

SING YIN SECONDARY SCHOOL
SYLLABUS FOR GEOGRAPHY -- SEPTEMBER 2016 - JULY 2017

FORM FOUR

Textbooks :

Senior Secondary Exploring Geography 1 (Second Edition)	Ip, Lam, Sze, Wong, Yeung	Oxford
Senior Secondary Exploring Geography 3 (Second Edition)	Ip, Lam, Sze, Wong, Yeung	Oxford
Senior Secondary Geography Revision Exercise 1 (Second Edition)	Ip, Lam, Sze, Wong, Yeung	Oxford
Senior Secondary Geography Revision Exercise 2 (Second Edition)	Ip, Lam, Sze, Wong, Yeung	Oxford
Mini School Atlas (Fifth Edition) (Reference)		Ling Kee

Students should:

1. appreciate and love the beauty of nature.
2. appreciate the interdependence of human beings and natural environment.
3. develop a sense of responsibility and willingness to take action in protecting the natural environment.

No. of Periods	Syllabus Topics	Specific Objectives	Teaching Strategies
40	Opportunities and Risks - Is it rational to live in hazard-prone areas?	<ul style="list-style-type: none"> • Natural hazards commonly found in areas with active tectonic activities (including earthquakes, volcanic eruptions and tsunamis) • Global distribution patterns of these natural hazards • Relationship between the distribution pattern of these natural hazards and that of tectonic activities 	<ul style="list-style-type: none"> • Collect and study newspaper clippings about tectonic activities and summarise their impact on people’s lives and their responses to them. • Search for updated information and statistics from the Internet and plot a map (paper or using GIS) to show the spatial distribution of earthquakes, volcanic eruptions and tsunamis in the world. • Identify the common distribution patterns of these natural hazards.

		<ul style="list-style-type: none">• Brief description of the internal structure of the earth• The names and types of major plates and plate boundaries in the world, as well as their location• The major landform features at plate boundaries (fold mountain, island arc, ocean trench, volcano, mid-oceanic ridge and rift valley) and their formation <p>The relationship between plate movement and natural hazards</p> <ul style="list-style-type: none">• Earthquake and volcanic zones far away from plate boundaries, e.g. hot spots	<ul style="list-style-type: none">• Use a map overlay or GIS to show the relationship between plate boundaries and the global distribution of geological hazards.• Draw a concept map to show the relationships among the major endogenetic processes, plate movement, the formation and distribution of major tectonic landform features and the distribution of tectonic hazards.• Visit Ma Shi Chau to identify various geological features related to faulting and folding in Hong Kong.• Identify on a map some earthquake and volcanic zones which are far away from plate boundaries.• Explain their spatial locations with reference to information on the Internet or in books.
		<ul style="list-style-type: none">• Effects of earthquakes (primary and secondary effects), volcanic eruptions and tsunamis on human beings and the environment• Measures used to reduce the effects of earthquakes, volcanic eruptions and tsunamis (e.g. monitoring, predicting and warning systems for natural hazards, various disaster mitigation and preparation strategies, land use zoning)• Effectiveness of the above measures• The reasons for less developed areas being more vulnerable to natural hazards than more developed areas (e.g. literacy level and awareness of the people, and socio-economic and technological gaps)	<ul style="list-style-type: none">• Discuss and present the effects of earthquakes, volcanic eruptions and tsunamis in groups.• Display and analyse the major measures which have been used to reduce the impact of natural hazards.• Select and study two contrasting case studies of earthquakes / volcanic eruptions / tsunamis from the Internet / newspapers, one from a less developed area and the other from a more developed area.• Compare and contrast the vulnerability of these two areas in facing hazards and explain their differences. Summarise information about the

		<ul style="list-style-type: none"> The advantages and disadvantages of people living in hazard-prone areas 	<p>advantages and disadvantages of living in hazard-prone areas.</p> <ul style="list-style-type: none"> Decide whether or not it is rational to live in hazard-prone areas with reference to a case study.
40	Managing river and coastal environments: a continuing challenge	<ul style="list-style-type: none"> Select contrasting features found at different river courses and coastlines to start off students' enquiry Examples of rivers can be drawn from local streams (in which observation in the field is recommended) or rivers in China (e.g. Chang Jiang) Examples of coasts can be drawn from local shores (in which observation in the field is recommended) or coastlines in England 	<ul style="list-style-type: none"> Identify, through direct observation in the field, the major features of a river/coast. Compare and contrast a variety of river/coastal environments from photos or video clips. Record information about a river/coast in the field by means of sketching, taking photos or videos.
		<ul style="list-style-type: none"> The major erosional (hydraulic action, abrasion, attrition, corrosion), transportation (traction, saltation, suspension, solution) and depositional processes of a river Downstream changes in velocity, discharge, efficiency and channel shape, and the factors that influence these changes The major landform features, including gorges, waterfalls and rapids, meanders and associated landforms, flood plains, levees, braids and deltas 	<ul style="list-style-type: none"> Annotate photographs to describe the characteristics of the different parts of a river. Use appropriate forms of presentation to explain the downstream variation of various fluvial processes. Delimit the boundary of a river basin on a map. Draw longitudinal profiles / cross-sections to illustrate the features of rivers.

		<ul style="list-style-type: none">• Wave generation and characteristics: fetch, energy• Constructive and destructive waves: breakers, swash and backwash• Processes of erosion (hydraulic action, abrasion, attrition, corrosion), transportation (traction, saltation, suspension, solution, longshore drift) and deposition• Factors (marine, atmospheric, geological) influencing the rate and location of the above processes• The major landform features, including sea cliff, sea cave, geo, sea arch and stack, wave-cut platform, beach, spit and bar, tombolo	<ul style="list-style-type: none">• Identify coastal features shown in maps.• Construct annotated diagrams to illustrate the formation of coastal features.• Use appropriate forms of presentation (e.g. tables, diagrams, statistical charts) to explain how coastal processes of erosion and deposition are influenced by various marine, atmospheric and geological factors.
		<ul style="list-style-type: none">• Human activities on river and coastal environments: reclamation, dredging, destabilisation and erosion, agriculture, recreation and power generation• Impact and consequences: flooding, erosion and mass wasting, pollution and disturbance / damage to the ecosystem• Management strategies: “hard” and “soft” strategies e.g. building of dykes and groynes, beach nourishment, land use zoning.• Management issues, including evaluation of methods and strategies used, and their possible impact	<ul style="list-style-type: none">• Use GIS, aerial photographs and/or satellite images to analyse the change of fluvial and coastal environments over time owing to human activities.• Conduct a field visit to a river in the north-western part of the New Territories to observe and identify the various management strategies implemented.

30	Disappearing Green Canopy-Who should pay for the massive deforestation in rainforest regions	<ul style="list-style-type: none"> Global distribution of tropical rainforests Deforestation in rainforest regions - rate and conditions 	<ul style="list-style-type: none"> Collect information from the Internet and other sources about the destruction rate of tropical rainforest. Interpret related graphs and figures. Construct maps to show the distribution of the tropical rainforest and its destruction rate using GIS or other IT tools.
		<ul style="list-style-type: none"> Definition of an ecosystem Abiotic components and biotic components of a tropical rainforest ecosystem Links and interrelationships between abiotic and biotic components, such as the influence of abiotic components on the characteristics of biotic components Energy flow in a tropical rainforest ecosystem Nutrient cycling in a tropical rainforest ecosystem 	<ul style="list-style-type: none"> Read climatic graphs. Extract information from photos and pictures. Field trip to Hong Kong Park or Tai Po Kau Nature Reserve to look at the characteristics of some tropical and sub-tropical plants. Use graphic representation to show the interrelationships between abiotic and biotic components.
		<ul style="list-style-type: none"> Types of destruction in the tropical rainforests Reasons for such destruction - economic development, agricultural development and population growth 	<ul style="list-style-type: none"> Extract relevant information from photos and pictures. Role play: How different parties can develop the potential of tropical rainforests.
		<ul style="list-style-type: none"> Impact of large-scale deforestation in tropical rainforests on climate, biosphere and lithosphere at a local and global scale Socio-economic impact on the local community and other places in the world 	<ul style="list-style-type: none"> By looking at graphs and newspaper cuttings, assess the impact of deforestation of tropical rainforests on the local and global natural environments. Through a case-study investigation, evaluate the kinds of socio-economic impact on both the local community and people far from this place.
		<ul style="list-style-type: none"> Measures to protect tropical rainforests, such as afforestation, 	<ul style="list-style-type: none"> Discussion: Ask students to give suggestions on

		<p>regulation on logging activities, setting up of national parks and natural reserves</p> <ul style="list-style-type: none">• Roles played by different parties, including native people and local dwellers, government officials, private developers and environmentalists, in developing and protecting rainforests• Problems of developing and protecting rainforests, such as conflict of interest among different parties (e.g. native people, local dwellers, private developers and environmentalists), the great debt borne by less developed countries and weak government control• Possible compromises between development and conservation and the consequences of different decisions made• Sustainable development of tropical rainforests	<p>the measures that can be used.</p> <ul style="list-style-type: none">• Debate: “As the tropical rainforest is very valuable, we should, by all means and at all costs, protect it.”• Discussion: How to compromise between development and conservation?
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Signature of Teacher in charge: _____

Miss Lok Yuen Kwan

Checked by: _____

Miss Liu Pui Ying