications. Show how you have weighed up all the evidence you collected and how you came to the conclusions about the sustainability of these traditional food practices. Consider the values and attitudes of households and communities when drawing conclusions related to sustainability.

Include a reference list that acknowledges the books, internet sites, people and other sources you used to find information.

# Resources

## Resource A: Sample questions

Social implications:

* How could the resurgence in using naturally grown foods help with some of the specific health issues of New Zealanders?
* How can communities become involved in developing this as a sustainable practice?
* How can we ensure that the traditional knowledge is preserved and passed on to future generations?
* What are the protocols and traditional procedures you need to be aware of before gathering wild foods?
* What skills do people need in order to prepare and cook these foods?
* How can these foods contribute to and improve the nutritional value of meals?
* What is the social and spiritual value around sharing traditional foods?
* What education do people need about poisonous foods?
* How could the foraging for wild food contribute to people’s well-being?

Economic implications:

* Can gathering bush food create employment? Is it possible to make a living from this practice?
* Is it a cost effective practice?
* Would there be economic benefits and barriers related to food packaging, storage and transportation?
* What are the comparative costs of gathering food from a local bush area (transport, etc) compared with buying food from a supermarket?
* How do we make sure forests are not depleted by people gathering for selling on (rather than for personal use)?
* If this became a more general practice, would there be costs involved with the security of forest and bush, and forest maintenance?

Environmental implications:

* What regulations and/or safety issues are involved in gathering these kinds of wild foods? Where do you find this information?
* How could emphasis on gathering this kind of food help with pollution issues and problems?
* Is there a problem with poisoning rats and other pests in our bush? Will this practice affect the wild food?
* How do we ensure there are appropriate forest regeneration practices?
* Would there need to be controls on the amount of food individuals gathered? Is a licence needed (like seafood and fish collection)?
* Would we need to limit access to certain places, such as sensitive ecosystems and whenua tapu?

## Resource B: Useful information

Remember to check and verify that your information is from a reliable source and is credible.

Here are some potential sources of information:

* Māori kai festivals often specialise in particular food types, for example:
	+ Kāwhia Kai Festival (Hamilton) – specialising in wild pork, shellfish, mud snails and watercress
	+ Te Rā o Waitangi (Wellington) – specialising in hāngī food and fresh kina (sea eggs)
	+ Hokitika Wildfoods Festival (West Coast) – specialising in ‘bush tucker’, or nativ*e* New Zealand food such as ponga fern pickles and huhu grubs.
* Traditional Māori foods and processes. You might be able to interview someone with knowledge of traditional food and/or preparation and cooking methods. You might be able to help plan, and then eat a traditional hāngī or meal on a marae.
* Restaurants and tours specialising in traditional Māori foods. Some tours take you into the bush and show you the foods to forage. You might be able to source some recipes for using some of these foods.
* Useful websites:

[http://www.newzealand.com/travel/media/features/food-&-wine/food&wine\_maori-food-ingredients\_feature.cfm](http://www.newzealand.com/travel/media/features/food-%26-wine/food%26wine_maori-food-ingredients_feature.cfm)

<http://www.maorifood.com/tour_taumarunui.html> (Māori food tours)

<http://www.newzealand.com/travel/media/features/events/food_maori-kai-festivals.cfm> (Māori food festivals)

[http://www.organicexplorer.co.nz/Info/Articles+and+Resources/Reflections+of+a+Maori+Chef.html](http://www.organicexplorer.co.nz/Info/Articles%2Band%2BResources/Reflections%2Bof%2Ba%2BMaori%2BChef.html) (re-discovering Māori foods and herbs for restaurant use)

<http://www.teara.govt.nz/en/1966/plants-edible-native> (New Zealand plants used by Māori for food and medicine)

<http://www.eske-style.co.nz/maori_plant_use.asp> (New Zealand plants used by Māori for food and medicine)

[www.doc.govt.nz](http://www.doc.govt.nz)

[www.wildlife.org.nz](http://www.wildlife.org.nz)

[www.foodsmart.govt.nz/food-safety/hunting-collecting-fishing/index.htm](http://www.foodsmart.govt.nz/food-safety/hunting-collecting-fishing/index.htm)

[www.foodsmart.govt.nz/whats-in-our-food/chemicals-nutrients-additives-toxins/specific-foods](http://www.foodsmart.govt.nz/whats-in-our-food/chemicals-nutrients-additives-toxins/specific-foods)

<http://tpo.tepapa.govt.nz/ViewTopicExhibitDetail.asp?TopicFileID=0x000a49be>

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Assessor/Educator guidelines

# Introduction

The following guidelines are supplied to enable assessors/educators to carry out valid and consistent assessment using this internal assessment resource.

As with all assessment resources, education providers will need to follow their own quality control processes. Assessors/educators must manage authenticity for any assessment from a public source, because learners may have access to the assessment schedule or exemplar material. Using this assessment resource without modification may mean that learners' work is not authentic. The assessor/educator may need to change figures, measurements or data sources or set a different context or topic. Assessors/educators need to consider the local context in which learning is taking place and its relevance for learners.

Assessors/educators need to be very familiar with the outcome being assessed by the achievement standard. The achievement criteria and the explanatory notes contain information, definitions, and requirements that are crucial when interpreting the standard and assessing learners against it.

# Context/setting

This activity requires learners to comprehensively evaluate the sustainable practices of sourcing, gathering and preparing food foraged from the New Zealand bush.

Learners will present their evaluation in a written report, visual or multimedia presentation. The format should be agreed to before the report is started.

# Conditions

The research can be completed as a group but the evaluation must be completed individually.

# Resource requirements

Learners need access to the internet.

It is preferable that learners have access to:

* a bush or forest area – although it is possible to meet the requirements of the standard by using only secondary sources
* appropriate facilities to safely and hygienically prepare some foraged food.

# Additional information

## Presentation suggestions

If learners select a format (for example PowerPoint) where the information is presented in a brief way, it is recommended that they include additional evidence (written and/or oral) to enable them to comprehensively evaluate the sustainable practice/s.

## Other possible contexts for this vocational pathway

Aquaculture diver, arborist, beekeeper, ecologist, fishery worker, forestry worker, hunter trapper, could investigate the sustainability of other traditional indigenous foods/practices. For example:

* food foraged from swamps, streams, wetlands and the shoreline
* the fusion of traditional with contemporary food products and practices
* the launching of Māori organic initiatives
* the study of early Māori crop development.

# Assessment schedule: Home Economics 91302 – Foraging in the forest

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| Evidence/Judgements for Achievement | Evidence/Judgements for Achievement with Merit | Evidence/Judgements for Achievement with Excellence |
| The learner evaluates sustainable food related practices by:* determining the value of sourcing, gathering and preparing food foraged from New Zealand forest/bush areas by considering the social, economic and environmental implications of those practices

For example:The learner provides a detailed account of the benefits and limitations, with examples of the social, economic and environmental implications.The learner makes connections to well-being.*In an overnight camp in the bush, I made a meal by using pikopiko fern tips, which are also known as bush asparagus, and fish I caught in the river. Most ferns are poisonous but I knew which ones to select as I had done my research and had also spent time on the local Marae preparing some of these foods. They need to be picked before the leaves unfold. The fronds added a 'forest' flavour to the steamed fish and certainly made the rice dish much more interesting. It is important to only pick what you need and select from more than one plant so the ferns can regenerate and keep providing for others in future.**The above expected learner responses are indicative only and relate to just part of what is required.* | The learner evaluates, in depth, sustainable food related practices by:* determining the value, supported by evidence, of sourcing, gathering and preparing food foraged from New Zealand forest/bush areas by considering the social, economic and environmental implications of those practices

For example:The learner provides a detailed account, supported by evidence, of the benefits and limitations, with examples of the social, economic and environmental implications.The learner makes connections to well-being.*In an overnight camp in the bush, I made a meal by using pikopiko fern tips, which are also known as bush asparagus, and fish I caught in the river. Most ferns are poisonous but I know from my research on the internet (http://www.newzealand.com/travel/media/features/food-&wine/food&wine\_maori-food-ingredients\_feature.cfm) that seven varieties are edible. I had also spent time on the local Marae preparing some of these foods so knew which ones to select. The fern tips need to be picked before the leaves unfold. The fronds added a 'forest' flavour to our steamed fish and certainly made the rice dish much more interesting. It is important to only pick what you need and select from more than one plant so the ferns can regenerate and keep providing for others in future.* *While on the Marae I learnt that one of the core values for Māori is to be guardians of the land and to show respect for it by only taking what we need for a meal. That way there will be food available for everyone to collect in the future. By knowing I had only taken the fern tips that were required to flavour the meal, I felt reassured that I was not damaging the environment and was considering whenua tapu.**The above expected learner responses are indicative only and relate to just part of what is required.* | The learner comprehensively evaluates sustainable food related practices by:* determining the significance, supported by evidence, of sustainable food related practices by considering the social, economic and environmental implications of those practices and drawing justified conclusions

For example:The learner provides a detailed account of the benefits and limitations, with examples of the social, economic and environmental implications.The learner makes connections to well-being.The learner’s conclusion could include:* + balancing restaurant and social needs
	+ economic concerns
	+ maintaining or improving food skills
	+ improving healthy options
	+ the impact on the wider environment.

*In the overnight camp in the bush, I made a meal by using pikopiko fern tips, which are also known as bush asparagus, and fish I caught in the river. Most ferns are poisonous but I know from my research on the internet (http://www.newzealand.com/travel/media/features/food-&wine/food&wine\_maori-food-ingredients\_feature.cfm) that seven varieties are edible. I had also spent time on the local Marae so knew which ones to select. The fern tips need to be picked before the leaves unfold. The fronds added a 'forest' flavour to the steamed fish and certainly made the rice dish much more interesting. It is important to only pick what you need and select from more than one plant so the ferns can regenerate and keep providing for others in future. While on the Marae I learnt that one of the core values for Māori is to be guardians of the land and to show respect for it by only taking what we need for a meal. That way there will be food available for everyone to collect in the future. By knowing I had only taken the fern tips that were required to flavour our meal, I felt reassured that I was not damaging the environment and was considering whenua tapu.**I discovered that gathering and cooking traditional food is not just about food, but you learn a lot about cultural values and traditions as food is such an intrinsic part of our lives. It can be a lot more than just buying something from the supermarket and sticking it in the microwave: the whole community comes together and gathers the food, shares the food and their cooking skills and eats the meal together. It is all about healthy eating and living. This has been acknowledged in some schools, which are developing courses so students come to appreciate their culture – they learn to catch eels and gather pāua and kina, and they also learn how to store and preserve the food properly and safely. This value would be a great way to promote this practice if the farmer decides to explore this further. This knowledge needs to be part of all New Zealand’s education.**The above expected learner responses are indicative only and relate to just part of what is required.* |

Final grades will be decided using professional judgement based on an examination of the evidence provided against the criteria in the Achievement Standard. Judgements should be holistic, rather than based on a checklist approach.