

Community Study Series Learning Resources¹

Theme (4): Bicycle-friendliness

I. Related topics

【Independent Subject Mode】

Life and Society Curriculum Guide (Secondary 1-3) (2010)

Module	Topic	Learning Points
Core module (13): Economic Performance of Hong Kong 【Extended part】	Hong Kong's Competitiveness and Sustainable Economic Development	<ul style="list-style-type: none">▪ Factors affecting the competitiveness of an economy▪ In the era of knowledge economy, as a special administrative region of the mainland and an international city, how Hong Kong enhances its competitiveness▪ Ways to ensure sustainable economic development in Hong Kong
Core Module (27): “Global City” 【Foundation part】	Social Characteristics of “Global City” as demonstrated by Hong Kong	<ul style="list-style-type: none">▪ Degree of openness of Hong Kong (as illustrated by the aspects of capital, media, information, human resources and culture, etc.)▪ The “push and pull” drive of Hong Kong to transnational business people, professionals, executives and labour
Core Module (29): Global Citizenship and Humanitarian Work 【Extended part】	Consciousness of Global Citizenship	<ul style="list-style-type: none">▪ Concept of global citizenship and factors contributing to its emergence, the distinction between a global citizen and a citizen of an individual country▪ Consciousness and quality of

¹ The original design was developed by Mr CHAN Kwok-bong (Supervisor), Mr NG Sze-long (Centre-in-charge) and Mr WONG Kon-chi (Community Curriculum Development Officer) of the Boys' and Girls' Clubs Association of Hong Kong.

		global citizenship
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【Mixed Curriculum Organisation Mode – Integrated Curriculum】

*Personal, Social and Humanities Key Learning Area Curriculum Guide (Primary 1 – Secondary 6) (2017)*²

Core Elements/Essential Content for Learning in the PSHE KLA Curriculum	Key Stage 3	Strand 5: Resources and Economic Activities	<ul style="list-style-type: none"> ● the role and policy of the HKSAR Government on the economic front
		Strand 6: Social Systems and Citizenship	<ul style="list-style-type: none"> ● local level <ul style="list-style-type: none"> - importance of the Basic Law - the development trend of society in future ● cross-level <ul style="list-style-type: none"> - embodiment of diversity and inclusiveness

² If the mixed curriculum organisation mode has been adopted and an integrated curriculum (e.g. Integrated Humanities) has been offered at junior secondary level, schools should make reference to the Core Elements/Essential Content for Learning at Key Stage 3 in the *Personal, Social and Humanities Education Key Learning Area Curriculum Guide (Primary 1-Secondary 6) (2017)*.

II. Background information for students' reading

A. Related to Government's Bicycle-friendly policy

Following is a question by a Legislative Councillor and a written reply by the Secretary for Transport and Housing in the Legislative Council today on 8 February 2017:

Question:

In recent years, the Government has been fostering a "bicycle-friendly environment" in new towns and new development areas by providing facilities such as cycle tracks and cycle parking spaces. However, some members of the public have criticised the Government for failing to implement a similar policy in urban areas, rendering them unable to use bicycles as a mode of transport in urban areas. The Government has all along indicated that urban areas are generally having heavier traffic with limited land and many vehicles, it is therefore difficult to find suitable land for providing such facilities in urban areas. In this connection, will the Government inform this Council:

- (1) whether any legislation is currently in place to affirm and safeguard the right of cyclists to use the roads; if so, of the details; if not, whether the authorities will consider enacting the relevant legislation;
- (2) of the number of cycle parking spaces currently available across the territory and their locations (and set out the figures by District Council district); if such information is unavailable, of the reasons for that;
- (3) as some cyclists have pointed out that the conditions such as potholes, cracks or unevenness that have been found on quite a number of road surfaces have posed danger to them and other road users, of the authorities' policy or measures in place for inspecting and repairing road surfaces on a regular basis;
- (4) whether the authorities will step up publicity and education to remind motorists to respect cyclists' right to the shared use of roads (except on expressways or in tunnel areas); if they will, of the details; if not, the reasons for that;
- (5) whether the authorities will incorporate the driving skills and safety knowledge required for the shared use of roads with cyclists into the contents of the

examination for driving licences; if they will, of the details; if not, the reasons for that;

- (6) whether the authorities will conduct a feasibility study on constructing cycle tracks and priority roads for bicycles in urban areas; if they will, of the details; if not, the reasons for that;
- (7) whether the authorities will require the Urban Renewal Authority to reserve space for providing cycle parking spaces and expanding roads for constructing cycle tracks when carrying out district-based redevelopment projects; if they will, of the details; if not, the reasons for that; and
- (8) as the authorities have indicated for several times in recent years that they would control the number of vehicles (especially that of private vehicles) in order to ease traffic congestion and improve air quality, whether the authorities will promote bicycles as a mode of transport at the same time when controlling the growth of the number of vehicles; if they will, of the details; if not, the reasons for that?

Reply:

President,

My reply to the various parts of the question is as follows.

- (1) Pursuant to the Road Traffic Ordinance (RTO) (Cap. 374), a “vehicle” means any vehicle whether or not mechanically propelled which is constructed or adapted for use on roads, but does not include a vehicle of the North-west Railway (i.e. Light Rail) or a tram. A bicycle is categorised as a “vehicle” and can be ridden on carriageways. However, owing to road safety considerations, certain sections of carriageways, such as expressways and government tunnels, are currently designated as zones where cycling is prohibited.

The RTO and its subsidiary legislation also contain regulations applicable to cyclists, such as offences relating to cycling recklessly, carelessly or when under the influence of drink or drugs, and the requirements to show white light at the front of a bicycle and red light at the rear during the hours of darkness or in poor visibility conditions.

Thus, same as other motorists, cyclists have the right to use the roads as well as the obligation to abide by the relevant legislation.

- (2) There are currently some 57 700 public bicycle parking spaces in the territory. A breakdown of the parking spaces by district is set out in detail at the Annex.
- (3) The Highways Department (HyD) is responsible for the maintenance of public roads and associated facilities (including cycle tracks), and conducts regular inspections and carries out maintenance works of various scales. To keep the road surfaces in a serviceable and safe condition, HyD will conduct regular inspections to trunk roads weekly; other roads once every one to three months; cycle tracks of public roads weekly to once every three months depending on the locations and traffic flow. HyD also conducts detailed inspections for all road types (including cycle tracks) once every six months to check the surface and structural conditions of the roads and to collect data for planning and prioritising the respective road maintenance works such that they can be done in an organised manner for preventive purpose.

On receipt of reports concerning road defects and damage or identification of any road defects in regular inspections, HyD will arrange appropriate maintenance works in a timely manner to rectify the road defects so as to ensure the safety of road users.

- (4) The Government attaches great importance to cycling safety. The Transport Department (TD) and the Police have been working closely with the Road Safety Council to promote the message of mutual respect among motorists and cyclists through publicity and education. For example, we have produced announcements in the public interests for both television and radio, a set of educational videos entitled "Safe Cycling: Rules and Tips", and the Road Safety Bulletin promotional publication, etc. All these serve to remind motorists to respect the rights of cyclists to the shared use of roads, and that motorists and cyclists should give way to one another so as to avoid traffic accidents.
- (5) At present, the written test component of the driving test required for the application for a driving licence is set based on the Road Users' Code (the Code). The Code covers knowledge about traffic and road safety. Chapter 5 of the Code, "For All Drivers", already provides instructions for motorists on how to show

consideration for the safety of other road users (including pedestrians, cyclists, etc.) when driving. As regards the road test component, candidates are required to observe road traffic conditions during the test, and when encountering cyclists, to take into consideration their safety and drive appropriately.

- (6) The traffic in urban areas of Hong Kong is generally very heavy, with narrow and crowded roads. On-street loading and unloading activities are frequent, with many vehicles passing by and needing to stop temporarily. Owing to road safety considerations, the Government does not encourage the public to use bicycles as a mode of transport in urban areas.

Moreover, given the relatively limited road space in urban areas in general, if dedicated cycle lanes are to be designated on the road space, the existing walkways or carriageways will need to be narrowed, inevitably bringing inconvenience to other road users or aggravating road traffic congestions, and easily causing traffic accidents. Allowing a large number of bicycles to share the busy roads in urban areas with other vehicles without dedicated cycle tracks will also increase the risks of accidents.

In view of the above, the Government currently does not have plans to designate priority lanes for bicycles in urban areas.

As for new development in urban areas, the Government will consider introducing cycle track networks in potential projects during the planning stage. For instance, the Government is carrying out a large-scale urban development project at the former Kai Tak Airport. According to the Kai Tak Outline Zoning Plan, a cycle track network of about 6.6 kilometres in length within the Kai Tak Development (KTD) has been planned. In response to public aspiration for wider coverage of the cycle track network in KTD for leisure and recreation purposes as well, the Civil Engineering and Development Department (CEDD) in 2014 reviewed the cycle track network and proposed extending the network to about 13 km by making use of the public open spaces. CEDD commenced a feasibility study in November 2015 for completion in mid-2017 to review the proposed cycle track network, its ancillary facilities including rental and parking provision, operation and management framework and implementation strategies.

In addition, when planning the development of harbourfront areas, the

Government will also carefully consider the feasibility of constructing cycle tracks. Where circumstances allow, the Government will provide cycle tracks and related facilities for the public to use bicycles for recreational or short-distance commuting purposes. The Urban Design Study for the New Central Harbourfront completed by the Planning Department (PlanD) in 2011 recommended the Government to consider providing a cycle track in the permanent waterfront promenade under planning at the new Central harbourfront subject to detailed assessment. Separately, in the Stage 2 Public Engagement conducted between June and August 2016 on the Urban Design Study for the Wan Chai North and North Point Harbourfront Areas, PlanD recommended in the proposed Master Layout Plan to reserve space for constructing a cycle track for leisure purpose including ancillary facilities for a bicycle-rental system. As for the proposed boardwalk of two km underneath the Island Eastern Corridor from Oil Street in North Point to Hoi Yu Street in Quarry Bay, cycle track, cycle renting kiosk and bicycle parking facilities are also proposed to be provided on the boardwalk. In taking forward long-term developments, the Government will carefully consider the feasibility of further studies for the provision of cycle tracks.

- (7) According to the Development Bureau, Chapter 8 of Hong Kong Planning Standards and Guidelines (HKPSG) covers standards and guidelines for cycle tracks and bicycle parking areas. The purpose of HKPSG is to provide for general guidelines, and flexible application should be adopted based on the special circumstances of individual projects, including those by the Urban Renewal Authority. As regards road widening, the Urban Renewal Authority has all along followed the overall planning by relevant Government departments (e.g. TD or HyD).
- (8) The Government attaches great importance to alleviating road traffic congestion, and will adopt a multi-pronged approach, taking forward progressively the series of recommendations by the Transport Advisory Committee in its earlier Report on Study of Road Traffic Congestion in Hong Kong, including exploring measures to control vehicle growth (in particular of private cars).

The Government's transport policy is based on public transport and aims to reduce reliance on private cars. At the same time, we endeavour to foster a green community by promoting cycling and walking for short-distance commuting, facilitating the public to travel between public transport stations and living

places or offices for "first mile" and "last mile" short-distance connection, thus minimising the need for mechanised transport over short distance.

Apart from actively taking forward the "Walk in HK" programme announced by the Transport and Housing Bureau in January this year to encourage people to walk more, we will continue to foster a "bicycle-friendly environment" in new towns and new development areas, including improving existing cycle tracks and bicycle parking facilities, and enhancing publicity and education on cycling safety. We will also study how to assist organisations in operating self-financing community bicycle rental services on a non-profit making basis.

Source: Web page of the Transport and Housing Bureau

(<https://www.thb.gov.hk/eng/psp/pressreleases/transport/land/2017/20170213e.htm>)

Memorandum of Understanding on operation of automated dockless bicycle rental services signed between Transport Department and operators (28 September 2018)

The Transport Department (TD) today announced the Code of Practice for Automated Dockless Bicycle Rental Services and signed the Memorandum of Understanding on the Operation of Automated Dockless Bicycle Rental Services (MoU) with four automated bicycle rental operators to promote self-regulatory and sustainable operation of automated dockless bicycle rental services (ADBRS). A number of District Councillors of Tai Po, Sha Tin and North Districts as well as Transport Advisory Committee member and former member of the Hong Kong Olympic cycling team Mr Hung Chung-yam also attended the ceremony to witness the signing of the MoU.

Speaking at the signing ceremony, the Commissioner for Transport, Ms Mable Chan, said that promoting green commuting has always been one of the focuses in the transport policy in Hong Kong. Hence, the Government endeavours to foster a bicycle-friendly environment in new towns and new development areas by developing the cycling network and improving the existing cycling facilities, so as to promote cycling as a green mode for short-distance commuting.

Ms Chan noted that the TD is aware of the wide use of ADBRS by members of the public and the highest utilisation of it in new towns had reached almost 10,000 per day. However, it has also caused problems including illegal parking and obstruction.

Drawing reference from different regulatory practices and experiences adopted in overseas cities, the TD formulated, on the basis of the existing legal framework, the Code of Practice for Automated Dockless Bicycle Rental Services, which places an emphasis on the use of information technology and self-discipline in the trade. This, coupled with the regulatory control exercised by relevant departments, will form a two-pronged approach so that the ADBRS operators would operate in a responsible, self-regulatory and sustainable manner.

After several discussions with the ADBRS operators and extensive consultations in districts, the Code was formulated and has proven practicable through the implementation of a pilot scheme. The code mainly covers the following five aspects:

1. Operators should not place bicycles in the urban areas due to road safety considerations and the lack of comprehensive cycle tracks and on-street cycle parking spaces in such areas;
2. They should proactively provide customers with appropriate assistance through mobile applications, including giving instructions on safety rules and advice against illegal parking and obstruction;
3. They should set up hotlines to handle enquiries and complaints effectively and make a performance pledge for processing enquiries and complaints;
4. They should put in place an effective site patrolling mechanism; and
5. They should provide operation data to the Government for monitoring and analysis purposes.

Ms Chan thanked the four ADBRS operators (namely HobaBike, Ketch'up Bike, LocoBike and ofo) for supporting the implementation of the Code. She appealed to the trade to continue co-operating with all government departments to promote a bicycle-friendly environment. The TD will also provide not less than 3 500 additional bicycle parking spaces at suitable locations to facilitate cycling by the public. The relevant government departments will continue to carry out enforcement actions and clearance operations against illegal parking black spots for bicycles.

The Code has been uploaded to the website of the TD for public viewing (www.td.gov.hk/mini_site/cic/en/safe-cycling/cycle-parking-tips.html). Meanwhile, the TD will enhance the cycle parking facilities and release the potential illegal parking black spots for bicycles at the website. The TD will also conduct publicity and education such as production of television and radio Announcements in the Public Interest to raise public awareness of proper parking of bicycles.

Source: Web page of the Transport and Housing Bureau,
(https://www.td.gov.hk/en/publications_and_press_releases/press_releases/transport_department/index_id_3054.html)

B. Related to Smart City

Hong Kong Smart City Blueprint (2017)

Vision

Embrace innovation and technology (I&T) to build a world-famed Smart Hong Kong characterised by a strong economy and high quality of living

Mission

- (a) to make people happier, healthier, smarter and more prosperous, and the city greener, cleaner, more livable, sustainable, resilient and competitive;
- (b) to enable the business to capitalise on Hong Kong's renowned business-friendly environment to foster innovation, transform the city into a living lab and test bed for development;
- (c) to provide better care for the elderly and youth and foster a stronger sense of community. To make the business, people and Government more digitally enabled and technology savvy; and
- (d) to consume fewer resources and make Hong Kong more environmental friendly, while maintaining its vibrancy, efficiency and livability

Smart Mobility

Intelligent Transport System and Traffic Management

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- Introduce pilot intelligent traffic signal systems with sensors for pedestrians and vehicles at road junctions starting from 2021

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Environmental Friendliness in Transport

- Establish "bicycle-friendly" new towns and new development areas and improve existing cycle tracks and cycle parking facilities in new towns in phases, with the first phase of improvement works to be completed by 2018

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Smart Living

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Digital Payment

- Develop a Faster Payment System (FPS) by 2018 which supports the use of mobile phone numbers or email addresses for payments anytime and anywhere

- Facilitate a common QR code standard through the industry group established to promote the wider use of mobile retail payments and bring greater convenience to customers and merchants

Source: Web page of Innovation and Technology Bureau

([https://www.smartcity.gov.hk/modules/custom/custom_global_js_css/assets/files/HongKongSmartCityBlueprint\(EN\).pdf](https://www.smartcity.gov.hk/modules/custom/custom_global_js_css/assets/files/HongKongSmartCityBlueprint(EN).pdf))

Research Report on Smart City (2015)

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- Smart Mobility: This involves the enhancement of the efficiency and service quality of urban transport through the use of video surveillance and remote detection technologies to monitor traffic facilities and conduct related data analysis for managing traffic flow, pedestrian flow and cargo flow in real time and handling emergencies. It also promotes mixed-modal access which integrates various modes of transportation, including public transport, clean-fuel vehicles, cycling and walking.

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United States

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- Boston: Mobile applications have been developed with a full range of functions for citizens, such as instant reporting of neighbourhood problems to the city government; search for on-street parking; real-time traffic information and route suggestions; help for children walking to school; and its city bike rental system...

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European Union

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Spain

(Barcelona) ...smart and environmental-friendly bicycle rental service is strongly advocated to enable citizens to hire and return a bicycle with a smart card and to locate a bicycle parking space via a smart system...

Smart City Development in Hong Kong

...

Smart Mobility

...

Regarding mixed modal access, the Government...has launched the pilot project of

“Walkable Kowloon East” and drawn up proposals for improving the local pedestrian and traffic environment, and considered providing seamless connection between major spots in the district by means of the Environmental Friendly Linkage System. The Government has also examined the feasibility of introducing a smart bicycle rental system and providing the public with information of bus-bus interchange, parking spaces, loading/unloading points, etc.

Appendix A Smart City Development Strategy of Barcelona

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- Superblocks: Five blocks in the city are chosen for integrated planning for a more liveable environment. Specific measures include: consolidation of bus route networks, cycling tracks and footways to reduce carbon emission and noise levels; addition and revitalisation of sitting-out areas; more vegetation for a greener environment; provision of suitable spaces and facilities to encourage activities that favour community participation and social inclusion; promotion of resources conservation, renewable energy generation and better use of water resources; and beefing up the element of public engagement in the process of drawing up various community projects.

...

- Bicing: Establishing 420 Bicing stations in the city, providing 6 000 bicycles for rent by members of the public who have registered online. Using a mobile application, they can access information such as the location of the Bicing stations and bicycle availability as well as rental record and payment status.

...

- Smartquesina: This is an interactive bus stop that provides various smart facilities, including free Wi-Fi connection; a municipal mobile applications downloading point via BCN Contactless; a touch screen displaying bus information, real-time bus schedule and information on other related city services (such as availability of public bicycles and tourist attractions); and USB ports for charging mobile devices.

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Source: Web page of Policy Innovation and Co-ordination Office (formerly known as Central Policy Unit)

([https://www.pico.gov.hk/doc/en/research_reports/CPU%20research%20report%20-%20Smart%20City\(en\).pdf](https://www.pico.gov.hk/doc/en/research_reports/CPU%20research%20report%20-%20Smart%20City(en).pdf))

III. Learning and teaching strategies

【Points to note:

- Search for “Cycle Tracks” and “Parking Spaces for Public Use” at the web page of the Transport Department, the Government of the HKSAR:
Home>Cycling Facilities>Major Cycle Tracks and Parking Sites
https://www.td.gov.hk/mini_site/cic/en/cycling-infrastructure/cycle-tracks-and-parkings/index.html
- Select a suitable location. Conduct an observation and shoot photos / video clips for record and class use purpose.
- Use an electronic application program³ to design and arrange students’ itineraries and related learning activities.
- If some students will ride bikes on the cycle track,
 - make reference to the *Guidelines on Outdoor Activities* (https://www.edb.gov.hk/attachment/en/sch-admin/admin/about-activities/sch-activities-guidelines/Outdoor_EN.pdf), especially the content in Chapter 7 Cycling.
 - remind them to take note of “Safe Cycling Tips” at the web page of the Transport Department, the Government of the HKSAR (https://www.td.gov.hk/mini_site/cic/en/safe-cycling/cycling-rules.html).
 - provide them with helmets and protective pads.】

³ For instance, EduVenture (<http://ev-cuhk.net/index.php>).

A. Pre-study Activities

1. Online Reading

- Safe Cycling Tips

Web page: Transport Department, the Government of the HKSAR

Home>Need-to-Know>Safe Cycling Tips

https://www.td.gov.hk/mini_site/cic/en/safe-cycling/cycling-rules.html

- Traffic Signs and Road Markings for Cyclists

Web page: Transport Department, the Government of the HKSAR

Home>Need-to-Know>Traffic Signs and Road Markings>

Traffic Signs for Cyclists

https://www.td.gov.hk/mini_site/cic/en/cycling-infrastructure/signs-and-markings/useful-signs.html

Road Markings for Cyclists

https://www.td.gov.hk/mini_site/cic/en/cycling-infrastructure/signs-and-markings/useful-markings.html

2. Timed Quiz

- Use an electronic application program⁴ to ask students to answer questions within a limited time in order to test their understanding of the safe cycling tips, traffic signs and road markings for cyclists, etc.
- Show the photos / video clips of the selected cycle track so that the students can have a basic understanding of the location. Also, they can be reminded of the points to note.

⁴ For instance, Kahoot! (<https://kahoot.it/>) or Plickers (<https://get.plickers.com/>).

B. Community Study

Worksheet (1): Cycling Experience

【Points to note:

- Each group rents an automated dockless bicycle.
- The activities will be conducted in groups. In each group, a student who knows how to ride a bike will be responsible for riding the bike on the cycle track. Others will complete related learning activities in the tablet computer.
- The student who is riding the bike
 - should put on a helmet and wear protective pads.
 - should obey traffic rules all the time and pay attention to other road users' safety as well as personal safety.
 - should ride on the cycle track / designated cycling areas and get off the bike and push the bike on other roads.
 - should park the bike in a designated area if indoor shopping is required.】

(i) Field Study

Activities 【pick the activities according to the selected route】 :

Points to note: When conducting the learning activities (e.g. shooting photos, collecting data), pay attention to personal safety as well as the safety of others. Also, avoid disturbing other users of the cycle track and related facilities.

1. Related to the cycle track

- | | |
|--|--|
| (a) Location where the cyclist has to get off the bike: | • Take photos (showing the reasons for getting off the bike) |
| (b) Difficulties faced when cycling (e.g. steep slope, sharp turn, limited visibility) | • Take photos (showing the difficulties) |
| (c) Appearance of obstacles: | • Take photos (showing the obstacles) |
| (d) Not wide enough: | • Take photos (showing the width) |
| (e) Other users of the cycle track (e.g. pedestrians, joggers, wheelchair users, skateboarders, persons using prams, persons with pets): | • Data collection (other uses of the cycle track and number of related users) |
| (f) Connected to/not connected to major meeting points (e.g. MTR stations, public transport interchanges, public facilities, large malls, schools, recreational and sports facilities) | • Take photos (showing connection/disconnection) |
| (g) Support measures along the cycle track: | • Take photos (e.g. provision of bicycle pumps, repairing tools, bicycle locks for rent) |

2. Related to traffic signs and road markings

- (a) At a pedestrian crossing at a junction with a cycle track / termination or commencement of a cycle track at a junction with a pedestrian crossing:
- Take photos (traffic signs and road markings) **【 if necessary, find out the meanings of the traffic signs and road markings at the web page of the Transport Department 】**
 - Data collection (number of cyclists and other users obeying/not obeying the traffic signs and road markings)
 - **【 when feasible and appropriate 】** Interview cyclists and other users (could make use of multiple choice questions on traffic signs and road markings to find out interviewees' level of understanding)

3. Related to cycle parking

- (a) Cycle parking facilities:
- Take photos
 - cycle parking facilities (e.g. inverted-U bicycle parking racks, one-up-one-down bicycle parking racks, spiral bicycle parking racks, angled bicycle parking racks, double-deck bicycle parking racks)
 - notices (e.g. notice to users, methods of use)
 - Data collection
 - number of parking spaces
 - actual number of bicycles parked
 - number of improper uses of parking spaces (e.g. placing other objects, parking more than 1 bicycle)
 - number of parking spaces involving prolonged occupation by abandoned bicycles (e.g. damaged, covered in dust)
- (b) Illegal parking black spots (e.g. entrance/exit of MTR stations, inside subways, under footbridges, emergency access)
- Take photos
 - showing the problem of illegal parking of bicycles
 - notices related to illegal parking
 - notices showing the ways to designated bicycle parking space
 - Data collection
 - number of bicycles parked illegally
 - number of parking spaces involving prolonged occupation by abandoned bicycles (e.g. damaged, covered in dust)

4. Related to renting of automated dockless bicycle

Rent an automated dockless bicycle by each group.

- (a) Renting process:
 - Take photos and click on the answers to multiple-choice questions
 - how to register (e.g. install related app)
 - how to pay deposit, time-based fee, add value (e.g. through registered credit card, digital wallet, pre-paid card)
 - how to find available bicycles
 - how to start the use of the bicycle
 - is the bicycle damaged
 - if damaged, can the transaction be cancelled
 - how to end the use of the bicycle
 - how to get back the deposit

- (b) Actual usage (on designated section of the cycle track):
 - Data collection
 - Number of persons riding automated dockless bicycles

- (c) Condition of parking:
 - Take photos and data collection
 - Number of automated dockless bicycles parked at designated parking spaces
 - Number of automated dockless bicycles parked illegally along the route

(ii) Lesson Summary and Reflection

【Show photos/data by each group】

1. Related to the cycle track

- Will the cycle tracks in the community encourage the residents to use bicycles?
- What are the bicycle-friendly design and facilities in the community?
- Make reference to the diagram in the web page of “What Makes a City Bike-Friendly”:

<https://bikefriendlyoc.org/2012/06/14/what-makes-a-bike-friendly-city/>

Can Hong Kong introduce the design and measures mentioned in the diagram?
Why?

2. Related to traffic signs and road markings

- Do the cyclists understand the meaning of the traffic signs and road markings? Do they obey the rules? Why?
- For whom are the designs made (e.g. cyclists, other users, drivers)?
- Under the existing road design, who will be given the priority to use the roads?
- Watch the following video:

Junction design in the Netherlands (in English with Chinese subtitles)

(BicycleDutch, 2014)

(duration: 5:09)

<https://www.youtube.com/watch?v=XpQMgbDJPok>

Can the design shown in the video be introduced to Hong Kong? Why or why not?

3. Related to cycle parking

- Guess what other functions can be performed by the cycle parking spaces?
- To what extent have the needs of users been taken into account by the design, location and supporting facilities of the cycle parking spaces?
- Watch the following videos:

- Automated cycle parking facilities:

Eco Cycle Automated Cycle Storage HD (Eco Cycle, 2015)

(duration: 2:00)

<https://www.youtube.com/watch?v=TTnX-MIVvjU>

Or

ECO Bicycle Parking (GIKEN Co. Ltd., 2013)

(duration: 10:01)

<https://www.youtube.com/watch?v=EY2AYA0O-VY>

- Underground/multi-storey bicycle parking facilities:

Utrecht Station Bicycle Parking Facility (BicycleDutch, 2017) (duration:

3:50)

https://www.youtube.com/watch?v=L3M_GM_MDg8

Or

Bicycle parking facility Jaarbeursplein, Utrecht (BicycleDutch, 2015)

(duration: 3:32)

https://www.youtube.com/watch?v=u2i_pN4BKco

Can the facilities shown in the videos be introduced to Hong Kong? Why or why not?

4. Related to automated dockless bicycle rental services

- What are the opportunities and challenges brought by the automated dockless bicycle rental services to the community?
- Which aspects of the smart city development are related to the business operation of the automated dockless bicycle rental services?
- Watch the following video:

Smart Bike City - Concept Movie (OMRON, 2016)

(duration: 3:20)

https://www.youtube.com/watch?v=jVxgJ_2dfyk

What directions of development are mentioned in the video?

What are the implications and importance of the above-mentioned directions of development to the development of a smart city?

IV. Related articles of the *Basic Law*

Basic Law

Article 118

The Government of the Hong Kong Special Administrative Region shall provide an economic and legal environment for encouraging investments, technological progress and the development of new industries.

Article 119

The Government of the Hong Kong Special Administrative Region shall formulate appropriate policies to promote and co-ordinate the development of various trades such as manufacturing, commerce, tourism, real estate, transport, public utilities, services, agriculture and fisheries, and pay regard to the protection of the environment.

END