

# MARINA INTERNATIONAL SCHOOL

## GEOGRAPHY SCHEME OF WORK

### FORM 6 - TERM 1

WEEK	TOPIC	TOPIC DETAILS
1.1	HYDROLOGY AND FLUVIAL GEOMORPHOLOGY: The drainage basin system	<p><b>FO</b> <b>TE</b> To describe the hydrological cycle and the processes going on within the system.</p> <p><b>FO</b> <b>ET</b> Inputs, Outputs, Stores, flows and Underground water</p> <p><b>FO</b> <b>ET</b> Input</p> <p><b>FO</b> <b>ET</b> Precipitation: all forms of rainfall including, snow, frost, hail etc</p> <p><b>FO</b> <b>ET</b> Outputs: Evaporation: process by which liquid or solid changes to gas,</p> <p><b>FO</b> <b>ET</b> Evapotranspiration: The combination of evaporation and transpiration.</p> <p><b>FO</b> <b>ET</b> River discharge: the volume of water flowing through a river channel.</p> <p><b>FO</b> <b>ET</b> Flows: above ground – throughfall: water that falls through gaps in vegetation or drops from leaves.</p> <p><b>FO</b> <b>ET</b> Stemflow: water that trickles along twigs and branches.</p> <p><b>FO</b> <b>ET</b> Overland flow: movement of water over the ground surface. Channel flow: movement of water within the river.</p> <p><b>FO</b> <b>ET</b> Flows: below ground – infiltration: Process by which water soaks into the soil.</p> <p><b>FO</b> <b>ET</b> Percolation: movement of water in rocks or soil.</p> <p><b>FO</b> <b>ET</b> Throughflow: The downward movement of water within the soil.</p> <p><b>FO</b> <b>ET</b> Groundwater/ baseflow: The store of water held beneath the water table.</p>
2.1	Discharge relationships within drainage basins	<p><b>FO</b> <b>TE</b> To describe the Components of hydrographs (storm and annual).</p> <p><b>FO</b> <b>ET</b> A storm hydrograph shows changes in discharge within a river over time. Influences on hydrographs. The factors below affect storm hydrographs.</p> <p><b>FO</b> <b>ET</b> Climate: precipitation type and intensity, temperature, evaporation, transpiration, evapotranspiration,</p> <p><b>FO</b> <b>ET</b> Antecedent moisture: The amount of moisture in the soil before a rain.</p> <p><b>FO</b> <b>ET</b> Drainage basin characteristics: size and shape, drainage density, porosity and permeability of soils, rock type, slopes, vegetation type, and land use.</p>

WEEK	TOPIC	TOPIC DETAILS
3.1	River channel processes and landforms	<p><b>FO</b> <b>HO</b> To describe the processes within a river channel. These processes are Erosion, transportation and deposition.</p> <p><b>FO</b> <b>HO</b> Erosional processes: abrasion/corrasion, solution, cavitation, and hydraulic action.</p> <p><b>FO</b> <b>HO</b> Load transport: traction, saltation, suspension, and solution.</p> <p><b>FO</b> <b>HO</b> Deposition and sedimentation: the Hjulstrom curve: a curve that describes the relationships between erosion, transportation, and deposition of sediments within a river.</p> <p><b>FO</b> <b>HO</b> River flow: velocity and discharge, patterns of flow (laminar, turbulent and helicoidal), and thalweg: is a line drawn to join the lowest points along the entire length of a stream bed or a river.</p> <p><b>FO</b> <b>HO</b> Channel types: The three types of channels in rivers: straight, braided, and meandering.</p> <p><b>FO</b> <b>HO</b> The Landforms created within a river channel: meander (river cliffs, point bars, oxbow lakes), riffle and pool sequences, waterfalls, gorges, bluffs, floodplains, levées, and deltas.</p>
4.1	The human impact	<p><b>FO</b> <b>HO</b> Modifications to catchment flows and stores and to channel flows by land-use changes (deforestation, afforestation, urbanisation), abstraction and water storage.</p> <p><b>FO</b> <b>HO</b> The causes and impacts of river floods; prediction of flood risk and recurrence intervals.</p> <p><b>FO</b> <b>HO</b> The prevention and amelioration of river floods to include:</p> <p><b>FO</b> <b>HO</b> forecasts and warnings</p> <p><b>FO</b> <b>HO</b> hard engineering – dams, straightening, levées and diversion spillways</p> <p><b>FO</b> <b>HO</b> Soft engineering – floodplain and drainage basin management, wetland and river bank conservation and river restoration.</p> <p><b>FO</b> <b>HO</b> Case study: candidates must study a recent river flood event showing the causes of the flood, Impacts on both people and the environment, and evaluate attempts to reduce the impact of the flood.</p>
5.1	ATMOSPHERE AND WEATHER: Diurnal energy budgets	<p><b>FO</b> <b>HO</b> To describe the Factors affecting diurnal energy budget:</p> <p><b>FO</b> <b>HO</b> Diurnal energy: How night-time energy budget differ from the day-time energy budget.</p> <p><b>FO</b> <b>HO</b> Incoming (shortwave) solar radiation: this is the energy from the sun, reflected solar radiation: energy sent back into the atmosphere by surfaces, energy absorbed into the surface and subsurface, albedo, sensible heat transfer,</p> <p><b>FO</b> <b>HO</b> Long wave radiation, latent heat transfer – evaporation, dew and absorbed energy returned to earth.</p>

WEEK	TOPIC	TOPIC DETAILS
5.2	The global energy budget	<p><b>FO</b> <b>HO</b> To describe the latitudinal pattern of radiation: excesses and deficits.</p> <p><b>FO</b> <b>HO</b> Atmospheric transfers: Winds result from differences in air pressure.</p> <p><b>FO</b> <b>HO</b> Wind belts and ocean currents.</p> <p><b>FO</b> <b>HO</b> Seasonal variations in temperature, pressure and wind belts: the influence of latitude, land/sea distribution, and ocean currents.</p>
6.1	Weather processes and phenomena	<p><b>FO</b> <b>HO</b> To describe Atmospheric moisture processes:</p> <ul style="list-style-type: none"> <li>o Evaporation, condensation, freezing, melting, deposition, and Sublimation: is the transition of a substance directly from the solid to the gas state, without passing through the liquid state.</li> <li>o Causes of precipitation: convection, frontal and orographic uplift of air, and radiation cooling.</li> <li>o Types of precipitation: clouds, rain, hail, snow, dew, and fog.</li> </ul>
6.2	The human impact	<p><b>FO</b> <b>HO</b> To describe the enhanced greenhouse effect and global warming: the evidence, possible causes and atmospheric impacts.</p> <p><b>FO</b> <b>HO</b> Case study: candidates must study an urban area which shows the effects of human activity on climate: temperature (heat island), humidity, precipitation and winds.</p>
7.1	ROCKS AND WEATHERING: Plate tectonics	<p><b>FO</b> <b>HO</b> To describe the nature of tectonic plates and their global patterns.</p> <p><b>FO</b> <b>HO</b> Types of plate boundaries: divergent (constructive), conservative and convergent (destructive).</p> <p><b>FO</b> <b>HO</b> Processes and associated landforms: sea floor spreading, subduction, fold mountain building, ocean ridges, ocean trenches, and volcanic island arcs.</p>

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7.2	Weathering	<p><b>FO</b> <b>HO</b> To describe the different types of weathering:</p> <ul style="list-style-type: none"> <li>o Physical (mechanical) weathering processes: freeze-thaw, heating/cooling, salt crystal growth, pressure release (dilatation), and vegetation root action.</li> <li>o Chemical weathering processes: hydrolysis, hydration, and carbonation.</li> <li>o General factors affecting the type and rate of weathering: climate, rock type, rock structure, vegetation, and relief.</li> <li>o Specific factors affecting the type and rate of weathering: temperature and rainfall (Peltier diagram).</li> </ul>
8.1	Slope processes	<p><b>FO</b> <b>HO</b> To describe the processes that goes on in a slope:</p> <p><b>FO</b> <b>HO</b> Slope processes, conditions under which each occurs and effects on slopes.</p> <p><b>FO</b> <b>HO</b> Mass movement: heaves, flows, slides, and falls.</p> <p><b>FO</b> <b>HO</b> Water and sediment movement on slopes: rain splash and surface runoff (sheetwash and rills).</p>
8.2	The human impact	<p><b>FO</b> <b>EO</b> The impact of human activities on the stability of slopes: increasing stability and decreasing stability. Strategies to modify slopes to reduce mass movements: pinning, netting, grading and afforestation.</p> <p><b>FO</b> <b>EO</b> Case study: candidates must study the impacts of human activity on slopes showing the effect on the stability of the slope, and evaluate attempts to reduce mass movement.</p>
9.1	Paper 2: CORE HUMAN GEOGRAPHY: Natural increase as a component of population change	<p>To describe:</p> <ul style="list-style-type: none"> <li>o Natural increase rate, birth rate and death rate, fertility rate, and infant mortality rate.</li> <li>o Factors (social, economic, environmental and political) affecting levels of fertility and mortality.</li> <li>o The interpretation of age/sex structure diagrams.</li> <li>o Population structure (age, gender, dependency, and dependency ratio).</li> </ul>
9.2	Demographic transition	<p><b>FO</b> <b>HO</b> To describe the demographic transition model</p> <p><b>FO</b> <b>HO</b> Changes in birth rate and death rate over time.</p> <p><b>FO</b> <b>HO</b> A critical appreciation of the demographic transition model, Stages 1–5.</p> <p><b>FO</b> <b>HO</b> Issues of youthful populations and ageing populations.</p> <p><b>FO</b> <b>HO</b> Links between population and development: changes in infant mortality rate and life expectancy over time</p>

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10.1	Population–resource relationships	<p><b>FO</b> <b>10</b> To describe:</p> <p><b>FO</b> <b>10</b> The concept of food security. Causes and consequences of food shortages.</p> <p><b>FO</b> <b>10</b> The roles of technology and innovation in development of food production. The role of constraints (e.g. war, climatic hazards) in relation to sustaining population.</p> <p><b>FO</b> <b>10</b> The concept of carrying capacity.</p> <p><b>FO</b> <b>10</b> Candidates should be able to critically evaluate the concept of optimum population including overpopulation and under-population.</p>
11.1	The management of natural increase	<p><b>FO</b> <b>11</b> To describe:</p> <p><b>FO</b> <b>11</b> Case study: candidates must study one country's population policy regarding natural increase, showing the difficulties faced and evaluate the attempted solution(s).</p> <p><b>FO</b> <b>11</b> (The case study must include attempts to alter the natural increase rate and to manage the results of population change.)</p>

## GEOGRAPHY SCHEME OF WORK

### FORM 6 - TERM 2

WEEK	TOPIC	TOPIC DETAILS
1.1	MIGRATION: Migration as a component of population change	<p><b>FO</b> <b>11</b> To describe:</p> <p><b>FO</b> <b>11</b> Movements of populations (excluding all movements of less than one year's duration). <b>FO</b> <b>11</b> Causes of migration: push factors and pull factors, processes of migration (including chain migration) and patterns of migration (including by distance and by age), the role of constraints, obstacles and barriers (e.g. cost, national borders).</p>
2.1	Internal migration (within a country)	<p><b>FO</b> <b>11</b> To describe:</p> <p><b>FO</b> <b>11</b> Rural–urban and urban–rural movements: their causes and impacts on source areas and receiving/destination areas including population structures. <b>FO</b> <b>11</b> Stepped migration within the settlement hierarchy and urban–urban movements. <b>FO</b> <b>11</b> Causes and impacts of intra-urban movements (within urban settlements).</p>

WEEK	TOPIC	TOPIC DETAILS
3.1	International migration	<p><b>FO</b> <b>ED</b> To describe:</p> <p><b>FO</b> <b>ED</b> Voluntary and forced (involuntary) movements. <b>FO</b> <b>ED</b> Causes and patterns of international migrations (including economic migration and refugee flows) and impacts on source areas and receiving/destination areas.</p>
4.1	The management of international migration	Case study: candidates must study one international migration stream: its causes, character, scale, pattern and impacts on source areas and receiving/destination areas.
5.1	SETTLEMENT DYNAMICS: Changes in rural settlements	<p><b>FO</b> <b>ED</b> Contemporary issues in rural settlements in LICs, MICs and HICs, (e.g. depopulation, service provision) including the impacts of internal migration and the consequences of urban growth.</p> <p><b>FO</b> <b>ED</b> Case study: candidates must study a rural settlement (village or hamlet) or a rural area showing some of the issues of its development and growth (or decline) and evaluating the responses to these issues.</p>
6.1	Urban trends and issues of urbanisation	<p><b>FO</b> <b>ED</b> To describe:</p> <p>o Urban growth. The process of urbanization: the process where an increasing proportion of the population lives in towns and cities. and its causes and consequences in LICs, MICs and HICs, including counter urbanisation and reurbanisation, competition for land and urban renewal.</p> <p>o The concept of a world city: causes of the growth of world cities and the development of a hierarchy of world cities</p>
7.1	The changing structure of urban settlements	<p><b>FO</b> <b>ED</b> To describe:</p> <p><b>FO</b> <b>ED</b> Factors (social, economic, environmental and political) affecting the location of activities within urban areas (including planning) and how urban locations change over time for retailing, services and manufacturing.</p> <p><b>FO</b> <b>ED</b> The changing central business district (CBD). <b>FO</b> <b>ED</b> Competition for space (spatial competition) in urban areas, the concept of bid rent, and functional zonation.</p> <p><b>FO</b> <b>ED</b> Residential segregation: causes (income and race/ethnicity) and processes (e.g. operation of the housing market, influence of family and friends, culture and planning).</p>