

Geography

<Kam Tin River VR Field Trip – Teacher’s Guide and Lesson Plan>

Senior Secondary Geography related topic	Managing river and coastal environments: a continual challenge	Level	Secondary 4 - 6
Learning objectives			
<ol style="list-style-type: none">1. Learning how the river management strategies change the river characteristics by using the Kam Tin River VR field trip teaching kit for data collection and observation2. Investigating the difference of the flood discharge capacity between the old and new Kam Tin River by examining the river management strategies and river characteristics in different field sites3. Developing observation and data analytical skills with the VR field trip teaching kit			
Inquiry question and hypothesis			
<ul style="list-style-type: none">● Inquiry question : Investigate the old and new Kam Tin River management strategies and flood discharge capacity● Hypothesis : The more the river management strategies, the higher the flood discharge capacity.			
Prior knowledge			
<ul style="list-style-type: none">● Different fluvial characteristics, processes and landforms in different river sections● The impact of human activities on rivers and river management strategies			

This VR field trip teaching kit includes the followings:

1. EduVenture® VR : Kam Tin River VR Field Trip
 - This teaching kit not only can be used by teachers during class, but also for students' self-directed learning in order to enhance their self-directed learning ability and to achieve the purpose of out-of-class continuous learning.

*Link: [eduventure.vr://?6c6f63610f093a30=657676725a59444c](https://eduventure.vr/?6c6f63610f093a30=657676725a59444c)

(Note: This link is only applicable to mobile phones/tablets)



**To download the VR tour, please scan the QR code after installing EduVenture VR application.*

2. Worksheet and data record sheet
3. Field study instrument and application list

Equipment required

1. Tablet ; or
2. Mobile phone (Can be used with a VR cardboard)

Pre-trip briefing			
Time	Teaching process	Learning objective	Teaching materials
15 minutes	<p>Teachers brief students on how to use EduVenture VR</p> <ul style="list-style-type: none"> • Download EduVenture VR on tablet or mobile phone • Download “Kam Tin River virtual field trip” (錦田河 虛擬實地考察) on EduVenture VR • Briefly describe how to use EduVenture VR • Students try out the “Kam Tin River virtual field trip” on EduVenture VR to master the observation skills in field trips 	<ul style="list-style-type: none"> • learning how to observe in field trips 	<p>EduVenture VR : Kam Tin River virtual field trip</p> <p>Tablet or mobile phone</p>
25 minutes	<p>Teachers brief students on the contents of the virtual field trip, as well as the skills required in a river field trip and things that should be paid</p>	<ul style="list-style-type: none"> • Understand the contents of the virtual field trip, as well as the river field trip skills and things that should be 	<p>EduVenture VR : Kam Tin River virtual field trip</p> <p>Student</p>

	<p>attention to.</p> <ul style="list-style-type: none"> ● Introduce the inquiry topics and hypotheses of the virtual field trip to Kam Tin River ● Introduce 6 field sites of the virtual field trip ● Remind students that they need to observe and collect data from the virtual fieldwork teaching materials according to the guidelines and steps on the student worksheet. Fill in the student worksheet and data recording sheet, as well as conduct data analysis and draw a conclusion ● Introduce the field study instruments and data collection methods as well as things that should be paid attention to during the river field trip 	<p>paid attention to</p>	<p>worksheet and data recording sheet</p> <p>Field study instrument and application list</p>
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During the virtual field trip			
Time	Teaching Process	Learning objective	Teaching materials
40 minutes	<p>Students conduct virtual field trips in the classroom (or self-learning)</p> <ul style="list-style-type: none"> Students use mobile phones (with VR Cardboard) / tablets to access EduVenture VR : Kam Tin River virtual field trip Observe and collect data from the virtual fieldwork teaching materials according to the guidelines and steps on the student worksheet. According to the student worksheet question guidelines, conduct data analysis, draw 	<ul style="list-style-type: none"> Observe and collect data from the virtual fieldwork of the Kam Tin River to learn how river management strategies change river characteristics Investigate the difference of the flood discharge capacity between the old and new Kam Tin River by examining the river management strategies and river characteristics in different field sites 	<p>Tablet / Mobile phone (Can be used with VR Cardboard)</p> <p>EduVenture VR : Kam Tin River virtual field trip</p> <p>Student worksheet and data recording sheet</p>

	<p>conclusions and make reflections on the virtual field trip.</p> <ul style="list-style-type: none"> • Complete the student worksheet and data recording sheet 		
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Post-trip presentation			
Time	Teaching Process	Learning objective	Teaching materials
30 minutes	<p>Students discuss in groups the data collected from the virtual fieldwork and the inquiry questions in the student worksheet.</p> <p>Teachers and students analyze whether the hypothesis is valid and inquire the results. They also review the deficiency and make suggestions on the field trip.</p>	<p>Summarize the following inquiry questions and hypotheses :</p> <ul style="list-style-type: none"> • Inquiry question : Investigate the old and new Kam Tin River management strategies and flood discharge capacity. • Hypothesis : The more the river management strategies, the higher the flood discharge capacity. <p>Review the deficiency and make suggestions on the field trip</p>	<p>EduVenture VR : Kam Tin River virtual field trip</p> <p>Tablet / Mobile phone</p> <p>Student worksheet and data recording sheet</p>