YEAR ELEVEN

GEOGRAPHY

HOME LEARNING KIT

Week 3

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| Name : |  |
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**Lesson # 46**

**Strand: Physical Geography**

**Sub Strand: Soil**

**Learning Outcome: Examine the problems related to soils in Fiji**

**Problems related to Fiji soils**

The problems related to soils are caused by nature and human action. Man has been dependent on soil for development and this has led to soil degradation.

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| Communicating Connectivity | Connecteur |

* **Overgrazing**
* **Ploughing**
* **Burning**
* **Use of chemicals**
* **Deforestation- erosion**

**Activity**

1. Describe one problem directly caused by human to soils in Fiji.
2. State how monoculture causes soil degradation.
3. State two ways practice good farming techniques.

**Lesson # 47**

**Strand: Physical Geography**

**Sub Strand: Soil (Fiji)**

**Learning Outcome: Describe the types of soils found in Fiji and their characteristics**

**Types of soils in Fiji**

Climate and relief play an important role in the formation and classification of soils.

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| **Characteristics**  | **Type**  | **Location**  |
| **Andosols/ Andisols** * young soils
* formed from volcanic parent material
* well drained
* most fertile
 | Basalt and Esites | Tavueni |
| **Recent soils*** soil developed from marine deposits
* best agricultural soils
* A-horizon
* Young and fertile
 | Alluvial soils- from river deposition on flood plains, deltas and banksColluvium- soils deposited by surface run-off on lower slope/ valleys | -Rewa Delta- Navua- Sigatoka- Wainibuka-Yasawa-Dawasamu |
| **Lateritic soil** * Deep reddish brown in color
* Deeply weathered and soluble minerals have **leached** out
* Low fertility
 | Areas with high precipitation | Laucala IslandKoroArea between Suva and NavuaNaboroNabukavesi |
| **Talasiga soil*** Poor soils repeated burning and clearing for long
* Low fertility
 | Sunburnt soil | Cane grown areasNadi, Lautoka, Ba Labasa |

**Activity**

* 1. State two characteristics of Talasiga soil.
	2. Describe how alluvium soil is formed.
	3. Describe the process of leaching in lateritic soil.

**Lesson # 48**

**Strand: Physical Geography**

**Sub Strand: Soil (Fiji)**

**Learning Outcome: Describe the types of soils found in Fiji and their characteristics**

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| **Vertisols*** Dark brown/black
* Rich in clay- holds plant nutrients
* Difficult to cultivate, swell when wet and cracks when dry
 |  | Found in large low lying areas |
| **Lithosols*** Very thin soil due to high rate of erosion
* Relief is most important factor for formation
 |  | Found on steep mountain slopes of high island. |
| **Coral limestone** * Is very porous (soil contains lot of air spaces)
* Little organic minerals
* Poorest soils in Fiji
 |  | Found on sandy low lying coral atolls and coastal areas. (Fulaga, Moala and Lakeba) |
| **Hydromorphic*** Found in swampy areas
* Poor drainage
* Plant nutrients are not leached due to presence of water
* Highly fertile, sticky and water logged
 | **Formed from gleying** | Found at the river mouths (Rewa and Navua)Floodplains of Labasa, Wailevu and Dreketi |

**Activity**

**Place a tick in the appropriate box**

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| **Soil type** | **Fertile**  | **Infertile**  | **Good for farming** | **Bad for farming** |
| **Alluvium** |  |  |  |  |
| **Lateritic** |  |  |  |  |
| **Lithosols**  |  |  |  |  |
| **Andosols** |  |  |  |  |
| **Talasiga** |  |  |  |  |
| **Hydromorphic**  |  |  |  |  |

**Lesson # 49**

**Strand: Physical Geography**

**Sub Strand: Soil (Fiji)**

**Learning Outcome: soil types in Fiji**



**Activity**

**On the outline map of Fiji locate and name the following**

1. Island with fertile volcanic soil in the north of the Lomaiviti group
2. The area with talasiga soil
3. The island in the North where andosols are commonly found
4. Region in the central division where latosols are commonly found
5. A town in Vanua Levu where vertisols can be found
6. An island with coral limestone soil



**Lesson # 50**

**Strand: Physical Geography**

**Sub Strand: Soil (Fiji)**

**Learning Outcome: examine the soil conservation measures in Fiji**

* **Afforestation**
* **Contour**
* **Crop rotation**
* **Crop diversification**
* **Agro forestry**
* **Composting and mulching in farming**

**Resource study**

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| *Villagers of Vatulovona in Vanua Levu have raised concerns with their village headman on the continued erosion near their church.*By**Laisa Lui****04 Nov 2019 10:00**FB TW G+ Print Email rssSoil Erosion, A Concern For Vatulovona VillagersSoil erosion at Vatulovona Village in Vanua Levu. Photo: Laisa Lui.**2020-04-20**Villagers of Vatulovona in Vanua Levu have raised concerns with their village headman on the continued erosion near their church.This was result of a recent heavy rainfall in the Northern Division.Village headman, Savenaca Raisogo said they noticed how quickly the soil had been eroding in the past few months.He had cautioned villagers and children to stay away from the steep slope until some embankment was built.He said the steep bank was two meters from the village church building.“In the past we used to plant cassava here, but now a huge chunk of land had been washed away.Mr Raisogo added that for the time being they would be planting vativa grass otherwise the best solution would be to construct a solid protection to address the problem.Kelera Dakai whose house is near the steep slope was worried that their house might get washed away in a flood if the banks are not protected.She said that children may also fall into the slope if something was not done quickly.**Edited by Selita Bolanavanua*****Feedback:*** laisa.kabulevu@fijisun.com.fj |

1. **State one cause of soil erosion in the article above.**
2. **Describe one negative impact from the activity.**
3. **Suggest one solution to the problem.**