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| 22－P5 | | | | | | | |
| Theme | Module | Topic | Learning objectives | Period | Activities | Resources | Remarks |
| Natural Resources | Saving Energy | Government and Individual Responsibilities in Water Conservation  (suggested period(s): 2) | * Understand the situation of lack of water resources in Hong Kong * Understand the approaches that the Hong Kong Government has adopted to solve the problem of lack of water resources | 1 | **Introduction (5 minutes)**  Ask students the following questions:   1. What are the sources of water in Hong Kong?   (Hong Kong has three water sources including local rainwater collection, imported water from Dongjiang and seawater for toilet flushing)   1. Why Hong Kong imports Dongjiang water?   (Hong Kong has an unreliable annual rainfall. Rainwater collected may not be adequate to meet the fresh water demand) |  |  |
| **Watching video (15 minutes)**  Play the video which allows students to understand Hong Kong’s water supply history and roles of the Water Supplies Department.  (Hong Kong’s first impounding reservoir built in 1863；Outbreak of plague in 1894；Installation of water meter and establishment of charging system for water supplies in 1902；Droughts in 1929 and that together with water rationing in 1963；Construction of additional reservoirs in 1932, 1959 and 1963；Importation of Dongjiang water since 1965；Hong Kong’s first reservoir was built in the sea in 1968；The first desalination plant was built in 1975；Establishment of the Water Supplies Department in 1982；The replacement and rehabilitation of water mains programme since 2000; and the Water Reclamation Trial Schemes, the Total Water Management Strategy and the preservation of waterworks heritage are also launched in recent years) | Teaching Video:  Topic 2 - “Milestones of Hong Kong Water Supply”－Senior primary level |  |
| **Explanation (10 minutes)**   1. Explain to students what it means by “promoting water conservation” and “exploiting new water resources” in the emphasis of the Total Water Management Strategy. (“Promoting water conservation”: controlling water demand and promoting water saving; “Exploiting new water resources”: enhancing water supply management and exploring new sources of water) 2. Ask students to finish Part 1 of the worksheet by classifying the strategies under the Total Water Management Strategy into the above two major categories. 3. Invite students to list out examples of “promoting water conservation” and “exploiting new water resources” apart from those listed on the worksheet. (“Promoting water conservation”: organising activities for public education, enhancing education of water conservation at school and implementing the Voluntary Water Efficiency Labelling Scheme (WELS) etc.; “Exploiting new water resources”: Protection of water resources, extending the use of seawater for toilet flushing and exploring new sources of water etc.) | Worksheet:  22 Worksheet “Government and Individual Responsibilities in Water Conservation” |  |
| **Conclusion (5 minutes)**  Conclude that a having stable supply of clean water is not easy. Every drop of water we enjoy resulted from the concerted effort of different parties. Thus, we have to treasure water resources and avoid wasting water. |  |  |
| Students should be able to:   * Establish a positive attitude towards water conservation and adopt water saving habits | 2 | **Introduction (5 minutes)**  Ask students:   1. How do you and your family use water in your daily life?   (Do you have a high or low water usage? Is your family a “Water-saving Elite” which treasure every drop of water or a “Water-wasting Family” which over-consuming water resources?)   1. How do you know the amount of water you and your family use every day? |  |  |
| **Class activities (25 minutes)**   1. By using the activities kit, show students how to find out items such as average daily water consumption, water consumption chart and payable water charges on the water bill. 2. Explain to students that in order to work out the per capita daily water consumption of the family, we have to multiply the “average daily water consumption” as shown on the water bill by 1000 which is then divided by the number of members in the family. Then, ask students to write down their results in Part 2 of the worksheet. (e.g. For a family of four, if the “average daily water consumption” is 0.2 m3, the per capita daily water consumption of the family would be 0.2×1000÷4＝50 Litres) 3. Invite students to make a guess of the average per capita domestic water consumption in the world (110 litres) and that in Hong Kong (about 130 litres while the use of flushing water is about 90 litres which adds up to a total of 220 litres), Macau (157 litres), Singapore (143 litres) and Shanghai (120 litres) respectively (see references materials). 4. Ask students to compare their results of average per capita daily water consumption to that of people in other cities. Hence, ask students to evaluate their personal/families’ water consumption habit and think again if they have a high or low water usage. 5. Ask students to think about ways to reduce water consumption at home in three areas namely the bathroom, kitchen and laundry. Then ask them to draw a picture to express their ideas in Part 2 of the worksheet. (Bathroom: take a shower instead of a bath/ turn off the tap while brushing teeth or washing face; Kitchen: allow food to defrost overnight inside the refrigerator and avoid thawing food under running water/ wash dishes and vegetables in a sink or container filled with water and avoid washing them under a running tap; Laundry: only run the washing machines or dishwashers with a full load/ use water-efficient washing machine.) 6. Invite students to share their ideas of saving water at home with the picture they have drawn and promote the importance of water conservation to their classmates. | Activities kit: Game 17 “How to Read a Water Bill?”  Materials:  Students’ water bills from home or a copy of it  Worksheet︰  22 Worksheet “Government and Individual Responsibilities in Water Conservation” | Remind students to bring their water bills or a copy of it to school in advance |
| **Conclusion (5 minutes)**  Conclude that the Government has adopted different approaches to control water demand and enhance water supply. And we should also contribute by saving water in our daily life and promoting the importance of water conservation and ways to reduce water consumption to our friends and family. |  |  |

Reference materials:

Water Supplies Department－Total Water Management Strategy

<https://www.wsd.gov.hk/en/core-businesses/total-water-management-strategy/index.html>

Water Supplies Department－How to Read Your Water Bill?

<https://www.wsd.gov.hk/en/water-conservation/domestic/how-to-read-your-water-bill/index.html>

Water Supplies Department－ “Water: Learn & Conserve” Teaching Kit for Liberal Studies book 2 – Milestones of Hong Kong Water Supply

<https://www.wsd.gov.hk/filemanager/common/teaching_kit/pdf/Book2.pdf>

Water Supplies Department－Issue No.70 (Jan 2015) PR Publications（information of per capita domestic water consumption of a Hong Kong citizen）(2015)

<https://www.wsd.gov.hk/en/publications-and-statistics/pr-publications/waterlink-newsletters/issue-70/index.html>

Public Accounts Committee of the Legislative Council－Report 64 Chapter 4 Part 4 “Management of water supply and demand”（information of per capita domestic water consumption in the world）(2015)

<https://www.aud.gov.hk/pdf_e/e64ch04.pdf>

澳門環境狀況報告 2017（information of per capita domestic water consumption of a Macao citizen）(2017) (Chinese version only)

<https://www.dspa.gov.mo/Publications/StateReport/2017/03_tc.pdf>

上海市人民政府－“全國城市節約用水宣傳周”在滬開幕（information of per capita domestic water consumption of a Shanghai citizen）(2018) (Chinese version only)

<http://www.shanghai.gov.cn/nw2/nw2314/nw2315/nw4411/u21aw1383286.html>

PUB - Singapore Water Story（information of per capita domestic water consumption of a Singaporean）(2017)

<https://www.pub.gov.sg/watersupply/singaporewaterstory>