TEACHER OUTLINE:

# SUSTAINABLE FISHING (2.6) & REVIEW (2.7)

## OVERVIEW

Orange Roughy live in dark cold, still waters around 1,000 metres deep. The oldest recorded Orange Roughy is estimated to be around 149 years old! In the 1980s and 1990s global stocks of Orange Roughy were overfished. In Aotearoa New Zealand at this time, Orange Roughy fisheries collapsed due to overfishing. In the year 2000 Aotearoa New Zealand Orange Roughy catch limits were severely reduced. Fisheries managers and the fishing industry has worked hard to understand how to fish Orange Roughy sustainably and fish stocks have been given time to recover. Marine Stewardship Council has now certified 60% of New Zealand Orange Roughy.

These learning activities explore some of the history of Orange Roughy fishing and the biological features of the fish that contributed to the fishery collapse.

The final activities review key learning and concepts covered in topic 2.

See accompanying slide sets Sustainable fishing: Orange Roughy and Reviewing key concepts

## FOCUS QUESTIONS

- *What characteristics of orange roughy make them susceptible to overfishing*
- *What new words and concepts have we learnt?*

## LEARNING OBJECTIVES

- Describe a characteristic of orange roughy that makes it susceptible to overfishing
- Use scientific and fisheries related vocabulary

## LOCATION

Indoors

## DURATION

45+ minutes

## LEVEL

Level 3 - 5

## CURRICULUM

Science

Pūtaiao

## NEXT STEPS

Topic 3: Science & the Sustainable Catch

Topic 5: Fisheries Management

# MATERIALS

- Slide set Sustainable fishing: Orange Roughy
- Slide set Reviewing key concepts
- This Teacher Outline
- Access to the internet (for film clip)
- Copies of MSC Certified fisheries: Orange Roughy worksheet
- Something to write with

# PROCEDURE

1. DISCUSS Orange Roughy and why this fish is so vulnerable to overfishing [slide 40 & 41]
2. READ and answer Sustainable fishing orange roughy worksheet [slide 41]
3. Complete the Topic 2 Summary Kahoot QUIZ [slide 42]
4. Review key terms by defining and then acting out a term while the rest of the class tries to guess the term [slide 42]

# KEY WORDS

Sustainable fishing

# CURRICULUM LINKS

**Nature of Science (Level 3-5)**

- Investigating in science
- Communicating in science
- Participating and contributing

**Living World (Level 3-5)**

- Ecology
- Life processes

**Science (Level 6+)**

- Participating and Contributing
- Ecology
- Life processes

**Pūtaiao**

- *The Natural World: The Organism:* Recognise that there are biological processes common to all organisms, which occur in different ways in different species. *The Biological Environment*: Recognise and explain the changes undergone by species (especially those of Aotearoa) over long periods of time (Level 4+)
- The Natural World: The Biological Environment: Investigate the effect of human actions, and natural processes, on an Aotearoa ecosystem (Level 6+)