YEAR 11

GEOGRAPHY

HOME LEARNING KIT

Week 1

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| Name : |  |
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**Lesson # 35**

**Strand: Physical Geography**

**Sub Strand: Soil**

**Learning Outcome: define soil, types and characters**

**Soil**

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* Soil is a natural surface layer that contains living matter and it can support plants.
* It contains minerals and humans (decayed organic plants and animal) water, air and living organisms.
* The study of soil science is called PEDOLOGY

SOIL TYPES and characteristics

* A particular temperature and amount of precipitation influence soil formation.
* Cold climate such as tundra areas have soil of little use for agriculture.
* In cold climate soil have slow decomposition (Tundra)
* Physical processes breaks down rock fragments of regolith in smaller pieces- soil

Activity

Short answers

1. Define soil
2. State two of its uses
3. Describe one factor needed for soil formation
4. State a reason for slow soil formation in colder regions.

**Lesson # 36**

**Strand: Physical Geography**

**Sub Strand: Soil**

**Learning Outcome: describe the soil patterns**

**Patterns of soil in NZ**

**ZONAL SOIL-** very young, climate and organic life are considered to have been the major influences in formation

**AZONAL SOIL-** is intro zonal depends on all the five factors example parent material, climate topography (relief) organism (biota) time.

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| Soil type 1. Zonal soil
 | spodosols/podsols, acidic due to heavy rainPoor for agricultureSoils of coniferous forestImprove- apply fertilser- good for potatoes |
| 1. Brown earth /forest soil
 | Occupy areas under deciduous wood landRoots of trees draw up nutrientsEarthworms- carry minerals up and downGood supply of nutrients |
| 1. chernozems
 | Very fertile, good for wheat growing, no leaching, grass die and becomes humus |
| 1. laterite
 | Due to leaching, formed in humid tropical areas, poor soil |
| 1. Tropical black earth
 | Formed from volcanic rocks, in humid region, usually fertile, soil is exhausted. |

Activity

1.Describe the soil pattern in zonal soils

2. Why lateritic soil is known as poor soil

3. Give one characteristics of Chernozems.

**Lesson # 37**

**Strand: Physical Geography**

**Sub Strand: Soil**

**Learning Outcome: describe factors of soil formation**

**Process of soil formation**

Factors Affecting Soil Development. Soil research has shown that soil profiles are influenced

by five separate, yet interacting, factors: **parent material**, **climate**, topography, organisms, and **time**. Soil scientists call these the factors of soil formation.



**Activity**

1. Name two factors affecting soil formation

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1. Describe how climate affects soil formation

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**Activity**

1. Discuss how topography affects soil formation
2. Differentiate between process of organic sorting translocation process. (research on google)
3. State how weathering affects soil formation

**Lesson # 38**

**Strand: Physical Geography**

**Sub Strand: Soil**

**Learning Outcome: locate and label the types of soil found in NZ**

**NOTE:**

**AREAS OF ALPINE, ZONAL AND AZONAL SOIL (RESEARCH)**

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**ACTIVITY : USE THE ESSENTIALS OF MAP DRAWING**

**Lesson # 39**

**Strand: Physical Geography**

**Sub Strand: Soil**

**Learning Outcome: Discuss the process of soil formation**

**Soil Processes**

1. **Leaching**, in geology, loss of soluble substances and colloids from the top layer of soil by percolating precipitation. ... In such areas rapid bacterial action results in the absence of humus in the soil, because fallen plant material is completely oxidized and the products are **leached** away.



**Activity**

1. **Define the following:**
2. **Calcification**
3. **Gleying**
4. **Podsolization**