**‘Go Green on Lamma Island’ Programme**

Set 2

**Pre-trip Activities**

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| Name: \_\_\_\_\_\_\_\_\_\_\_\_\_ ( )  | S. \_\_\_\_\_\_\_ | Date: \_\_\_\_\_\_\_\_\_\_\_\_  |

1. Read the article on climate change and answer the following questions.

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| To be provided by teacher. |

What problem may occur on Lamma Island by 2030? (Suggested question)

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2. Figure 1 shows the trend in greenhouse gas emission for Hong Kong, 1990-2012. **Figure 1**



Source: Hong Kong Climate Change Report 2015

<http://www.enb.gov.hk/sites/default/files/pdf/ClimateChangeEng.pdf>

How does Hong Kong contribute to the problem mentioned in Question 1?

Major greenhouse gas and its function

Carbon dioxide (CO2)

Function: Trap heat in the atmosphere

Three major sources of greenhouse gases

1. Electricity generation
2. Transport
3. Waste

Effect on global temperature

Global temperature increases

Name of phenomenon

Global warming

Effect on Hong Kong

Low-lying area will be submerged.

Effect on sea ice and sea level

Sea ice melts and sea level rises

3. Read the article and answer the questions.

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| **The Paris Agreement and Hong Kong**The Paris Agreement, an ambitious multilateral treaty agreed in December 2015, succeeds the Kyoto Protocol that will expire in 2020. China formally signed it on Earth Day, 22 April 2016, and ratified it on 3 September 2016. The Paris Agreement came into force on 4 November 2016.The 2°C Target The key provisions of the Paris Agreement call for global actions to: • Achieve ‘peak’ greenhouse gas (GHG) emissions (referred to as carbon emissions hereinafter) as soon as possible and achieve a balance between carbon sources and sinks in the second half of the 21st century (i.e. to reach ‘carbon neutrality’ between 2051 and 2100); and • Keep global average temperature increase well below 2°C relative to pre-industrial levels and to pursue efforts to limit it to 1.5°C.Ratchet-up every 5 years Global actions are based on a “bottom-up” approach, where all the Parties must devise their own suitably ambitious “nationally determined contributions” (NDCs) with targets and timelines. Each signatory must: • Prepare NDC every 5 years, and each successive NDC to represent a progression beyond the previous one.Transparent implementation Since the Parties are all making efforts to meet their NDC obligations, the Paris Agreement requires action in the immediate years to:•Create a transparent mechanism to facilitate implementation of the Paris Agreement; •Facilitate dialogue among the Parties on their collective efforts towards peak carbon and achieving the 1.5°C-2°C goal; and •Conduct the first global stock-take in 2023, and every 5 years thereafter toassess collective progress.Collaboration The Paris Agreement also calls upon the Parties to cooperate with the private sector, civil society, financial institutions, cities and regions in order to mobilise stronger and more ambitious climate actions in the world. |

Source: Hong Kong’s Climate Action Plan 2030+, <http://www.climateready.gov.hk>

What are the targets of the Paris Agreement?

* To achieve the ‘peak’ greenhouse gas emissions/ carbon emissions hereinafter.
* To achieve a balance between carbon sources and sinks in the second half of the 21st century.
* To keep the global average temperature increase well below 2°C and to pursue efforts to limit it to 1.5°C.
1. The following is part of the foreword by the Secretary for the Environment.

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| Our new plans continue to phase down coal in local electricity generation, optimise the implementation of renewable energy, make our buildings and infrastructure more energy efficient, improve public transport and promote walking as a mobility means, strengthen the climate-readiness of the city as a whole, ‘cool’ the city through landscaping, and partner with stakeholders so that our community can be climate-resilient now and in the long-term. |

 Source: Hong Kong’s Climate Action Plan 2030+, <http://www.climateready.gov.hk>

 Do you think the measures suggested by the government can help to combat climate change? Give evidence to support your answer.

 Any reasonable answers.

 ***Questions you need to address in the field trip***

1. Are there any human activities leading to climate change on Lamma Island?
2. What measures have been done to combat global warming on Lamma Island? Are they effective enough?
3. What other sustainable measures can be used to reduce climate change?
4. What can we do to combat climate change in our daily lives?