

**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 [Teacher Outline](#)). Visit the [Careers New Zealand website](#) & RESEARCH the job title & complete [Career Quest Quiz](#) [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 verified seafood supply chain and the role of the [Marine Stewardship Council](#) [slides 20 - 22].
- WATCH the short Marine Stewardship Council film clip about [verified seafood and the seafood supply chain](#) [0:47] [slide 20]
- WATCH a more detailed Marine Stewardship Council film on [traceability in the supply chain](#) [3:56] and answer the questions [slide 23 & 24]
- Explore the [FishWise interactive supply chain](#) that also shows some of the work required to ensure fish come from legal, regulated and verified sources [Slide 24]

### LESSONS 4 & 5: Illegal fishing 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]
- BRAINSTORM reasons why people are forced to work at sea [slide 36]
- WATCH the short film illustrating how [satellites can reveal global extent of forced labour in the world's fishing fleet](#) [2:19] [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 <b>industry</b> comprises ocean and coastal <b>fishing</b> , and <b>fishing</b> consultants, <b>fishing</b> in inland waters and <b>fish</b> farming and <b>fish</b> 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     | <b>Illegal fishing</b> 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   |