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

School: PENANG SANGAM HIGH SCHOOL **Year/Level: 10**
Subject: SOCIAL SCIENCE **WEEK 16**

Strand	**STRAND III PLACE AND ENVIRONMENT**
Sub Strand	**3.1 Develop an understanding recognize, demonstrate and critically examine the interdependent relationship of people with different places and environments and explain how people utilize and adapt this relationship for their survival and for sustainable development**
Content Learning Outcome	**Investigate the main features of physical geography and illustrate how they determine land use to maximize productivity.**

PHYSICAL GEOGRAPHY

RELIEF

Relief is the difference in slope and height of any area of land.

The main types of relief features found in Fiji are Mountains, Rolling hill country, Plains, Plateaus, and Rivers.

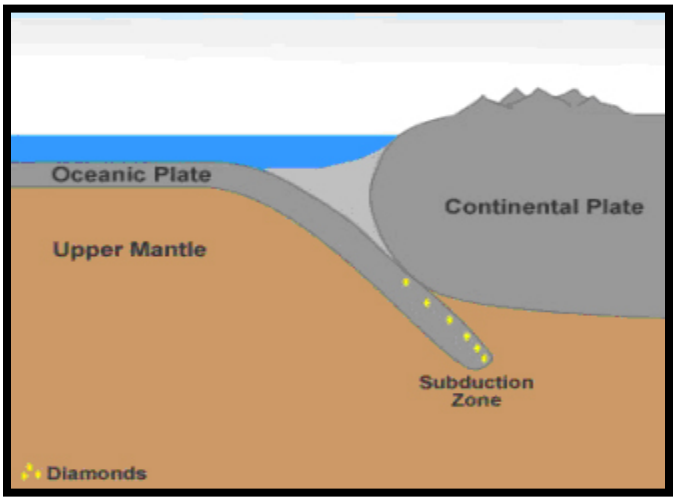
Fiji lies 5,100 km southwest of Hawaii and 3,150 km northeast of Sydney, astride the main air route between North America and Australia. Fiji has a total land area of 18,274 square kilometers. Nadi is the hub of the Pacific air routes while Suva is a regional centre.

The 180th Meridian cuts through Fiji but the International Dateline swings east so that the entire group can share the same day. Fiji has up to 850 islands.100 islands are permanently inhabited.

They are all a variety in shapes and sizes. The main islands, VitiLevu, Vanua Levu, Kadavu, Koro, Rotuma, and Taveuni are volcanic high islands and the remainders are low islands (coral or limestone)

PLATE TECTONICS AND FIJI

Fiji is located at the Indo Australian and Pacific plate boundary between two opposite facing subduction zones. The stress created by the opposing plate movements has resulted in the formation of transform faults such as the Fiji Fracture Zone to the North and the Hunter Fracture Zone to the South.



TYPES OF ISLANDS AND THEIR CHARACTERISTICS Topography:

Types of islands in Fiji

Type	Examples	Characteristics
Volcanic high islands	Viti Levu,Vanua Levu,Taveuni, Lomaiviti group, Kadavu	High with rugged relief. Deep interior valleys. Jagged peaks and ranges. Lower coastal fringe.
Raised limestone islands	Kabara,Lakeba and Fulaga	Uplifted limestone deposits, fractured by volcanic action. Rise up to 300 metres but generally of low relief.
Coral islands/islets	Nukulau,Wailagilala	Very low relief. Soil generally sand.

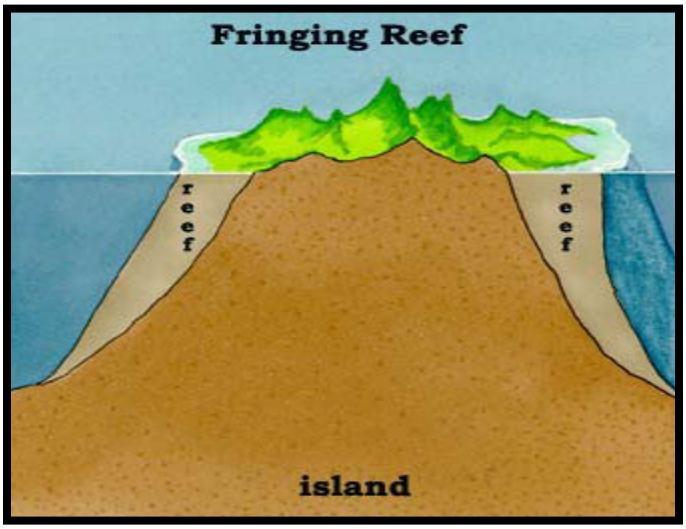
ZNote: Some islands such as Vanua Balavu are a mixture, with a volcanic cone, flanked by limestone. The underlying rock is generally basalt or other volcanic rock.

REEFS

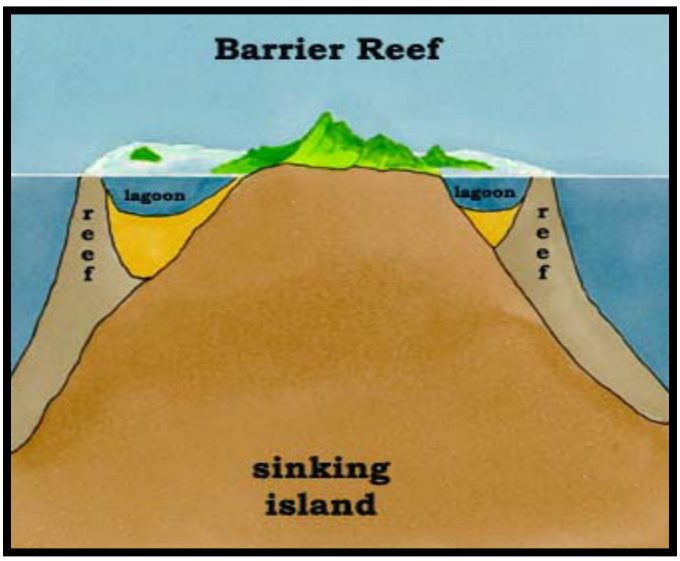
Fringing reefs are common along most of the coastlines and Fiji is outstanding for its many barrier reefs. The Great Sea Reef off the north coast of Vanua is the fourth longest in the world and the Astrolabe reef north of Kadavu is one of the most colorful. Reefs surround all islands except the Southern half of Taveuni.

The two types of reefs are:

a) *Fringing Reefs: cover the off-shore plate forms and has little water on them. The area dries up at low tide.*



b) *Barrier Reefs: found at the edge of the underwater plate form and appear to be separated from the land.*



MOUNTAINS

Mountains are towering steep-sided masses of rock that are over 1000 meters from base to peak. There are more mountains in Viti Levu as compared to the other islands in Fiji. Most of the mountains in Fiji are under the Conservation
projects and are used as Eco-Tourism sites. For e.g. the highest mountain which is Mt Victoria (Tomaniivi) is under the 'Mareqeti Viti' project and the Landowners together with all the stakeholders have declared it a conservation site where logging is not allowed as well as unnecessary removal of any flora and fauna.

Mountains are: Mt Victoria (Tomaniivi) -1323m (highest)
• Mt Naserolevu-1032m
• MT Uluiqalau-1231m
• Mt Washington-839m

LOWLANDS

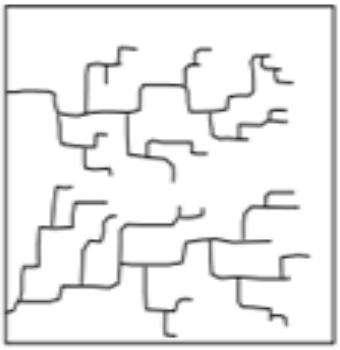
Lowland is limited in area i.e. along valleys and coastal areas Viti Levu has broad floodplains and deltas near the mouth of the rivers and along the coast. Viti Levu's lowlands form only a small part of the total land area but they support the bulk of Fiji's agriculture. In Vanua Levu, the lowlands are also restricted and most are found on the northern side where they are broken up into small pockets by ranges of low hills running out to sea.

The sun burnt plains or the infertile grasslands of Vanua Levu is hot and dry during most part of the year and is called 'talasiga'. Taveuni is called the Garden Island because of the richness of the young volcanic soils and productive plantations (yaqona,dalo and coconut)

RIVERS (DRAINAGE)
The typical drainage pattern of Fiji is radial drainage, whereby the rivers seem to radiate out like the spokes of a wheel.

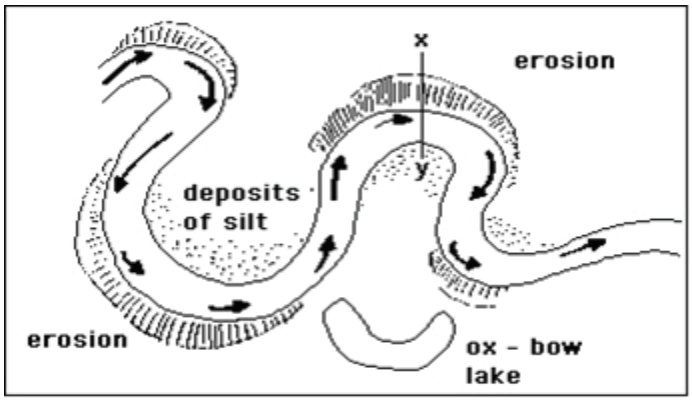
Dendritic Drainage

Radial Drainage



Rectangular Drainage

Meandering River Pattern
A meander, in general, is a bend in a sinuous water course or river. A meander forms when moving water in a stream erodes the outer banks and widens its valley, and the inner part of the river has less energy and deposits silt. A stream of any volume may assume a meandering course, alternately eroding sediments from the outside of a bend and depositing them on the inside. The result is a snaking pattern as the stream meanders back and forth across its down-valley axis. When a meander getscut off from the main stream, an oxbow lake forms.



An example of a braided river pattern.

RIVERS IN FIJI

Deepest River-Dreketi (Vanua Levu) Widest and largest-Rewa (Nausori) Longest-Sigatoka (Nadroga)

PLATEAUS

Plateaus are areas of fairly flat land. The main plateaus in Fiji are:

i. Muanivatu - 1,131 m
ii. Colo-East - drained by the Rewa River
iii. NavosaPateau - drained by the Ba River
iv. Colo West - drained by the Sigatoka River
v. Navua - drained by the Navua River
vi. Nadrau - cradled between Mt Tomaniivi(1,323 m)

Activity

1. Explain Fiji's Plate Tectonic history.

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2. Differentiate between two types of reefs in Fiji.

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3. State two features of volcanic island.

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