NO MATTER WHAT FOOD WE EAT …

Social Sciences, Science and Personal Health & Safety Unit from:
best suited to Years 5–10

New Zealand
FOOD SAFETY SCIENCE & RESEARCH CENTRE

https://www.nzfssrc.org.nz

TEACHER BACKGROUND

Recently, students and teachers from Kahukuranui at Tolaga Bay Area School, along with scientists from Groundtruth, Food Safety Science & Research Centre, Plant and Food Research and members of the Te Aitanga-a-Hauiti iwi all sat down together to a wonderful meal of locally sourced wild food. The menu was set by the students after research and interviews with their pakeke (elders). The kai-blitz is part of project to work with the Tolaga Bay community to look at harvesting wild food safely, building on the goals of the broader Uawanui Sustainability Project. The aim of the kai-blitz was to learn from each other and look at how to ensure that traditional food sources are safe and kept safe in the changing environment.

This unit focuses on safe food gathering, safe storage and safe food preparation not only from local and traditional wild food sources but through to foods we purchase at our local supermarket.

LEARNING AREAS AND STRANDS – Students will:

Social Sciences:

Place and Environment – learn about how people perceive, represent, interpret, and interact with places and environments and come to understand the relationships that exist between people and the environment.

Continuity and Change – learn about past events, experiences, and actions and the ways in which these have been interpreted over time.

Science

Living World - understand the link between life processes and ecology, and of the impact of humans on all forms of life, and the sustainability of New Zealand's unique fauna and flora and distinctive ecosystems.

Health

Personal Health – develop the knowledge, understandings, skills, and attitudes they need to maintain and enhance their personal well-being and physical development

Healthy Communities & Environments – contribute to healthy communities and environments by taking responsible and critical action.

PRE-EUROPEAN MĀORI FOOD – KAI

- Have students speculate on the century when Māori settled in Aotearoa New Zealand (approx 1300AD). Use shared reading at: ***https://teara.govt.nz/en/maori-foods-kai-maori*** to discover what plant and animal foods they brought with them and what other foods found here became part of their normal diet, *eg* taro, kumara, yam, kiore, kuri, native birds, berries fish and shellfish …
- Assign groups one section of the story each to report back findings to the class: *eg*
  - *traditional foods: growing and gathering; cooking and … preserving foods; foods introduced by Europeans; foods used in modern cuisine.*

Pre-European Kumara. Photograph by Graham Harris

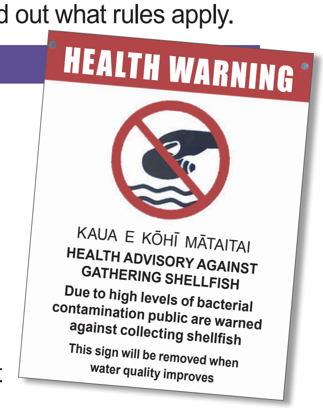
- Discover further indigenous Māori food ingredients – many of them still being eaten today at: ***www.newzealand.com/int/feature/indigenous-maori-food-ingredients/***

MATAITAI – SHELLFISH GATHERING

https://teara.govt.nz/en/mataitai-shellfish-gathering

- Do students know that prior to (and when Europeans first arrived), Māori enjoyed an enormous variety of shellfish and seafood. Have groups conduct research to discover/ report back
  - *what archaeologists have found out*
  - *how traditional harvesting was carried out including the rules for harvesting, cooking and preserving, sharing of seafood, why bans were applied and what species are still available today.*
- Introduce the idea that in New Zealand today we have strict rules that tell us where we can fish and gather shellfish and telling us how many fish/shellfish we can gather and what species are protected? Why do students think we have these (sustainability) rules? Have them visit the fishing rules page and select their region to find out what rules apply.

SHELLFISH WARNING



- Students share shellfish gathering experiences *eg where did they go to gather them? What shellfish were they gathering? How did they go about it? How successful were they? What shellfish do they like? Did they prepare them to eat in a special way …?*
- Have students ever seen a sign at a beach warning people not to gather the shellfish or catch fish? Speculate on what would make shellfish/fish unsafe to eat?
- Download '*Food safety for **seafood gatherers***' pdf for class/ group shared reading/discussion and research at: ***http://www.mpi.govt.nz/dmsdocument/1058/loggedIn*** (*Prior to research, ensure students understand the meanings of the following: bacteria; viruses; biotoxins; pollution*) Focus on:

IT'S FOOD SAFETY THAT MATTERS

- *why shellfish are high risk food*
- *reasons why the bacteria and viruses are not killed*
- *how to lower the risk of getting sick from shellfish*
- *differences between bivalves and grazing shellfish*
- *how to tell if the collection area is not safe (warning signs)*
- *what to look for/do in all areas without warning signs, eg talk to locals/parents/grandparents/iwi*
- *further safety measures after collecting shellfish and fish*
- *safe handling, storing and cooking shellfish and fish (4Cs)*

• Do students know that shellfish and water samples are taken at popular shellfish gathering areas every week? and if shellfish are not safe to eat, warning signs are placed at these beaches. Tell students that up-to-date warnings are also placed on the web. Check the latest warnings at: https://www.mpi.govt.nz/travel-and-recreation/fishing/shellfish-biotoxin-alerts

FRESHWATER – RIVERS, STREAMS & LAKES

• New Zealand has many different types of freshwater habitat/areas. Challenge students to list the different types of fresh water habitats. List/identify freshwater areas in or close to their local area. 'FLY' to these areas using Google Earth and describe them.Visit: https://teara.govt.nz/en/life-in-fresh-water and www.niwa.co.nz/our-science/freshwater/tools/kaitiaki_tools/species/mitigation for class research to find out what lives in these habitats. ***eg** Over 50 species of native freshwater fish.*

• Although our waterways are clean by world standards, have students to brainstorm ways they can become polluted. Visit: https://teara.govt.nz/en/water-quality/page-2 for further research. Play 'Up the Creek' to discover the causes of water pollution and the steps we can take to protect our freshwater at: www.doc.govt.nz/get-involved/conservation-education/resources/up-the-creek

• Plan a class field trip to your nearest waterway/stream to measure and rate the health of the waterway and surrounding area. What would students look for to show if it is healthy or unhealthy? Compare their answers with the following pdf. www.starters.co.nz/download/get/waterwayhealth/64.html

• Download the full field trip detailed lesson plan (includes links to native plants, invertebrates and freshwater fish guides) at: http://www.starters.co.nz/download/detail/fieldtrip/62.html (Lesson plan includes practical activities and follow-up activities.

AN INTRODUCTION TO WILD FOOD

• Are students aware that there are plenty of wild plant foods in the New Zealand countryside that can be eaten if you know what to look for? Can they name any of these 'edible' plants or even weeds that we can safely eat?

• Play the Garden Guru Edible Weeds video at: www.youtube.com/watch?v=n96ViuNoddc to discover what we have in our gardens/lawns which can be eaten.

• Conduct further research on NZ wild edible plant foraging at: https://thisnzlife.co.nz/beginners-guide-foraging-new-zealand to discover the following: *reasons why we should add them to our diet; benefits of wild food plants compared to cultivated plants;* the very ***important rules to follow for 'safe' foraging**…*Challenge students to write an appealing description of a wild food for a restaurant menu to tempt people to order it. Using local knowledge (family/friends/gardeners), survey the local area for 'safe' wild foods. Map what can be gathered safely and from where.

FOOD SAFETY

CLEAN COOK CHILL DON'T GET ILL

• Do students know that thousands of Kiwis suffer from food poisoning every year? Tell students that most food poisoning is caused by people not following simple rules when preparing, cooking and storing food. Stress that these rules apply to all food – wild food, and all food we purchase at supermarkets, farmers' markets …. Speculate on what these rules could be. Visit: mpi.govt.nz/food-safety/food-safety-for-consumers/clean-cook-chill to discover: *number of Kiwis annually who get food poisoning; what causes the campylobacter to spread; the symptoms of campylobacter food poisoning; steps we can take to prevent it happening – what to clean, how to cook and how and what to chill.* Play and discuss the following:
www.youtube.com/watch?v=gZC4XmtcmD0 (detailed overview)
www.youtube.com/watch?v=vEatBiGcdys (handwashing 20/20)
www.youtube.com/watch?v=vH4VLE4jKgA (fridge tips)

GETTING FOOD SAFETY MESSAGES OUT

Have students brainstorm ideas about planning and running a campaign to get these important foodsafe messages out and better understood by their community. Introduce the idea that running a **Food Safety Parents/ Community Day** would be a good way to get these messages out and could include:

- *inviting health professionals to talk about and explain the dangers of foodborne illnesses and actions we can all take to avoid them*
- *invite a wild food specialist to talk about safe foraging gathering, and preparation of wild foods*
- *inviting cooks to talk about and demonstrate correct foodsafe preparation, handling and storage*
- *present dramas, videos and posters promoting foodsafe behaviours in everyday situations*
- *hand washing, BBQ, food preparation.*

FURTHER USEFUL WEBSITES

www.youtube.com/watch?v=oWvYdMNBqes (BBQ)
www.youtube.com/watch?v=VWUr7Y-r6z0 (Food Prep Tips)
www.youtube.com/watch?v=fVQxTQtxZxk (Chill/Carry)
www.youtube.com/watch?v=kypS1lkv0gY (Cleaning Utensils)
www.youtube.com/watch?v=6JrEeR5OXiE (Hand Washing)