YEAR ELEVEN

GEOGRAPHY

HOME LEARNING KIT

Week 2

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| Name : |  |
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**Lesson # 40**

**Strand: Physical Geography**

**Sub Strand: Soil**

**Learning Outcome: study and analyse the soil horizon and its features**

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A **soil horizon** is a layer parallel to the **soil** surface, also the decaying matter on it (plant litter), whose physical, chemical and biological characteristics differ from the layers above and beneath. **Horizons** are defined in many cases by obvious physical features, mainly colour and texture.

**Resource Interpretation**

Study the resource above and answer the question

1. **Describe the features of A Horizon**

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1. **Which horizon is rich with humus? Why?**

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1. **What is found in bedrock?**

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**Lesson # 41**

**Strand: Physical Geography**

**Sub Strand: Soil**

**Learning Outcome: study and analyse the soil structure**

**Soil structure**. **Soil structure** describes the arrangement of the solid parts of the **soil** and of the pore space located between them. It is determined by how individual **soil** granules clump, bind together, and aggregate, resulting in the arrangement of **soil** pores between them.

* Organic matter- humus fron dead plants and animals
* Highest humus- temperate grassland
* Low humus- dry climate
* Soil moisture- helps in upward and downward movement plants
* Clay reduces infiltratration rastes retains water
* Air fills pore spaces left by soil moisture
* Biota needs carbon dioxide gives out oxygen
* Soil organisms

Activity

1. Discuss how soil moisture plays a vital role in soil structure.
2. How does temperature affect humus content

**Lesson # 42**

**Strand: Physical Geography**

**Sub Strand: Soil**

**Learning Outcome: Describe ways to improve soil nutrients**

**SOIL NUTRIENT**

NUTRIENT is essential for plant growth and maintenance of fertility of soils.

Soil exhaustion can be avoided by:

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* Adding natural fertilizers- cow dung, goat manure, poultry
* Adapting crop rotation method
* Fallow- do not plant on the land for some time
* Shifting cultivation
* Contour farming
* Mulching

Warm temperature + soil moisture = HUMUS

(FUNGI AND BACTERIA WORK BETTER IN WARM TEMPERATURE)

ACTIVITY

1. Describe the ways to avoid soil exhaustion in your own words.

**Lesson # 43**

**Strand: Physical Geography**

**Sub Strand: Soil**

**Learning Outcome: Analyse the soil erosion process, the causes and conservation methods**

**Soil erosion**

Is the removal of the top layers of soil due to the action of wind an water

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| Soil erosion in nepal |

Also extensive human activities, monoculture activities where farmers only choose to plant one type of crop for easy task, routine and maximize profit making.

**Soil conservation**

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| * Contour ploughing. * Terrace farming. * Keyline design. * Perimeter runoff control. * Windbreaks./shelter belts * Cover crops/crop rotation. | * Soil-conservation farming. * Salinity management. * Crop diversification * Fallowing * Agroforestry |

**Activity**

1. State two ways to reduce soil degradation
2. Discuss two ways the soil has been degraded.

**Lesson # 44**

**Strand: Physical Geography**

**Sub Strand: Soil**

**Learning Outcome: examine the afforestation method of conserving soil.**

1. Vegetative cover (page 72)
2. Contour ploughing /terracing
3. Strip cropping
4. Adopting artificial and natural fertilizers
5. Adopting crop rotation methods

Impact of climate change on soil

Affects production in agriculture

Loss of peat soils

Increase damage to land degradation

**Resource study Activity**



* 1. **Identify the type of soil conservation method shown.**

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* 1. **State two benefits of practicing this method to soil.**

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* 1. **Suggest how the Agriculture ministry can sustain agriculture in Fiji.**

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**Lesson # 45**

**Strand: Physical Geography**

**Sub Strand: Soil**

**Learning Outcome: Revision Purpose**

**I test myself**

**Mapping**

Locate and label the following features on the map of NZ

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1. A finger lake
2. Mt Egmont
3. A alluvial plain
4. Hauraki Gulf
5. Karst region
6. Alpine fault
7. A braided stream