A Tablespoon

－water we can use－

National Institute of Technology, Fukui College

A: Hello, everyone. I am Asuka Kinoshita.

R: I am Ryudai Santa.

H: And I am Hideki Takashima.

Today we are going to talk about something you already know, and certainly used today. We are going to talk about water from both a local and global point of view. But first, please listen to Asuka and Ryudai.

A: Do you know where in Japan we can drink the best tap water?

R: I don’t know

A: Before I give you the answer, let me explain. We can classify tap water into 4 groups:

Here’s a hint grade-water, the highest rank of the four, always comes from mountainous areas and it’s SO tasty that you can even say it’s DELICIOUS!

R: So is it Mt Rokko near Kobe?

A: No

R: Nagano?

A: No

R: Hokkaido? I give up.

A: Actually, it’s MY home town, O-no city, surrounded by beautiful mountains in Fukui prefecture. Isn’t THAT great?

R: Let me tell you something even better. If you could imagine putting all the water existing on the Earth into two 25-liter buckets, the water that’s drinkable is just one tablespoon. And since we are sharing this tablespoon with everyone in the world, there are over 1 billion people who cannot obtain safe water. So, despite living in a global situation like this, in Japan, people can drink safe and fresh water from the faucet.

H: We can drink water simply by twisting a faucet. Let’s think about where this water comes from and how it’s made safe to drink. First, watch the journey of drinking water originating from the mountains and forests. Rainwater lands and becomes spring water, growing into big rivers while collecting more and more surrounding water. This water is stored at dams, which protect areas below from flooding and controls the amount of water we use. Next the water comes to a filtration plant, which purifies water for us to drink. Then that water is temporarily stored at a holding tank. Finally, pipes carry water to our homes.

A: It’s so easy, and because of that, I always used to leave the water running when I took a bath or did the dishes. I didn’t think much about it before, because in O-no we have plenty of clean water. But when I went to Australia, I realized that I used too much water back at home. Fortypercent of Australia is desert, and they don’t have a lot of mountains, so water shortages occur quite often. There were three important rules in my host family’s house. One, take short showers. Two, wash clothes just twice a week. Three, turn off the water when washing dishes. My host family took great care to save water. Japanese people, however, take water for granted. We use it without thinking about how precious it really is.

H: There are a number of water problems; the first of which is water shortage. This is caused by global warming, population growth, water pollution and so on. According to the United Nations, one person dies every 20 seconds through lack of water or by drinking polluted water. Climate change caused by global warming leads to a decrease in the amount of rainfall and consequently results in water shortage. Demand of water will increase along with the population, leading to further shortages. Back in 2005, 500 million people around the world couldn’t get enough water for their daily lives. Ten years from now in 2025, when the world population is predicted to reach 8 billion, 500 million will become almost 700 million.

A: The people that suffer from water shortage have a hard life. They need to walk a long way in order to get water. This important non-paying job is left to women and children, especially girls. These pictures were taken by a Japanese volunteer; a friend of our English teacher in a village in Rwanda. If safe water is not supplied to the village, children have to spend HOURS to fetch it, instead of going to school, or doing their homework.

R: The UN says that humans need at least 50 liters of water a day to meet a basic standard of life: 5 for drinking, 20 for sanitation, 15 for bathing and 10 for cooking. In Japan, each person can use 250 liters a day. In Rwanda, however, it’s 20 liters per person. With the temperature over 40 degrees, and lack of proper nutrition, these long walks make it difficult for them to do other work or even study. Their day is all about water.

H: Another real problem resulting from water shortage or pollution is water conflict. This is caused by people in villages, towns and even countries scrambling for precious water resources. Too much intake of water in the upriver region, and improper disposal of waste-water, naturally affects the amount of water in the downstream area. Water pollution in the upstream may also result in conflict between countries. Problems such as poisoning water supplies or occupation of dams also occur. This problem is becoming so terrible, the United Nations trace the growth of terrorist groups like ISIS from these water shortages.

A: Actually Japan also has some problems...

R: Let me talk about “Virtual Water.” “Virtual Water” refers to the hidden flow of water in international trade. For example, importing 1kg of beef, is the same as importing 20,000 liters of water. Pork and chicken about 6000. Rice, almost 4000.This sheet of paper (take out A3 paper) takes a bottle of water to make. Since Japan is a major importing country with a food self-sufficiency rate at just 40%, we are heavily dependent on foreign water. In 2005, Japan imported about 64 billion cubic meters of virtual water. This amount is almost the same as that of “real” water consumed annually in Japan. Considering this fact, no world water problems are unconnected to us. We can’t keep on saying that we have nothing to do with water problems because we have plenty of water. We must do something.

A: Some companies are trying to get rid of water shortages by growing and preserving forests. It will produce clean and delicious water for the long-term. Other companies build channels or dig wells to supply water to the areas that can’t get enough drinking water.

R: Epson is producing a paper machine where companies can recycle their own paper in house. That is high-tech!

A: But low-tech is also solving problems. The state of California started filling their reservoirs with water balls, 96 million balls will save over 1 billion liters of water per year.

H: While various enterprises like these are working on water problems, don’t we also need to do something? Or just be bystanders, doing nothing?

R: We can all start acting now. Instead of taking a shower for 10 min. shorten it to 5 min. Save paper by using both sides, and think before you print. For the problem of virtual water, we can solve this by improving our food self-sufficiency rate. For example, through eating local foods and reducing leftovers.

A: Each action by each person might not make a big difference but by joining together there can be significant change. If everybody has easy access to water, then the people in Rwanda won’t have to walk a long distance. Children will be able to go to school, and woman will work more actively: saving lives, improving children’s education and promoting the social advancement of women.

H: Easily accessible water will lessen the global problems of both water conflict and climate change. But, each of us must do something. We are global citizens, and should love and respect Nature.

B: Stay conscious.

A: Stay active.

H: If more people take water problems more seriously, we will definitely find a better way to improve our world for generations to come.

A: One person can’t solve everything.

T: But imagine, if each person in Japan saves just one tablespoon of water for a day, that would result in 1million liters---enough for drinking water for 24million people.

All: Thank you for listening…