IB/AP Geography
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IB/AP Geography Syllabus

Geographic Tools

I. Geographical Skills (IB)

1. Locate and differentiate elements of the Earth's surface including the use of aerial and space photography
2. Read, interpret, analyze, and produce maps: isoline, sketch, topological, dot, proportional maps, and flow diagrams
3. Interpret topographic maps
4. read, interpret, analyze and construct statistical graphs
5. undertake statistical calculations to show patterns and changes using frequencies, ranges, densities, ratios, and dependency ratios
6. manipulate and interpret data using quantitative techniques including Spearman Rank Coefficient
7. undertake geographical investigation
8. produce written geographical evaluation

II. Geography: Its Nature and Perspectives (AP)

1. Geography as a field of inquiry
2. Evolution of key geographical concepts and models associated with notable geographers
3. Key concepts underlying the geographical perspective: space, place, and scale
4. Key geographical skills
    a. How to use and think about maps and spatial data sets
    b. How to understand and interpret the implications of associations among phenomena in places
    c. How to recognize and interpret at different scales the relationships among patterns and processes
    d. How to define regions and evaluate the regionalization process
    e. How to characterize and analyze changing Interconnections among places
    f. Sources of geographical ideas and data: the field, census data, etc.

III. Topographic Mapping (IB)

a. components
b. spatial patterns: physical, human landscapes, integration of landscape components

Physical Systems: Interactions of Earth Systems

Text: Elemental Geo-systems, Christopherson

IV. Lithospheric processes and hazards (IB)

1. Tectonic processes: plate tectonics, earthquake hazards, distribution and processes, human responses, volcanic hazards, distribution and processes
2. Mass Movement of rocks: processes of weathering, physical causes and consequences of mass movement; human causes and consequences of mass movement

3. Population & Resources (IB) (from core theme of Population Resources & Development)

a. natural resources: non-renewable and renewable
b. relationship between population and resource base
c. population projections and policies

4. Resources production and consumption (IB) (from core theme of Population Resources & Development)

a. patterns of production and consumption of fossil fuels, water and forest products
b. spatial distribution of production and consumption over time and place

IB/AP Geography Syllabus

c. factors affecting patterns of production; reasons for changes of production and consumption in terms of economic development

V. Coasts and their Management (IB)

1. Factors affecting the shoreline environment: terrestrial, atmospheric, marine, biological factors creating shorelines, cliffs, dunes, barriers, beaches, lagoons, estuaries
2. role of humans in altering the coastal zone
3. marine processes and landforms: action of waves, erosional landforms, depositional landforms, emergent and submergent coastlines, eustatic and isostatic changes
4. issues and management strategies: changes in coastal littorals, coastal hazards especially in LEDC's, response to hazards and environmental impact

VI. Drainage Basins and their Management (IB)

1. concept of drainage basins as open systems; delineate basins at different scale
2. understand the interrelationship of precipitation, evapotranspiration, interception, infiltration, through flow, percolation, ground water store and flow, water table, surface flow, channel flow, water balance
3. mechanics of a drainage system: impact of moving water, drainage terminology,
4. controls on a drainage system: basin size, shape, relief, slope, atmospheric controls, rock and soil types, land use, vegetation…. ; use of hydrographs
5. fluvial features in the landscape: landforms produced by erosion and deposition
6. natural and human hazards from flooding; effect of humans on fluvial processes including urbanization
7. water supply management
8. issues of water utilization at a variety of scales

VII. Climatic hazards and change (IB)

1. atmospheric and human processes leading to the development of tropical cyclones, tornadoes, drought, storm tracts
2. hazards associated with climatic events
3. global climatic change: causes, El Nino Southern Oscillation, enhanced greenhouse effect, acid deposition, ozone depletion
4. local climatic changes: modification of urban micro-climates; modification of rural micro-climates

Human Systems

Text: Human Geography, Fellmann & Getis; Planet Geography, Codrington

VIII. Cultural Patterns and Processes (AP)

A. Concepts of culture
   1. Traits and complexes; 2. Diffusion; 3. Acculturation; 4. Cultural regions and realms
B. Cultural differences
   1. Language; 2. Religion; 3. Ethnicity; 4. Gender; 5. Popular and folk culture
C. Environmental impact of cultural attitudes and practices
D. Cultural landscapes and cultural identity
   1. Values and preferences
   2. Symbolic landscapes and sense of place

IB/AP Geography Syllabus

IX. Population (IB & AP)

A. Geographical analysis of population
1. Density, distribution, and scale
2. Consequences of various densities and distributions
3. Patterns of composition: age, sex, race, and ethnicity
4. Population and natural hazards: past, present, and future

B. Population growth and decline over time and space
1. Historical trends and projections for the future
2. Patterns of fertility, mortality, and health
3. Regional variations of demographic transitions
4. Effects of pro- and anti-natalist policies

C. Population movement
1. Major voluntary and involuntary migrations at different scales
2. Short-term, local movements, and activity space

D. Population , Resources, and Development: **(IB)**
1. Distribution, density and the relationship to resources
   a. size, distribution, & density of population at global, national and regional scales
   b. physical factors influencing these distributions such as climate, accessibility, topography and resources
   c. human factors affecting distributions including economic, historical, political, cultural factors
   d. concepts of optimum, over and under-population
2. Population Change
   a. world population growth- historical and projected factors affecting global and specific rates of fertility and mortality, life expectancy and rates of natural increase
   b. the demographic transition model
   c. type of migration classified by time, and distance and motive
   d. actual and perceived motives to migrate, including economic, social, political, environmental, cultural and demographic reasons, push-pull factors
   e. issues arising from changing distribution of population, including effects on both places of origin and places of destination in migration, laws and political influences upon migration
   f. population policies affecting natural increase and migration, boundaries and frontiers, areas in crisis and conflict

E. population structure
   a. population pyramids
   b. age groups, dependency ratios
   c. sex ratios
   c. issues arising form the changing structure of populations including environmental, economic and social impacts, political tensions, gender imbalances, and cultural interactions.
   d. spatial patterns of fertility
   e. economic factors of fertility

X. Urban Environments: (IB & AP)

A. Urbanization
1. definition and classification of settlements
2. evolution of cities as centers of production, consumption, exchange, finance, and corporate and political decision-making
3. growth of large cities in different parts of the world; rise of megacities

IB/AP Geography Syllabus

4. changes over time such as rapid urbanization in some parts of the world, suburbanization, agglomeration, counter-urbanization, urban renewal

5. economic, social, cultural, political and environmental forces affecting different rates of urban growth around the world

B. urban systems and networks

1. central place theory- Christaller- range, and threshold of goods
2. urban hierarchies, rank- size
3. inter-urban flows, gravity models
4. urban growth and rural-urban migration
5. cultural context and urban form

C. Urban morphology

1. land prices, bid rent, and land use
2. distribution of social groups
3. location of urban activities
4. urban models- Hoyt, Burgess, Harris & Ullman;
5. urban morphology in different parts of the world
6. comparative models of internal city structure

D. urban issues & responses to growth

1. problems and potential solutions such as transportation, waste disposal, water supply, access to services, housing, inner city areas, social issues
2. urban planning and design
3. community action and initiatives

E. Functional character of contemporary cities (AP)

1. changing employment mix
2. changing demographic and social structures

F. built environment and social space (AP)

1. transportation and infrastructure
2. . political organization or urban areas
3. uneven development, ghettoization, gentrification
4. impacts of suburbanization

XI. Agricultural and Rural Land Use (IB & AP)

A. Development and diffusion of agriculture

1. Neolithic Agricultural Revolution;
2. Second Agricultural Revolution

B. Major agricultural production regions

1. Agricultural systems associated with major bio-climatic zones
2. Variations within major zones and effects of markets
3. Linkages and flows among regions of food production and consumption

C. Rural land use and settlement patterns

1. Models of land use and localization of economic activities
2. Settlement patterns associated with major agriculture types

D. Modern commercial agriculture: the Third Agricultural Revolution

1. Green Revolution and the beginning of the biotechnological revolution

IB/AP Geography Syllabus

2. Characteristics of the third revolution: blending of primary, secondary, and tertiary activities, intensification of mechanization, and development of biotechnology
3. Spatial organization of industrial agriculture
4. Diffusion of industrial agriculture
5. Future food supplies and environmental impacts of agriculture — hopes and fears

E. Food as a resource (IB)

1. define hunger and malnutrition at local and global scales
2, Food output; decrease in regional output and increase in actual production at a global scale

F. Food production, trade and aid

1. global imbalance in production and distribution of food; relationship of global imbalance of available food and economic development; market access, capital, technology, and government intervention
2. Trading patterns in food; understanding of trade agreements and government programs

XII. Industrialization and Development (AP)

A. Key concepts in industrialization and development

B. Growth and diffusion of industrialization

1. The changing roles of energy and technology
2. Industrial Revolution
3. Diffusion of economic cores and peripheries
4. Geographic critiques of models of industrial location, economic development, and world systems

C. Contemporary patterns and impacts of industrialization and development

1. Spatial organization of the world economy
2. Variations in levels of development
3. Deindustrialization
4. Pollution, health, and quality of life
5. Industrialization, environmental change, and sustainability
6. Economic development initiatives: government policies

D. Productive activities (IB)

1. locational factors for agricultural and industrial locations; influences and factors for production
2. changes in transport and communications; transport costs and changes
3. changes in labor: sectoral shifts and locational changes; female and child labor
4. changes in systems and organization: changes in production, agribusiness and multinationals, government intervention
5. Geographical impacts of change; agricultural change between LEDC's and MEDC's; changes in industrial location
6. Sustainable development: agriculture and industrialization

E. Development **(IB)**

1. Concept of development; indicators of development; definitions of development; quantitative indicators of development including economic, social and demographic; composite and qualitative indicators of development, HDI, PQLI, survival, welfare, security, freedom from want, ways of defining quality of life
2. Differential levels of development; spatial variations in the levels and rates of development
3. Problems and strategies of development; uneven impacts of development at a variety of scales- national, regional, local; development issues; concept and practice of sustainable development; issues in "poorer" countries and "richer" countries.

F. Sustainable Development and resource management **(IB) (Population, Resources & Development)**

1. concept of sustainable development; concept of stewardship;
2. concept of conservation, recycling and substitution

IB/AP Geography Syllabus

G. Globalization **(IB, AP)**
1. definitions and characteristics of globalization
2. globalization of economic activity: global integration, global transport
3. cultural integration: factors and effects, impact on indigenous population
4. tourism: growth of global tourism, changes in tourist industry, a role in development; eco-tourism; economic, social and environmental costs
5. sustainable management of tourism: case studies! Management to conserve a tourist destination

XIII. Political Organization of Space (AP)

A. Territorial dimensions of politics
1. The concept of territoriality
2. The nature and meaning of boundaries
3. Influences of boundaries on identity, interaction, and exchange

B. Evolution of the contemporary political pattern
1. Territorial assumptions underlying the nation-state ideal
2. Colonialism and imperialism
3. Internal political boundaries and arrangements

C. Challenges to inherited political-territorial arrangements
1. Changing nature of sovereignty
2. Fragmentation, unification, alliance
3. Spatial relationships between political patterns and patterns of ethnicity, economy, and environment

Major Themes throughout the year:
Globalization, Diffusion, Natural Hazards, Anthropogenic Relationship, biogeography