

# Term Plan for 4<sup>th</sup> Form Geography

## NATURAL SYSTEMS

### Weathering and Mass Wasting

#### Introduction to Weathering

**Objective:** Define weathering and distinguish it from erosion; understand the role of climate.

#### Types and Processes of Weathering

**Objective:** Detail the specific mechanical and chemical processes required by the syllabus.

- **Physical (Mechanical) Weathering:**
  - **Frost Action (Freeze-Thaw):** Common in high altitudes/temperate zones.
  - **Exfoliation (Insolation/Thermal Expansion):** Common in hot deserts; "onion-skin" peeling.
- **Chemical Weathering:**
  - **Carbonation:** Specifically how it affects limestone (Karst) landscapes.
  - **Hydrolysis:** Breakdown of feldspar into clay.
  - **Oxidation:** "Rusting" of iron-rich rocks.
- **Biotic Weathering:** The role of plant roots and burrowing animals.

#### Mass Wasting (Mass Movement)

**Objective:** Understand the downslope movement of materials under the influence of gravity.

- **Classification of Mass Wasting:** \* **Fast Movements:** Landslides, rockfalls, and debris flows.
  - **Slow Movements:** Soil creep (identifying "curved tree trunks" and tilted fences).
- **Triggers of Mass Wasting:**
  - Saturation by heavy rainfall (highly relevant to Caribbean hurricanes).
  - Tectonic activity (Earthquakes).
  - Slope angle and undercut slopes (by rivers or coastal waves).

## HUMAN SYSTEMS

### Urbanisation and Migration

#### **Migration – Types and Causes**

**Objective:** Define migration and distinguish between different types; analyze the "Push-Pull" framework.

#### **International Migration & Caribbean Trends**

**Objective:** Examine the patterns and consequences of international migration with a focus on a named Caribbean country.

#### **Urbanisation – Growth and Causes**

**Objective:** Define urbanization and explain the factors driving it in the Caribbean.

#### **Urban Case Study and Management**

**Objective:** Detail the impacts of urban growth in a named Caribbean capital and discuss control measures.

#### **Controlling Urbanisation**

### Pollution & Environmental Degradation

#### **Introduction and Air Pollution**

**Objective:** Define pollution and identify the various types of pollution.

**Definition:** The introduction of harmful substances (pollutants) into the environment that cause adverse changes.

#### **Water Pollution as a consequence of urbanisation**

**Objective:** Explain how Caribbean water bodies are degraded and the biological consequences.

- **Sources of Water Pollution:**
  - **Marine:** Oil spills from tankers and ships
  - **Terrestrial:** Agricultural runoff (pesticides and fertilizers) and untreated sewage.

- **Eutrophication:** 1. Fertilizers/Nitrates wash into rivers/seas. 2. Algae blooms grow rapidly on the surface. 3. Sunlight is blocked; plants die. 4. Bacteria decompose plants and use up all oxygen (O<sub>2</sub>). 5. **Fish kills** and "dead zones" occur.
- **Case Study:** Pollution of the **Kingston Harbour (Jamaica)**.

## MAPWORK/ PRACTICAL

Measuring straight and curved distances (to nearest 100 metres)

Describing landscapes

- (i) Relief – the distribution, height and size of landforms; types of slopes (concave, convex, straight, terraced/stepped); nature and height of slopes (steep, gentle, undulating, uneven), spurs, valleys, plains, depressions, ridges, plateaux, escarpments, cliffs, passes (cols, saddles);
- (ii) (ii) Drainage – drainage patterns, density, direction of flow, quality of the drainage, shape and size of channel;
- (iii) (iii) Land use – vegetation, agriculture, industry, transport networks and settlement form and distribution.

Cross sections.