

NZ Curriculum:

Key competencies

Thinking; Managing Self;
Relating to others

NZ Curriculum: 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.

Geography

Level 6, 7, 8: Geographic research

Contemporary New Zealand geographic issue

Geographic topic at a global scale

Application of geographic concepts.

NZ Curriculum: Social Sciences

Level 4: Understand how producers and consumers exercise their rights and meet their responsibilities

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

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

Te Marautanga o Aotearoa

Pūtaiao Level 4+ *Uses of Science:* Learn about the people and the work they do to produce science knowledge. Apply knowledge of science to community decisions and actions, in order to think about iwi and wider issues impacting on the individual, society and the environment.

Pūtaiao Level 4+ *Philosophy and History of Science:* Develop understanding of the processes by which science and society affect each other and co-evolve. Appreciate the role played by science and technology in past and present processes impacting on indigenous peoples and ecosystems, and the possibility for indigenous perspectives to influence science applications.

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 ākona ki te whare, tū ana ki te marae, tau ana (The Changing World)

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

LEARNING OBJECTIVES:

1. Investigate fishing and seafood industry related jobs
2. Identify key steps in the chain that supplies seafood from the ocean to our plate
3. Explain how traceability in the seafood supply chain can help achieve sustainable fishing and prevent illegal fishing
4. Describe one or more types of illegal fishing and how this can impact on sustainability of a fish stock
5. Describe key drivers for human rights issues on fishing vessels at sea
6. Use seafood industry related vocabulary

POSSIBLE WONDERINGS:

- What kind of job would I like to do? Would I like to work at sea?
- How does kai moana come from the ocean to my plate?
- Can we trace where our kai moana comes from?
- What is illegal fishing? Why does it happen?
- Why do some (usually) foreign fishing folk work in terrible conditions?

CONCEPTUAL UNDERSTANDINGS:

1. There are a wide range of jobs (not just at sea) that people work in the fishing and seafood industry
2. There are a number of parts to the chain supplying seafood from ocean to plate
3. Traceability in the supply chain helps those consuming and purchasing seafood ensure their seafood is sustainable
4. Illegal and unreported fishing impacts negatively on the sustainability of fisheries
5. Human rights abuses occur on some fishing vessels
6. Specialised words and terms are used in the seafood industry

POSSIBLE ACTIONS:

- KNOW the rules & follow them when fishing and taking kai moana
- LOOK for the Marine Stewardship Council label when I buy fish
- ASK whānau at home about their fishing – how do they feel about illegal fishing?
- SHARE new knowledge with whānau at home
- MAKE a poster/ imovie/ game/ presentation informing an audience about illegal fishing and / or human rights issues at sea

LEARNING EXPERIENCES OVERVIEW



LESSON 1: Seafood industry jobs FOCUS QUESTION: *What jobs do people do in the seafood industry?*

- CONSIDER who you know that works in the seafood or fishing industry & what it might be like to work on a fishing boat at sea? [slide 9]
- BRAINSTORM what we know and complete the [Prior Knowledge Chart](#) [slide 9] [See [Teacher Outline](#)]
- INVITE a local commercial fisher to talk about what it's like to work at sea
- DISCUSS key facts about the number of people employed by Aotearoa's seafood industry [slide 10]
- WATCH film clips about fishing jobs: [rock lobster fisherman](#), an [inshore skipper](#), and a [deep water skipper](#) [slides 11 - 3]
- INVESTIGATE job opportunities aboard a [deep sea factory ship](#) (includes working with machines, deckhand and working in the processing factory)
- WATCH the short film about opportunities opening up for [young Māori and those who attend the deep-sea fishing school](#) [slide 14]
- Have learners pick a seafood related job from the list provided (see [6.3 Teacher Outline](#)). Visit the [Careers New Zealand website](#) & RESEARCH the job title & complete [6.3 Fishing Jobs Worksheet](#) [slide 15]
- WATCH the short film about the [fishing community](#) and make a list of jobs you see people doing that are involved in the supply of seafood from ocean to plate [slide 16]
- DISCUSS which job you would most and least like to do and why [slide 16]

LESSONS 2 & 3: Seafood supply chain FOCUS QUESTION: *What are key steps in the chain that delivers seafood from the ocean to our plates* AND *Traceable seafood supply chain FOCUS QUESTION: How does traceability in the supply chain contribute to sustainable seafood?*

- DISCUSS the seafood supply chain [slide 17]
- BRAINSTORM what we already know about the seafood supply chain [slide 17]
- WATCH the WWF film [Ocean to Plate](#) [7:02] [slide 18]
- LIST steps in the journey of a fish from ocean to plate [slide 18]
- DRAW a flow diagram showing the journey of a fish from ocean to plate [slide 19]
- READ and discuss the example from [Lee Fisheries](#). What are the advantages of a quick turn around from point of capture to the delivery of the fish to market? [slide 19]
- COMPARE your flow chart with the [FishWise Seafood Supply Chain Diagram](#) [slide 19]
- EXPLORE the idea of a 'traceable' seafood supply chain and the role of the [Marine Stewardship Council](#) [slides 20 - 22].
- WATCH the short Marine Stewardship Council film clip about [traceability](#) in the seafood supply chain [0:47] [slide 20]
- WATCH a more detailed Marine Stewardship Council film on [traceability in the supply chain](#) [3:56] [slide 23]
- INVESTIGATE more deeply (suitable for older learners) the concept of traceability from ocean to plate by reading the Marine Stewardship Council story [From Ocean to Plate](#) and complete the ocean to plate worksheet [slide 24]

- **LESSONS 4 & 5: Illegal fishing AND Slavery at sea FOCUS QUESTION: *What impact does illegal, unregulated and unreported fishing AND Slavery at sea* FOCUS QUESTION: *Why do human rights abuses occur on some fishing vessels at sea?* AND Review key concepts FOCUS QUESTION: *What new words and concepts have we learnt?***
- DISCUSS the concept of illegal, unreported & unregulated fishing [slides 25 & 26]
- BRAINSTORM what you already know about illegal fishing [slide 26]
- READ [Marine Stewardship Council story about the hunt for pirates who illegally fished toothfish](#) [slide 27] Use the Pirate story timeline challenge CARDS to piece together the timeline of events [see [Teacher Outline](#)]
- TEST understanding of differences between Illegal, Unreported and Unregulated fishing [slides 28 & 29] & QUIZ using IUU fishing quiz [see [Teacher Outline](#)]
- DISCUSS illegal fishing & poaching in Aotearoa. WATCH the short film how [poaching has impacted on the recovery of toheroa](#) [2:07] [slide 30]
- Consider your own VIEWPOINT & justify your position [slide 31]
- EXPLORE what the Marine Stewardship Council is doing to deal with illegal fishing and complete the [illegal fishing worksheet](#) [slide 32]
- INVESTIGATE & WATCH a short film about [Global Fishing Watch](#) [0:53] [slide 32]
- EXPLORE the [Global Fishing Watch map](#) & DISCUSS [slide 33]
- DISCUSS poor working conditions, & flags of convenience [slide 35]
- WATCH the short film about [forced labour](#) on fishing boats [1:00] [slide 36] & BRAINSTORM reasons why people are forced to work at sea [slide 36]
- Extend learning by EXPLORING human rights & labour rights [slides 37 & 38]
- REVIEW learning using continuum activity [slide 39]

KEY WORDS AND CONCEPTS (FOR TEACHERS)

Seafood industry	The industry comprises ocean and coastal fishing , and fishing consultants, fishing in inland waters and fish farming and fish and shellfish processing.
Employment	The state of having paid work
Ocean to plate	The journey of seafood from their ocean habitat to the point of consumption / disposal
Fishing industry	The industry of catching fish – including growing, processing, transporting fish
Supply chain	The sequence of processes involved in the production and distribution of a commodity
Traceability	The quality of having an origin or course of development that may be found or followed
Slavery	The state of being a slave (excesssively dependent upon or controlled by someone else)
Pirate	A person who attacks and robs ships at sea
Illegal fishing	Illegal fishing takes place when vessels or harvesters operate in violation of the laws of a fishery
Unregulated fishing	Fishing of stocks that have no rules and regulations to manage how those stocks are fished
Human rights	Rights which are believed to belong to every person
Labour rights	Workers rights or labours rights are human rights that have to do with the relationship between a worker and an employer