

### Topic 3- From Source to Tap (Key Stage 1)

English voice over script and super:

Super: Topic 3 From Source to Tap Key Stage 1

FVO: Topic 3 From Source to Tap Key Stage 1

Girl: Water Save Dave, I'm going on a trip to Japan with my parents soon and I'm very excited! Have you ever travelled?

Water Save Dave: Of course I have. I always travel, and every time I will spend a long time.

Girl: Wow that's nice! Where have you been to? Did you go by plane or cruise ship?

Water Save Dave: Neither. If you want to know more about my journey, you'd have to know my properties, which is a cycle.

Girl: What? I didn't know you were a psycho!

Super:

Room temperature

$< 0^{\circ}\text{C}$

$100^{\circ}\text{C}$

Water Save Dave: No! Cycle, as in the change in forms that I go through, when I'm under different temperatures. The three forms of me are solid, liquid and gas. In room temperature, I am liquid water. When the temperature is under  $0^{\circ}\text{C}$ , I solidify into the form of ice. When the temperature reaches  $100^{\circ}\text{C}$ , I vapourise into the air as steam.

Girl: I see what you mean. When you are ice, you will melt under heat to become water; when you are water, you boil under heat to become steam. On the contrary, When you are steam, you can condense under cold to become water, and you can even freeze to become ice.

Water Save Dave: Smart girl. Since you know my properties now, I can share my journey with you in detail.

Girl: Great, I can't wait to hear it!

Water Save Dave: My home is a lake. When the sun shines, its heat evaporates all my water drop buddies in the oceans, rivers and plants. We evaporate into water vapour and rise to the sky. But when it gets cold in midair, more and more of our water drop buddies come and join together like glue. When there are a lot of us, we form clouds.

Girl: Haha! that sounds fun!

Water Save Dave: Even though that's fun, we need to be self-controlled. When the cloud gets too heavy, we fall from the sky as rain and reach the ground. Some of us land on stone walls, some into wells, basically everywhere. Last time I fell into a river, and swam all the way to the catchwater. The view on the way was spectacular!

Girl: Wow, your journey really sounds thrilling!

Water Save Dave: That's not all. After passing the catchwater, I reached the bottom of a valley and was stopped by a dam. That place is called Shing Mun Reservoir.

Super:

Shing Mun Reservoir

Tsuen Wan

Girl: Shing Mun Reservoir? Where is it located?

Water Save Dave: It is in Tsuen Wan. A lot of people hike near that area.

Girl: What is a reservoir used for?

Super:

X 17

Water Save Dave: It is used for collection and storage of rainwater. Some reservoirs are also used for irrigation and recreational purposes. When it is in the non-spawning season, some reservoirs would be opened to the public for fishing. Including Shing Mun Reservoir, there are a total of 17 reservoirs in Hong Kong.

Girl: I bet a lot of water can be stored in all these reservoirs!

Super:

100%

6 months

High Island Reservoir

Largest

Plover Cove Reservoir

First reservoir built in the sea in the world

Water Save Dave: Yes, when all reservoirs are full, the storage capacity can meet about six months' demand of Hong Kong. There is the High Island Reservoir, also known as "The Reservoir in the Sea", which is the largest impounding reservoir in Hong Kong. As for the Plover Cove Reservoir, it is actually the first reservoir built in the sea in the world!

Girl: So what did you do in Shing Mun Reservoir?

Water Save Dave: Just having a vacation. It's really a beautiful place! The dam is towering and the view is breathtaking. The exquisite birds and flowers are all too beautiful to look at. There are also monkeys playing around, it's just like a paradise to me!

Girl: Oh please, you make me really want to visit this place. Your description is too attractive.

Water Save Dave: Well, at least I can show you a video of it.

Video

Video Ended

Girl: It is surely as stunning as you have said.

Water Save Dave: Of course it is! Actually all reservoirs look beautiful, you should ask your parents to bring you there if you have the chance. You really need to experience it! I stayed there for a long, long time, but time flies...

Girl: You had to leave? Did you feel unwilling?

Water Save Dave: Yes I did, but I'm still glad I plucked up my courage to leave that comfort zone, or else I wouldn't be able to experience so much more and make new friends to broaden my horizons.

Girl: What did you experience after leaving the reservoir?

Super:

Sha Tin Water Treatment Works

Water Save Dave: Afterwards, I arrived at Sha Tin Water Treatment Works. I met friends from different backgrounds. Apart from friends coming from different reservoirs, there were also buddies from Dongjiang in mainland China, that is what you called the Dongjiang water.

Girl: Why is the water from Dongjiang showing up in Hong Kong? Are they travelling too?

Super:

1960s

Water supply for

4 hours every 4 days

Water Save Dave: In the 1960s, there was a serious drought in Hong Kong, it affected the water supply greatly. The Government was forced to exercise water rationing, where water to the public could only be made for 4 hours every 4 days. To cope with low and unstable rainfall, Hong Kong has been importing Dongjiang water since 1965 to meet local water demand. That's why our buddies from Dongjiang came.

Girl: How did they come?

Super:

Dongjiang

Shenzhen Reservoir

Pumping stations

Water treatment works

Water Save Dave: My water buddies from Dongjiang told me that they were playing happily in Dongjiang, then, one day, they were suddenly pumped away, all the way to

Shenzhen Reservoir. After that, they were delivered to different pumping stations and water treatment works along the aqueduct systems and finally reached Sha Tin Water Treatment Works, where we met each other.

Girl: Oh I see. What did you do in the water treatment works?

Water Save Dave: Took a nice bath!

Girl: Haha! Even you have to take a bath?

Super:

Sand

Small particles

Sterilised

Clean

Water Save Dave: Why not? I get dirty after visiting so many places. And the water treatment works is a place to filter and purify raw water and make us clean. Inside the treatment works, we take rounds and rounds of baths. Afterwards, not am only I free of sand and other small particles, I'm also sterilised, meeting with the standards of World Health Organization. It feels wonderful to be clean again!

Girl: With you and your tons of friends, won't the place be crowded with water drops wanting to get purified?

Super:

water treatment works 20

2120

Water Save Dave: Well, it sure will, if we all cram into the same water treatment works. Luckily there are in total 20 water treatment works in Hong Kong, cleaning up to 2120 swimming pools of water every day. Sha Tin Water Treatment Works is the largest among them, taking up a quarter of the total treated water in Hong Kong.

Girl: I never knew that so much water is treated in Hong Kong every day! What is the next stop after you take your bath?

Super:

Water treatment works

Service reservoirs

Water Save Dave: After taking a bath, we are diverted to different service reservoirs through underground water mains.

Girl: What is a service reservoir?

Super:

174 Fresh water service reservoirs

High ground

Water Save Dave: A service reservoir is used for storing treated fresh water. Currently, there are 174 fresh water service reservoirs in Hong Kong. They are normally constructed on high ground so that gravity will help to supply water to households. My water buddies and I would stay there temporarily, then reach your home through the distribution network.

Girl: I live on the 38/F, that's quite high above. How can you reach there... by lift?

Super:

Sump water tanks

Roof water tanks

Water Save Dave: Of course not! It is much more exciting than that. After being connected to the sump water tanks in buildings, we would be pumped all the way to the roof water tanks. Then, we are distributed to different floors, and to different flats. Therefore, when you turn on the tap, here I came!

Girl: What a marvelous journey that was!

Water Save Dave: Yes, only after the series of processes including rainfall collection, water treatment and water distribution, I can finally arrive at your home.

Girl: I still have one question.

Water Save Dave: What is it?

Girl: After we take a shower, brush our teeth or wash the clothes, where does all the sewage go?

Water Save Dave: Used water would be directly sent to the sewage treatment works. After treatment, some water will be discharged into the sea, and some will be reused for non-potable uses. The water in the sea would evaporate under the sun's heat, turn into water vapour, and form clouds with other water droplets in the atmosphere. They fall again onto the ground as rain, flowing along rivers... and it goes round and round each time. That is the water cycle.

Girl: Wait a minute... so we are using the same water over and over again?

Water Save Dave: Technically yes. Even though my water buddies and I change forms all the time, the water on Earth is still in the same amount. No matter where the water goes, it still lies in the water cycle. Therefore, whatever you do to water in one place can have an effect on the water cycle, or even the ecosystem, which may affect not just humans, but also animals and plants.

Girl: Then how can we protect our water resources from pollution?

Water Save Dave: There are a lot of ways. Let me give you some tips.

Girl: Great!

Super:

Conserve the water

Water Save Dave: Firstly, we need to reduce the waste at source, conserve the water. For example, some used water can be reused, instead of throwing them away immediately after use.

Girl: What kinds of water can be reused?

Water Save Dave: After washing vegetables, the water can be used to water plants; after washing rice, the water can be used for face washing; the collected water from the dehumidifier can also be reused to mop the floor.

Girl: Thanks for the tips!

Super:

Chemical detergents

Environmental friendly detergents

Water Save Dave: Apart from reducing water waste, we can also get into good washing habits, such as to use fewer chemical detergents and use more environmental friendly detergents. These actions can lower the risk of contaminating water.

Girl: I thought chemical detergents have a better cleaning effect?

Water Save Dave: The better the effect, the more toxic it is!

Girl: Whoa, that sounds scary! What other ways are there?

Water Save Dave: There are still plenty of ways, such as not to overly use detergents for washing clothes or dishes. Also, remember to wipe the frying pan with a tissue before washing, so as to remove the grease and prevent polluting the water.

Girl: I understand.

Water Save Dave: One more thing, also bear these in mind while having outdoor activities. Remember not to swim in the reservoirs even if you are hiking nearby, because you can easily pollute the water source. Plus, it is against the law. When you go to country parks or barbecue sites, take your garbage with you when you leave, or else they may end up in the river channels.

Girl: Of course I will. I always clean up after myself.

Super:

Cherish water resources

Minimise wastage

Save water

Water Save Dave: Good! Water resources are so precious, and every one of us has the responsibility to pay attention to and care for the environment. Cherish water resources, minimise wastage, and save water.



Super:

Yes

Girl: Yes sir!

Super:

Acknowledgements:

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