

**The Chinese University of Hong Kong**  
**Jockey Club Museum of Climate Change**

Work Sheets for Primary School Students (Abridged Version)

**Section 1: Polar Gallery**

1. *Xuelong* is China's largest \_\_\_\_\_.

A. submarine	B. icebreaking polar research vessel	C. rescue boat	D. cruise ship
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2. Draw a line to match each research technique to its objective:

Research:			Objectives:
sea floor drilling with gravity corer	•		to collect deep sea muds and sediments for greenhouse gas contents analysis and to evaluate ongoing climate change in the region
releasing weather balloons	•		to collect air and atmospheric information for local gas composition analysis
trawling	•		to collect live samples of marine organisms and estimate changes in species quantity
ice core drilling	•		to review gas data from different ages extracted from snow samples and to analyse changing greenhouse gas content in the polar regions

3. Scientists can often obtain important climatic data from ice cores.

i. During the past 800,000 years, atmospheric carbon dioxide (CO<sub>2</sub>) content has not exceeded \_\_\_ parts per million (ppm).

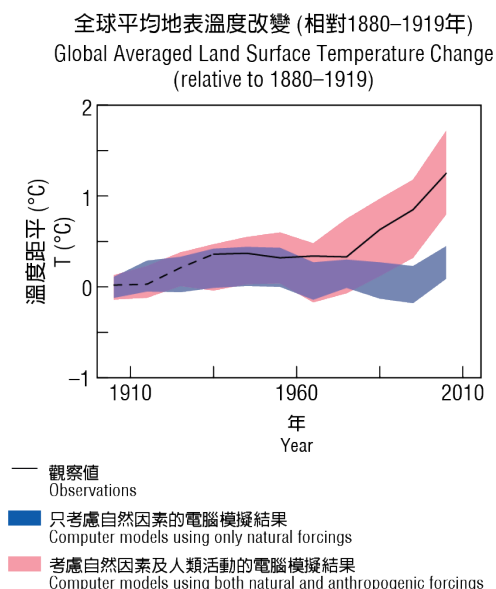
A. 1	B. 10	C. 30	D. 300
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ii. Currently, atmospheric carbon dioxide (CO<sub>2</sub>) content is higher than it has ever been during the past 800,000 years, and has now reached \_\_\_ parts per million (ppm).

A. 1	B. 300	C. 400	D. 4,000
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4. Scientists have also been using computer simulations to model the changes in the global average surface temperature. Their models show that the recorded temperature increase in recent decades can only be effectively explained when human activities are / are not considered.

(Please cross out as appropriate)



5. Scientists use remote sensing and environmental monitoring technologies to collect surface data on climate-related parameters over a specific time range.

Let's help our scientists to analyse the data collected from changes in sea ice coverage, sea levels, carbon dioxide concentrations and global temperatures. Study the changes in the past decades and summarize the analytical results in the following table: (select the correct answer from the table)

My observations are...	My observations are...	Sea levels	Carbon dioxide concentrations	Global temperatures
Overall change:	<input type="radio"/> expanding <input type="radio"/> shrinking	<input type="radio"/> rising <input type="radio"/> falling	<input type="radio"/> increasing <input type="radio"/> decreasing	<input type="radio"/> rising <input type="radio"/> falling

6. What is the relationship between human activities and the greenhouse effect? (Please cross out as appropriate)

The natural greenhouse effect keeps the surface temperature warm / cool over the years. However, human activities produce large amounts of wastes / sewage / greenhouse gases, which have enhanced the 'greenhouse effect', leading to an increase / decrease / irregular change in global temperatures.

## Section 2: Remote Sensing and Environmental Monitoring

7. Climate change is not only devastating our living environment, but also poses an increasing threat to our health. Write down one abnormal consequence of climate change and its possible threats to human health:

# Hints: Study the relationship between climate change and human health in the interactive media in the 'Remote Sensing and Environmental Monitoring' section.

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## Section 3: Research and Innovation at CUHK

8. Imagine that you are an architect who is planning a housing project. Taking into account the two urban climate models you see here, what factors do you think can assist the city's sustainable development?

# Hints: Think about building density, construction materials, urban greening and public facilities.

I think: \_\_\_\_\_

9. This section introduces a number of studies of renewable energy by different researchers. Write down the name of one of these studies.

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## Section 4: The Hong Kong Jockey Club Green Gallery; Action Pledge Studio

10. List three methods we could adopt to reduce waste in daily life.

(1) \_\_\_\_\_

(2) \_\_\_\_\_

(3) \_\_\_\_\_

11. As you walked through this Climate Change Voyage, did you find anything to inspire you? After you finish the voyage, take a photo in the Action Pledge Studio and make a carbon reduction promise. You can obtain the photo through email, share it on social media and call on people to save the Earth together!

My promise is: \_\_\_\_\_

At home, I am willing to: \_\_\_\_\_

At school, I will: \_\_\_\_\_

I will encourage others to: \_\_\_\_\_