

## LESSON NOTE FOR WEEK FOUR

**SUBJECT:** GEOGRAPHY

**CLASS:** SS1

**TOPIC:** MASS MOVEMENT



**MEANING OF MASS MOVEMENT :** Mass movement or mass wasting is defined as the movement (sliding, falling, creeping or flowing) of rock materials from one place to another under the influence of gravity.

### Factors Affecting Mass Movement

Mass movement or wasting could be gradual or rapid, depending on the following factors

1. **Gradient of the slope:** The gradient of the slope affects the movement of rock materials. Rock materials move faster in steep slopes than in gentle slopes.
2. **Human activities:** The activities of man on the slope of mountains or highlands could promote or reduce the movement of rock materials.
3. **Nature and weight of materials:** Loose rock materials tend to move faster than tightly held materials. On the other hand, the heavier the weight of materials, the slower the movement and vice versa.
4. **Pressure of lubricating moisture:** The presence of lubricating moisture like rainwater, ice, etc. tends to promote or increase the movement of rock materials down the slope.
5. **Presence of vegetation:** The presence of thick vegetation tends to reduce the rate of the movement of rock materials down the slope.

### Types of Mass Movement

There are four types of mass movement. These are;

#### **A. Slow Movement Type**

1. **Soil Creep:** This is a slow, downward movement of soil materials down a gentle slope. This movement is aided by water which acts as a lubricant which enables rock materials to creep over each other. Alternate wetting and drying, heating and cooling of the soil, etc. are other factors that can promote soil creep. Soil creep can be noticed when fences or trees bend toward the direction of movement of the soil in a gentle slope.
2. **Soil flow or Solifluction:** Soil flow is formed when the soil receives heavy rainfall which turns it into a semi- liquid state. Under this condition, the soil then acts like a liquid and flows down the slope as mudflow or soil flow.

3. **Rockfall:** This occurs when a large mass of rocks fall from a steep cliff. This type of mass wasting is the most rapid of all. If a rockfall goes on repeatedly for a long time, the broken rocks collect at the base of the slope in mound (talus).

#### **B. Fast Movement Type**

4. **Landslide:** This occurs when large quantities of loosened surface rocks and soil suddenly slide down a steep slope. Landslides are caused by:
1. Lubricating action of water down the steep slope.
  2. When a steep slope is undercut by a river
  3. The pull of gravity
  4. Earthquake or volcanism and;
  5. The activities of man on the steep side or base of the slope during farming, mining or housing.