PENANG SANGAM HIGH SCHOOL
P.O.BOX 44, RAKIRAKI
LESSON NOTES

School: Penang Sangam High School
Subject: Agricultural Science
Year/Level: 9 **Week 25**

Strand	STRAND AS 9.4 LIVESTOCK
Sub Strand	SUB-STRAND AS 9.4.1 FISHERIES

LESSON ONE: HISTORY OF FISHERIES IN FIJI

Aquaculture - the art, science and business of farming of freshwater and saltwater organisms

A fishery is an area of fresh, brackish or salt water, in which aquatic organisms are harvested. **The two types of fisheries are:**

i) **Capture fisheries – where the organisms are caught from the wild e.g. in the ocean and river.**
ii) **farmed fisheries- where organisms are farmed e.g. aquaculture.**

The Fisheries Division in Fiji is divided into three sub-sectors:

1. **Subsistence Fisheries Sector**	2. **Artisanal Fisheries Sector**	3. **Industrial Fisheries Sector**

Pre-commercial fisheries

When the population was low, the ocean, streams, rivers and ponds were able to provide many different types of aquatic resources that were needed, so capture fisheries was practised.

Fishing shallow waters from bamboo raft	Open sea fishing from a canoe	Collecting mussels
		
http://www.searover.co.uk	http://www.kulacanoes.com	http://www.teara.govt.nz

Commercial fisheries

Over time larger catches were needed to feed the growing population. People began to specialise in harvesting more aquatic organisms for barter and then for sale. This resulted in the development of more efficient equipment and methods of capturing wild aquatic organisms and aquaculture.

The fisheries sector has developed in response to the demand for the sustainable use of aquatic resources.

LESSON TWO: IMPORTANCE OF FISHERIES

The fisheries industry is important because it is a

- ✓ source of food
- ✓ materials
- ✓ income
- ✓ source of leisure activities
- ✓ A wide variety of leisure activities are also based on this resource.

AS 9.4.1.2 Describe the major systems and enterprises of aquatic resources.

LESSON ONE: AQUATIC RESOURCES

List of aquatic resources

- ✓ Fish
- ✓ Shark
- ✓ Eel
- ✓ Mammals [whales]
- ✓ Octopus
- ✓ Crabs
- ✓ Prawns
- ✓ Mud crab
- ✓ Sea cucumbers
- ✓ Aquatic plants [sea grapes]
- ✓ Sea sponges
- ✓ Corals
- ✓ Sea salt
- ✓ Sand

LESSON TWO: BASIC REQUIREMENTS OF AQUATIC ORGANISMS

To survive and grow to their potential, aquatic organisms need the following:

LESSON THREE: AQUATIC ENVIRONMENTS

The environments in which aquatic organisms live include:

- ✓ Aquarium
- ✓ Pond
- ✓ River
- ✓ Mangroves
- ✓ Intertidal zone [seashore]
- ✓ Reefs
- ✓ Deep ocean

AS 9.4.1.3 Explore challenges facing aquatic organisms and suggest possible solutions.

LESSON ONE: CHALLENGES TO AQUATIC RESOURCES

Aquatic resources face many challenges which must be addressed.

1. **Unlicensed harvesting** – where people do not have a licence to commercially harvest aquatic resources from an area so they are stealing.

2. **Destructive fishing methods** – are fishing methods that: i) destroy the ecosystem e.g. dynamiting breaks coral and kills all organisms in the ecosystem.

3. **Harvesting spawning females** – many species of aquatic organisms spawn in large groups. When these spawning females are harvested, there will be no young produced.

4. **Overfishing** – aquatic organisms like to live or visit various areas to breed and eat. Fishermen find these areas and harvest as many organisms as they can. When too many organisms are removed there will be no food for other organisms in the food chain so stocks of all organisms decline.

5. **Habitat destruction** – aquatic organisms require pristine environments to live in. Damage is caused by:
   i) rubbish including plastic, metals and rubber trash burying, poisoning and blocking the ecosystem
   ii) poison

LESSON TWO: Strategies for Dealing with Challenges facing Aquatic Organisms

The Government sets the rules and laws aimed at protecting aquatic environments and resources.

If fishermen are found to be breaking the law, the Government can take action against them.

STUDENT ACTIVITY

Paragraph Writing

'Aquatic resources face many challenges which must be addressed'.

Discuss five challenges faced by aquatic resources.

THE END