



# Satit Prasarnmit International Programme

## Curriculum Pathway Academic Year 2023-2024 Department: Humanities

Department Details	Assessment Types
<b>Subject:</b> IGCSE Environmental Management 0680 <b>Head of Department:</b> Ken Somvongsiri <b>Head of Department Email:</b> <a href="mailto:vitas.so@spip.in.th">vitas.so@spip.in.th</a> <b>Subject Teacher:</b> Charmaine Bredenkamp	<b>Assessment Type 1: Creative Projects:</b> Posters, booklets, brochures, cartoons, slide shows, videos, role play interviews, models, etc. both in groups and/or individually
	<b>Assessment Type 2: End of Unit Test</b>
	<b>Assessment Type 3: Continuous:</b> Online and class pop quizzes, work in notebook, class participation
	<b>Assessment Type 4: Writing:</b> Essays, case studies, research or reports on a topic - both in groups and/or individually, interviews
	<b>Assessment Type 5: End of Year Examination</b>

Year	Term	Unit/s of Work	Core Knowledge & Concepts
10 IGCSE	1	<b>1. Rocks and minerals and their exploitation</b> 1.1 Formation of rocks 1.2 Extraction of rocks and minerals from the Earth 1.3 Impact of rock and mineral extraction 1.4 Managing the impact of rock and mineral extraction 1.5 Sustainable use of rocks and minerals	<ul style="list-style-type: none"><li>• Student learn to describe and interpret the rock cycle and state and explain the formation and characteristics of named igneous, sedimentary and metamorphic rocks</li><li>• Students must be able to describe methods of extraction of rocks and minerals: – surface mining and subsurface mining</li><li>• Student must understand the environmental, economic and social impacts of rock and mineral extraction</li><li>• Students must describe and evaluate strategies for restoring landscapes damaged by rock and mineral extraction</li><li>• Define sustainable resource and sustainable development and describe and evaluate strategies for the sustainable use of rocks and minerals</li></ul>
		<b>2. Energy and the environment</b> 2.1 Fossil fuel formation 2.2 Energy resources and the generation of electricity 2.3 Energy demand 2.4 Conservation and management of energy resources 2.5 Impact of oil pollution 2.6 Management of oil pollution	<ul style="list-style-type: none"><li>• Describe the formation of the fossil fuels: coal, oil and gas</li><li>• Student learn about fossil fuels, nuclear power, biofuels, geothermal power, hydro-electric power, tidal power, wave power, solar power, wind power and describe how resources are used to generate electricity</li><li>• Students must be able to describe and explain the factors affecting the demand for energy</li><li>• Students will learn to identify and explain strategies for the efficient management of energy resources</li><li>• Students must be able to describe the causes and impacts of oil pollution on marine and coastal ecosystems</li><li>• Students will explore strategies for minimising the impacts of oil spills on the marine and coastal ecosystems</li></ul>
		<b>3. Agriculture and the environment</b> 3.1 Soil composition 3.2 Soils for plant growth 3.3 Agriculture types 3.4 Increasing agricultural yields 3.5 Impact of agriculture	<ul style="list-style-type: none"><li>• Students must learn to describe and explain the composition of soils</li><li>• Student will study soils as a medium for plant growth</li><li>• Students will explore the different types of agriculture</li><li>• Students must be able to describe techniques used to increase agricultural yields</li><li>• Students must be able to describe and explain the impact of agricultural</li></ul>

		3.6 Causes and impacts of soil erosion 3.7 Managing soil erosion 3.8 Sustainable agriculture	practices on the environment and people <ul style="list-style-type: none"> <li>Students must understand the causes and impacts of soil erosion</li> <li>Student must understand and explain strategies to reduce soil erosion</li> <li>Students must be able to describe and explain strategies for sustainable agriculture</li> </ul>
10 IGCSE	2	<b>4. Water and its management</b> 4.1 Global water distribution 4.2 The water cycle 4.3 Water supply 4.4 Water usage 4.5 Water quality and availability 4.6 Multipurpose dam projects 4.7 Water pollution and its sources 4.8 Impact of water pollution 4.9 Managing pollution of freshwater 4.10 Managing water-related disease	<ul style="list-style-type: none"> <li>Student learn about the distribution of the Earth's water</li> <li>Student must be able to describe and interpret the water cycle</li> <li>Students explore the sources of fresh water used by people</li> <li>Students must be able to describe the different ways in which fresh water can be used</li> <li>Students will compare the availability of safe drinking water (potable water) in different parts of the world</li> <li>Students must be able to describe and evaluate multipurpose dam projects</li> <li>Students will learn about the sources of water pollution</li> <li>Students must be able to describe and explain the impact of pollution of fresh water on people and on the environment</li> <li>Describe and explain strategies for improving water quality</li> <li>Student learn describe the life cycle of the malaria parasite and will evaluate strategies to control and cholera</li> </ul>
		<b>5. Oceans and fisheries</b> 5.1 Oceans as a resource 5.2 World fisheries 5.3 Impact of exploitation of the oceans 5.4 Management of the harvesting of marine species	<ul style="list-style-type: none"> <li>Students must learn to outline the resource potential of the oceans</li> <li>They will explore the distribution of major marine fish populations</li> <li>Students will study the impact of exploitation of fisheries</li> <li>Students must practice to describe, explain and evaluate strategies for management of the harvesting of marine species</li> </ul>
10 IGCSE	3	<b>6. Managing natural hazards</b> 6.1 Earthquakes and volcanoes 6.2 Tropical cyclones 6.3 Flooding 6.4 Drought 6.5 The impacts of natural hazards 6.6 Managing the impacts of natural hazards 6.7 Opportunities presented by natural hazards	<ul style="list-style-type: none"> <li>Students will study the structure of the Earth, the distribution and causes of earthquakes and volcanoes and must understand magnitude and the Richter scale</li> <li>Students must be able to describe and explain the distribution and causes of tropical cyclones (storms, hurricanes and typhoons)</li> <li>Students must explore and compare causes of flooding</li> <li>Students will learn to identify, describe and explain the causes of drought</li> <li>Students must be able to describe and explain the impacts of natural hazards on people and the environment</li> <li>Students will explore and evaluate the strategies for managing the impacts of natural hazards before, during and after an event</li> <li>Students must be able to describe and explain the opportunities presented by natural hazards to people</li> </ul>
11 IGCSE	1	<b>7. The atmosphere and human activities</b> 7.1 The atmosphere 7.2 Atmospheric pollution and its causes 7.3 Impact of atmospheric pollution 7.4 Managing atmospheric pollution	<ul style="list-style-type: none"> <li>Students will study the structure and composition of the atmosphere</li> <li>describe the natural greenhouse effect</li> <li>Students will learn to identify and explain the causes of atmospheric pollution</li> <li>They will explore and explain the impact of atmospheric pollution</li> <li>Students will evaluate the strategies used by individuals, governments and the international</li> <li>Students will compare and describe ways communities can use to reduce the effects of atmospheric pollution</li> </ul>
		<b>8. Human population</b> 8.1 Human population distribution and density 8.2 Changes in population size 8.3 Population structure 8.4 Managing human population size	<ul style="list-style-type: none"> <li>Students will identify where people live in the world</li> <li>describe and explain the growth curve of populations</li> <li>They will study, describe and explain the changes in human populations</li> <li>Students will compare and describe population structure in MEDCs and LEDCs</li> <li>They will evaluate strategies for managing human population size</li> </ul>
		<b>9. Natural ecosystems and human activities</b> 9.1 Ecosystems 9.2 Ecosystems under threat 9.3 Deforestation 9.4 Managing forests 9.5 Measuring and managing biodiversity	<ul style="list-style-type: none"> <li>Students must learn to understand the terms ecosystem, population, community, habitat and niche</li> <li>Students will identify the biotic (living) and abiotic (non-living) components of an ecosystem</li> <li>They will explore causes and impacts of habitat loss</li> <li>Students must practice to describe and explain the causes and impacts of deforestation</li> </ul>

			<ul style="list-style-type: none"><li>• Students must learn to understand and explain the need for the sustainable management of forests</li><li>• They must learn to describe and evaluate methods for estimating biodiversity</li><li>• Students will evaluate sampling techniques to unfamiliar situations</li><li>• They will also evaluate national and international strategies for conserving the biodiversity and genetic resources of natural ecosystems</li></ul>
11 IGCSE	2	Fieldwork and sampling Practice of Paper 2	<ul style="list-style-type: none"><li>• Students will learn all the skills involved in environmental enquiries.</li><li>• They will learn how to do sampling and what type of sampling can be used.</li><li>• Students will learn how to approach Paper 2, which is a case study incorporating all the elements of Environmental Management.</li></ul>
11 IGCSE	3	IGCSE Exams	Students will study for, and write their final IGCSE exams.