

NZ Curriculum:

Key competencies

Thinking; Managing Self; Relating to others

Curriculum: Geography

Level 6, 7, 8: Geographic research
Contemporary New Zealand
geographic issue

Geographic topic at a global scale
Application of geographic concepts

Other

This resource can also be used to support the teaching of Achievement Objectives in:

- Technology
- Maths
- History

And as supplementary learning for:

Science

Level 4: *The Nature of Science: Participating and contributing:*

Explore various aspects of an issue and make decisions about possible actions.

Level 5: *The Nature of Science: Participating and contributing:*

Develop an understanding of socio-scientific issues by gathering relevant scientific information in order to draw evidence based conclusions and take action where appropriate.

NZ Curriculum: Social Sciences

Level 4: Understand how exploration and innovation create opportunities and challenges for people, places and environments

Level 5: Understand how people seek and have sought economic growth through business, enterprise and innovation

Level 5: Understand how people's management of resources impacts on environmental and social sustainability

Level 5: Understand how the ideas and actions of people in the past have had a significant impact on peoples lives

Level 5: Understand how the Treaty of Waitangi is responded to differently by people in different times and different places

LEARNING OBJECTIVES:

1. Describe key moments in the history of fishing and Māori fishing in Aotearoa New Zealand
2. Investigate the size and economic value of Aotearoa New Zealand's seafood industry today
3. Explore the role of enterprise, innovation and exploration in growing fishing business
4. Identify future challenges and opportunities for the Aotearoa New Zealand seafood industry
5. Use seafood industry related vocabulary

POSSIBLE WONDERINGS:

- How has fishing changed over time?
- What was the fishing like when my koro or grandparent was young?
- How can technology improve our fishing?
- How has technology changed our fishing?
- Are there any parts of the sea that we don't fish and haven't explored yet?
- How do we explore the deepest and furthest away parts of the ocean?

Te Marautanga o Aotearoa

Pūtaiao Level 4+: *Uses of Science*

Level 4+: *Philosophy and History of Science*

Tikanga-ā-iwi

Level 4+: *Kotahi tonu te matua o te tangata Māori, ko Ranginui e tū nei, ko Papa-tū-ā-nuku e takoto nei.* (Place and environment)

Level 4+: *E tama, e hine, tangata i ākōna ki te whare, tū ana ki te marae, tau ana* (The Changing World)

Level 4+: *E kore e ngaako te rākau ki te tīkina i te pūtake whakangaoko ai engari, me tiki ki te matamata* (The Economic World)

CONCEPTUAL UNDERSTANDINGS:

1. Some key moments in the history of fishing have shaped our fishing industry past and present
2. Aotearoa New Zealand's seafood industry is sizeable and worth billions of dollars
3. Enterprise and innovation are critical factors in growing seafood industry business
4. Growing demand and the need to care for our environment are key challenges and opportunities for the future of our seafood industry
5. Specialised words and terms are used in the seafood industry

POSSIBLE ACTIONS:

- ASK a Kaumātua or grandparent about how fishing has changed over time?
- LOOK at old fishing photos to see how fishing is different now?
- EXPLORE a new way of fishing or collecting kai moana
- SHARE new knowledge with whānau at home
- CONSIDER new and innovative ideas that you could apply to your own fishing to reduce your impact on the environment and get your kai moana freshly to your plate

LEARNING EXPERIENCES OVERVIEW



LESSON 1: History of Aotearoa Fishing Industry FOCUS QUESTION:

What are some key moments in the history of fishing in Aotearoa?

- DISCUSS whakataukī, proverbs and sayings about fishing [slide 9]
- BRAINSTORM what you already know about the history of Aotearoa NZ fishing [slide 10]
- INVESTIGATE how attitudes to fish stocks have changed over time & INVITE local Kaumātua or grandparents or fisher folk to talk about their experiences first hand [slide 11]
- EXPLORE key periods in the history of Aotearoa fishing [slide 12]
- RESEARCH key periods in the history of Aotearoa fishing & CREATE a digital or paper based timeline [slide 13] [see [Teacher Outline](#)]
- RESEARCH and SHARE one piece of history particularly relevant to the Treaty and Māori fisheries [see [Teacher Outline](#)]
- WRITE a paragraph about each key period in the history of Aotearoa fishing [see [Teacher Outline](#)]

LESSON 2: Aotearoa: Business of fishing today FOCUS QUESTION:

What is the size and economic value of Aotearoa's seafood industry today?

- DISCUSS key facts about Seafood industry production [slide 14]
- GRAPH the harvest data provided [slide 14]
- INTERPRET & DISCUSS seafood export data [slide 15]
- EXPLORE how sustainable our fishing industry is [slide 16]
- Take the true false QUIZ about the Aotearoa seafood industry [slides 17-19]
- Create an INFOGRAPHIC about Aotearoa's fishing industry [slide 20]

LESSON 3: Future opportunities and challenges FOCUS QUESTION:

What future opportunities and challenges face Aotearoa's seafood industry?

- CONSIDER opportunities & challenges brought about by global growth of seafood production & consumption [slides 21 & 22] as well as global trends in over & under fishing [slide 23]
- INVESTIGATE whether we actually use all the fish we catch [slide 24] and create a bar GRAPH using data for global food loss and waste. COMPARE the effectiveness visually, of the bar graph v pie charts presented [slide 24]
- In groups DISCUSS the sustainability of global fishing [slide 25].
- CONSIDER if the global fishing industry meet the needs of the present without compromising the ability of future generations to meet their own needs? [slide 26]
- Extend thinking by DISCUSSING whether lab grown fish are the answer to meeting global demand? What other solutions might there be? [slide 27]

LESSON 4: Exploration, innovation & enterprise FOCUS QUESTION *What role do enterprise, innovation and exploration play in growing fishing businesses?* **AND Review FOCUS QUESTION:** *What have we learnt?*

- EXPLORE the meaning of key terms [slide 28]
- REVIEW examples of innovation, exploration and enterprise in Aotearoa fisheries by WATCHING [Sustainable Oceans & Seas](#) [slide 29] Take the Kahoot QUIZ to test understanding of film content [slide 29 teacher notes]
- INVESTIGATE examples of innovation, exploration and enterprise in the current Aotearoa seafood industry by WATCHING [Innovation – we're fishing smarter](#) [slide 30]
- READ about innovations and use of technology in the [Southern Ocean](#) to reduce bird bycatch [slide 31]
- WATCH film about the new innovative fishing method [PSH](#) and explore how this new technology will impact on fishing [slide 32]
- READ about [Better Fishing's](#) innovative approach [slide 33]
- WATCH this [short film about Gravity Fishing's innovative approach](#) to their supply chain [slide 34]
- WATCH the short film about [Lee Fish](#) and CONSIDER how innovations they have used to grow their business [slide 35]
- DISCUSS Callaghan Innovation and their recent award to [BlueTide Aquaculture](#) [slide 36]
- WRITE about what you have learnt in this topic using the words provided [slide 37]

KEY WORDS AND CONCEPTS (FOR TEACHERS)

Treaty settlements	Settlements made between iwi and the Crown in recompense for losses incurred by Māori when terms of the Treaty were broken
Sustainable	Able to be maintained at a certain rate or level
Sustainable development	Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs
Exports	Product or service sold overseas
Production	The quantity of something (as a commodity) that is created (usually within a given period <u>of</u> time)
Fishing industry	The economic activity concerned with catching fish for food
Consumption	The purchase of goods and services by the public
Enterprising	Having or showing initiative and resourcefulness
Exploration	Action of exploring an unfamiliar area
Innovative	Introducing new ideas; original and creative in thinking