Using Google Earth Presentation Mode to Conduct Pre-trip Preparatory Activities
for Geography Fieldwork -
Virtual Pre-trips to Ng Tung River Drainage Basin in Hong Kong

[Student Worksheets]

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Name: _____ Class: _____

	Objectives: ● **To familiar** with key features and surrounding environments of the Ng Tung River Drainage Basin ● **To identify** different data types: primary and secondary data ● **To assess** risks and potential danger of conducting fieldwork in fluvial environments ● **To equip** students' I.T. skills (especially in Geographical Information System / GIS)

A. Geography Issue Enquiry: River

Rivers receive water from sources like surface runoff and ground water to form discharge. In general, the size of drainage basin, drainage density, gradient, vegetation, land use, geology etc. will influence the amount of discharge in a river.

B. Drainage Characteristics of the Ng Tung River

Prior to the virtual pre-trip, you may search some online information about Ng Tung River drainage basin first.

Answer the following questions after browsing the following websites:

1. GeoInfo Map   (https://www.map.gov.hk/)
2. JC Wise – Rivers @ HK Database (Rivers in Hong Kong)   (http://www.jcwise.hk/gis/)
3. JC Wise – Rivers @ HK Database (River Journal: 7 – Ng Tung River)
   (http://www.jcwise.hk/gis/ng_tung_river.php?lang=en)

		Answers
i.	What districts are Ng Tung River passing through?	
ii.	What is the major rock type in the Ng Tung River drainage basin?	
iii.	What is/are the major economic activities found in the upper course of Ng Tung River?	
iv.	What is the major landscape found in the upper course of Ng Tung River?	
v.	How long is Ng Tung River?	
vi.	How is the river gradient changes along Ng Tung River?	

C.   Using Virtual Pre-trip Materials to Conduct Preliminary Field Study

Using online pre-trip materials helps **save time** and **costs**. It also helps to identify and **prevents risks and danger** when an outdoor fieldwork is conducted. In this set of virtual pre-trip materials of Ng Tung River, the checkpoints are set at approximately 1.2km interval to display the change of river channel and its surrounding environments.

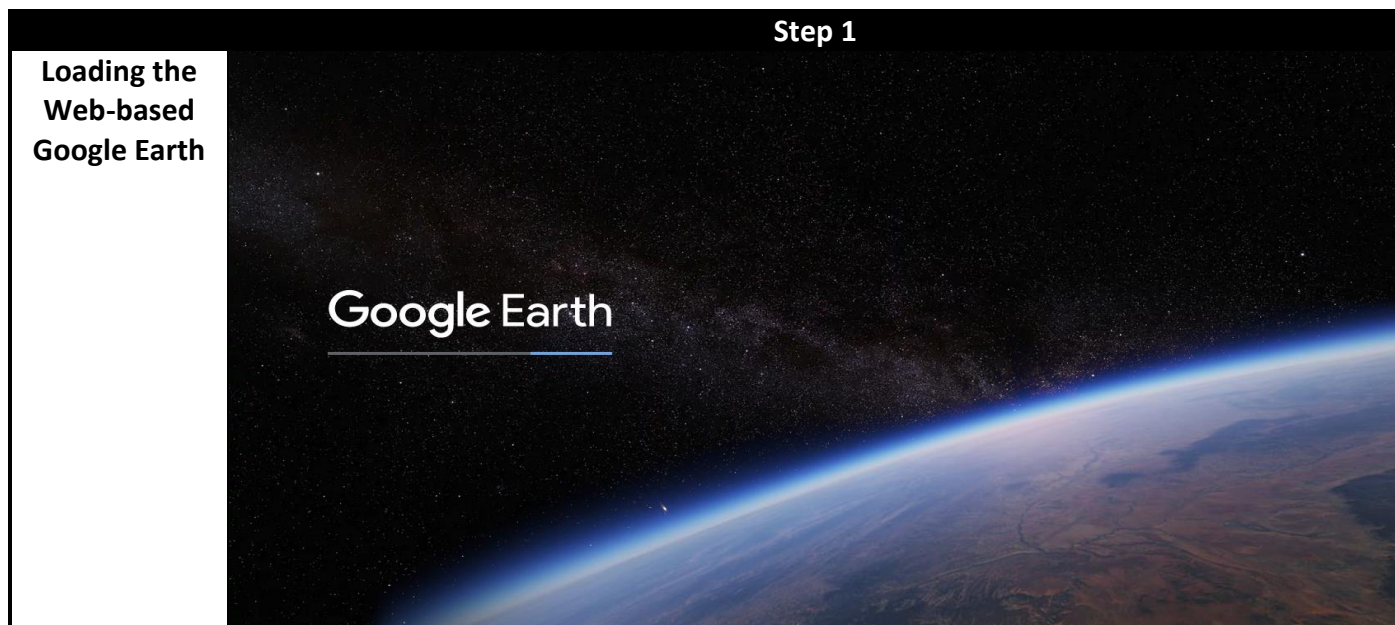**D.   Steps to Use this set of Google Earth Pre-trip Materials to Conduct Virtual Fieldwork**

1.   Using Personal Computers / Tablets

Step 1: Scan the QR Code on the right or
visit the website [https://qrgo.page.link/bExDr]
The browser will show the Google Earth Web.

Step 2: Press the icon " ▶ Present", the virtual pre-trip begins.

Step 3: Navigate to other checkpoints using the "navigation tool bar" and view the landscape, photographs and basic information of the checkpoints.
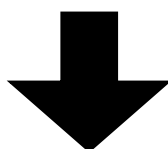
Step 1
Loading the Web-based Google Earth

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Step 2

Press Present (簡報)

Step 3

Site specific information box

Press < or > to study other checkpoints

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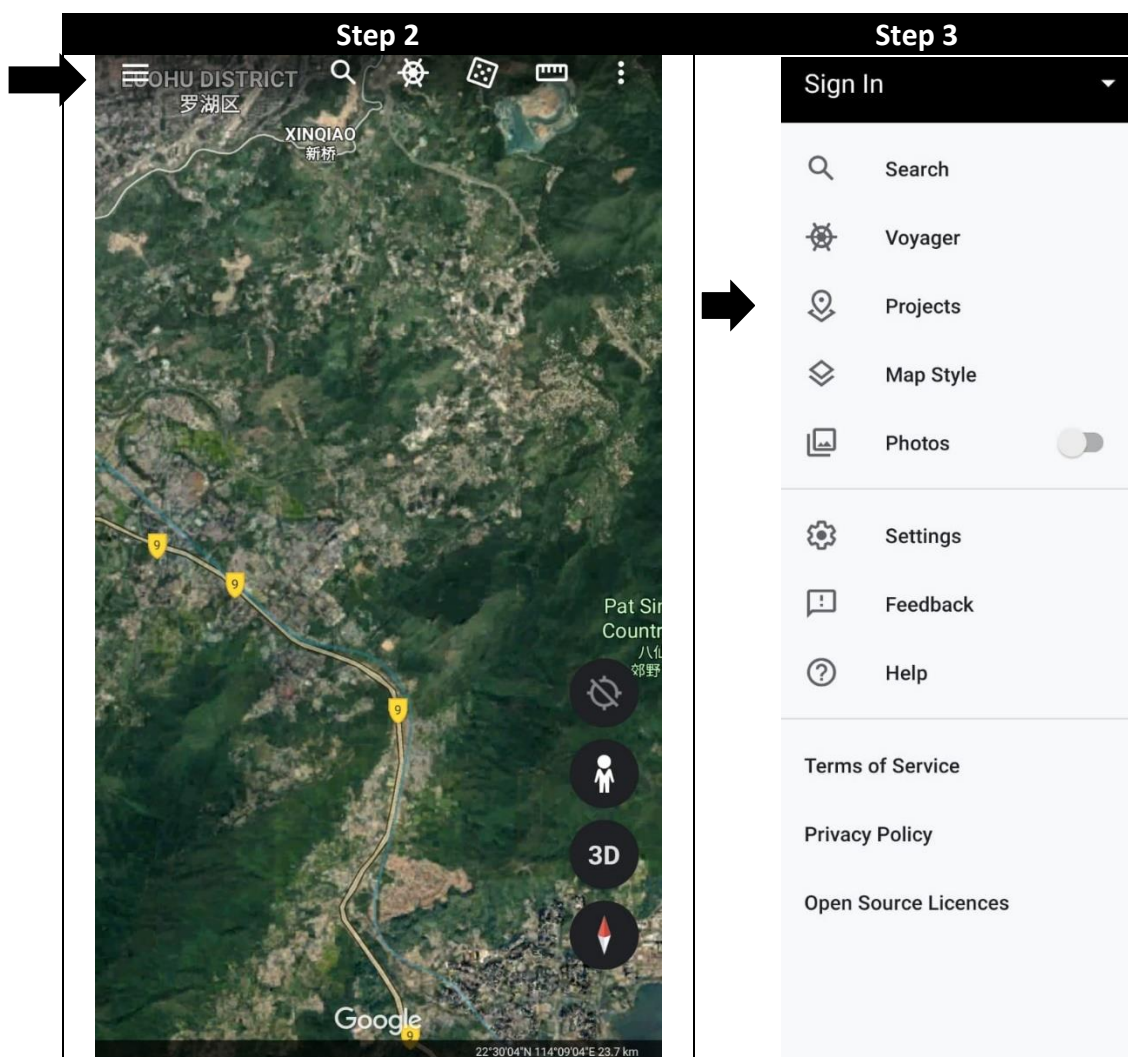
3
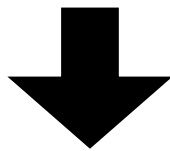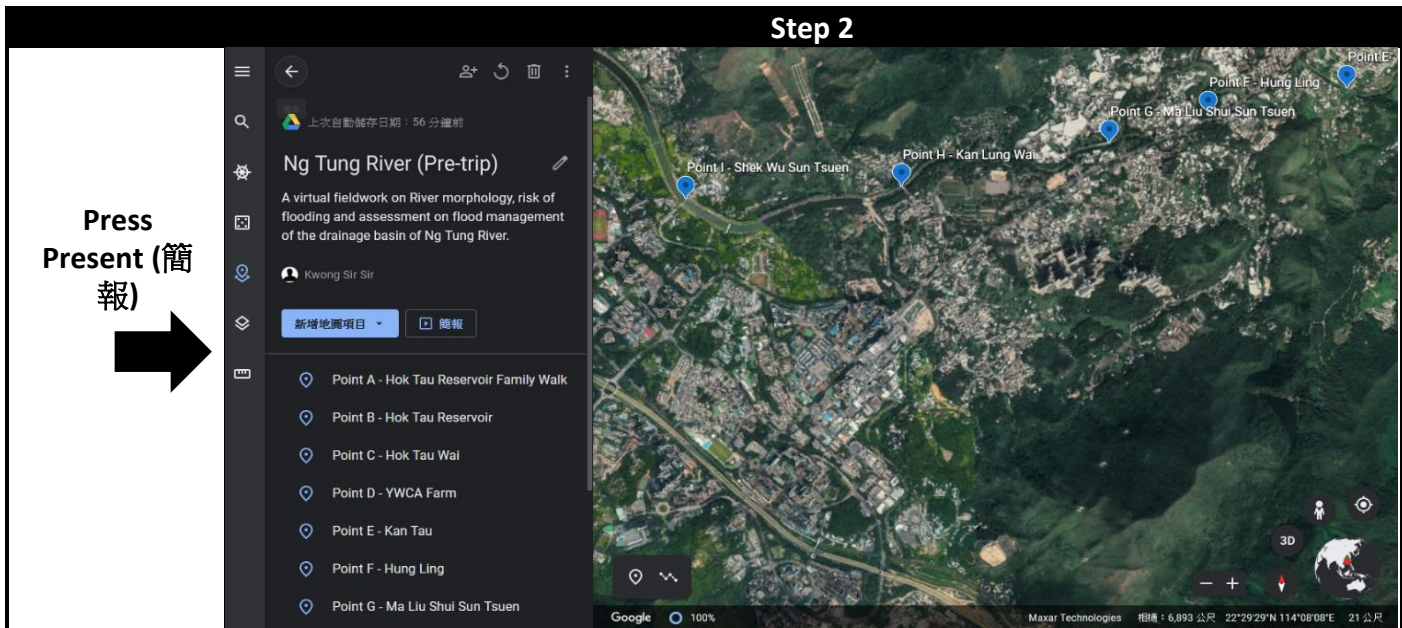
2. Using Mobile Phones

Download "Google Earth" from APP Store / Play Store (if not installed previously)

Step 1: Scan the QR Code below or visit the website [https://qrgo.page.link/bExDr].

Step 2: Open "Google Earth" APP and Press "☰" on the top-left corner of the screen.

Step 3: Press "Projects" to open the list of projects.

Step 4: Click the "Ng Tung River Project" and the aerial photograph of this fieldwork pops up.

Step 5: Click "▶ Present" to start the virtual pre-trip.
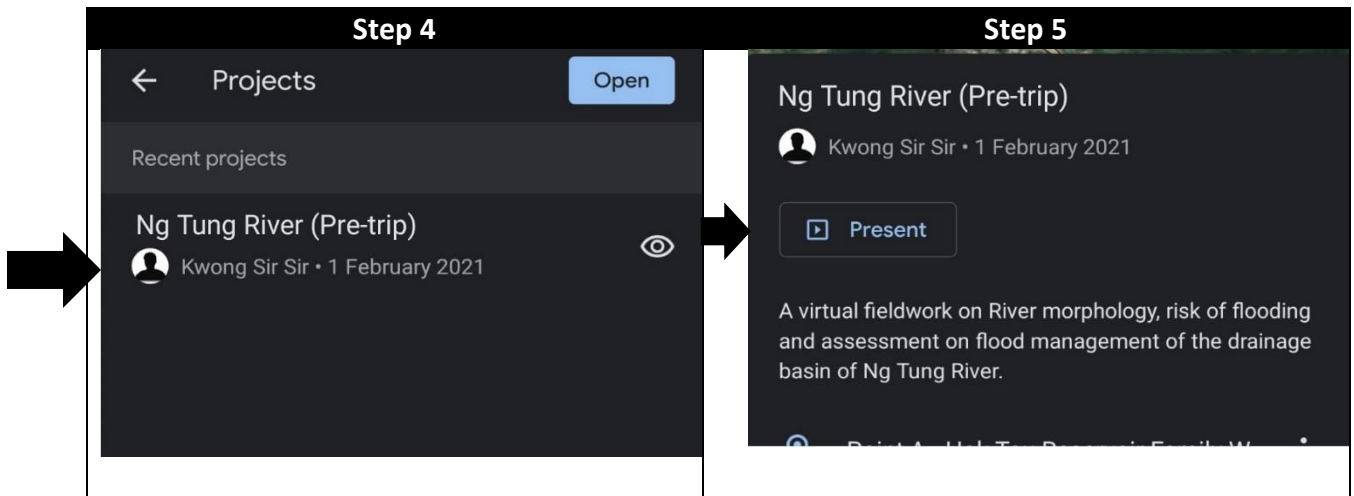
Step 6: Press < or > to study other sites. User can Zoom in and out from the 3D Terrain and read the descriptions about the checkpoints.

E. Assessment Questions after the Virtual Pre-Trip

Refer to the virtual fieldwork that you have just browsed and answer the following questions related to the planning stage of a fluvial fieldwork.

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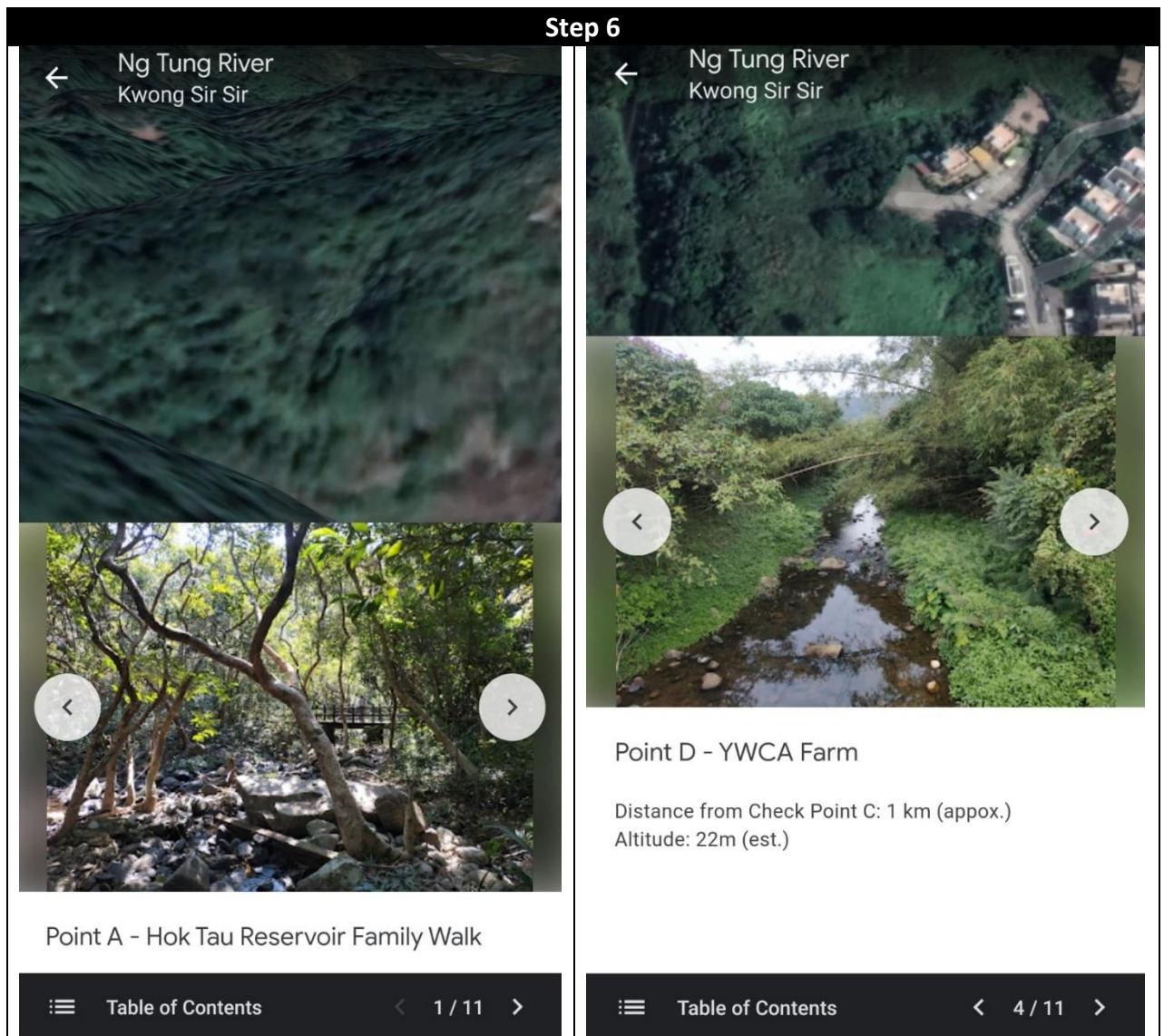
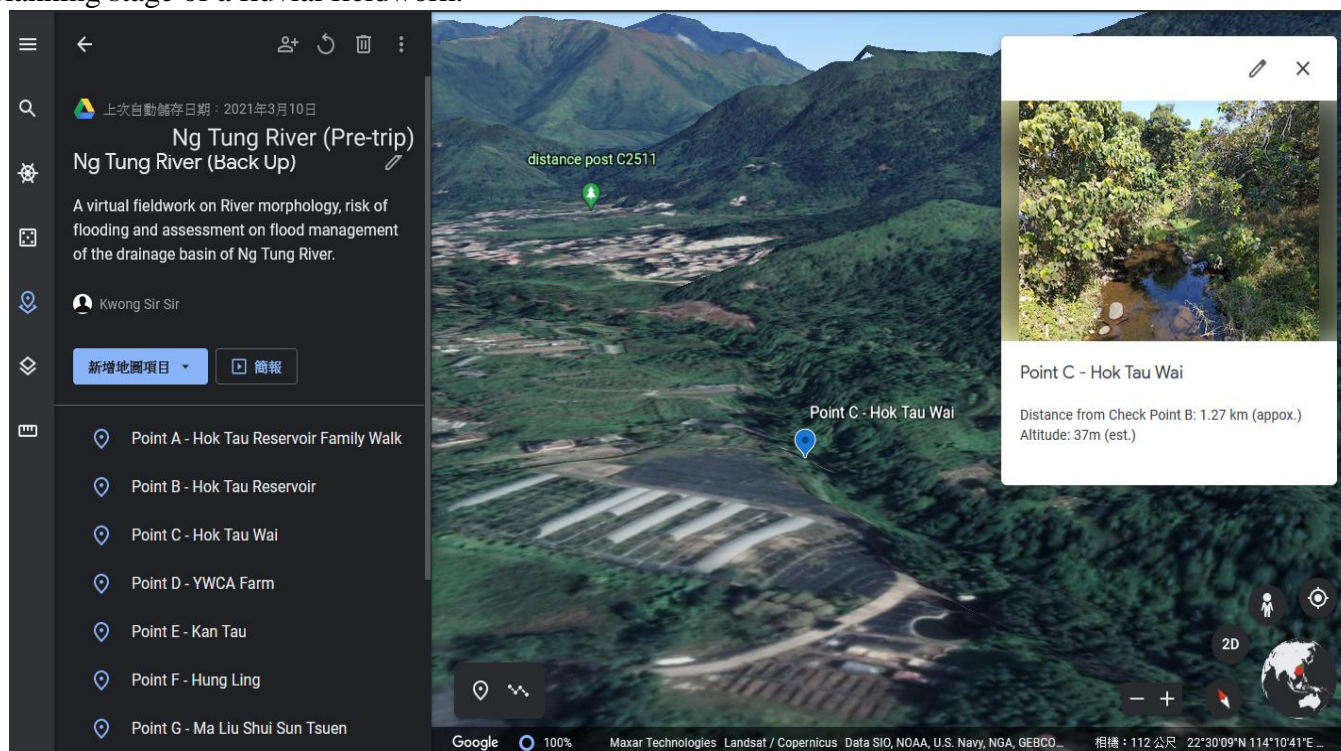(a) (i) Describe the changes of landscape along Ng Tung River from Checkpoint A to Checkpoint K. How do these changes affect your planning of an on-site / authentic fieldwork at Ng Tung River? (4 marks)

   (ii) Describe and explain the changes of altitude along the Ng Tung River. How do these changes affect your planning of the on-site / authentic fieldwork at Ng Tung River? (4 marks)

   (iii) What types of settlements are found around Checkpoints D and I of Ng Tung River respectively? How do these settlements bring potential advantage(s) and disadvantage(s) to your fieldwork? (5 marks)

(b) What type of data (primary or secondary) is presented in the virtual fieldwork? Suggest another example of the same data type that can help your river fieldwork. (3 marks)

(c) Suggest ONE category of data about channel characteristics of the Ng Tung River that cannot be retrieved from the virtual fieldwork. Discuss how you can get this data category. (2 marks)

(d) Discuss some ways to prevent the potential danger and accidents identified in your planned fieldwork. (4 marks)

(e) Besides preventing danger, explain other advantages of conducting a virtual pre-trip before an on-site / authentic fieldwork. (3 marks)

(f) Suggest a geographical topic or geographical hypothesis that could be studied in an on-site/authentic fluvial fieldwork of the same area. (3 marks)