

## 1.2.Reducing My Water Footprint!

### Aim:

- To provide an understanding of the relationship between the disappearance of fresh water resources in nature and ecological balance.
- Recognize the importance of individual effort in reducing the water footprint.

**Duration:** 40 minutes

### Preliminary Preparation:

- The attached "Water Saving Questionnaire" and "Water Saving Commitment Cards" are reproduced as many as the number of students.
- Students are asked to keep the last water bill they received at home.

### Instruction:

#### Grouping

Students are named with the words in the question "water", "foot", "trace", "what is it?" from right to left respectively. Four different groups are formed: one group with the name "water", one group with the name "foot", one group with the name "footprint", one group with the name "trace" and one group with the name "what is". After the students settle in their groups, the question "What is the water footprint?" is asked. Answers are received from 3-4 students. The following questions are used as clues to get students to think about the concept:

- What happens to the water used in the production of the clothes we wear?
- What happens to the water we use in processes such as growing and cooking food?
- Where does the water go after it rains?

"A water footprint is the total amount of fresh water that a person, community, company or country uses to produce services. There are three different water footprint concepts in total: Blue water footprint: The surface and underground freshwater resources needed to produce a good, i.e. the water resource that comes to mind when we think of freshwater. The blue water footprint is usually increased by agricultural activities.

- Green water footprint: It refers to the percentage of water consumed in any product purchased or any daily habit that is sourced from rainwater.
- Gray water footprint: Water polluted by the production of goods and services."

### Water Footprint Detective Game

"Now I am going to show you some visuals. You will discuss with your group how many liters of water the food or clothing in the visuals consumes from the producer to the consumer and make an estimate. You should write down your collective estimate as a group on a piece of paper." It is said and the "Water Footprint Cards" in the appendix.

Visuals are projected on the smart board. 1 minute time is started. At the end of the time, the spokespersons of the groups raise their predictions at the same time. The group with the most correct guess gets 10 points. After all the guesses about all the visuals are taken in turn, the group that collects the most points is declared the "Water Footprint Detectives Champion of the Class".

Correct answers :

- 2,400 liters of water is used for 1 150 g hamburger.
- It takes 200 liters of water to produce 1 glass (200 ml) of milk.
- Approximately 11,000 liters of water are used to produce a pair of jeans.
- It takes 40 liters of water for 1 slice of 30 g wheat bread.
- It takes 2,700 liters of water to make a single t-shirt

### Water Footprint Calculation

"Were you surprised by any information in the game we just played? Did you know that 140 liters of water is used to produce a cup of coffee and 2400 liters of water is used to produce a hamburger?" With these questions, important points such as that we should be more careful when buying items such as t-shirts and trousers even though we do not need them just because they are fashionable, or when we buy more food than we can eat and waste it are mentioned. Then the water footprint calculation is done as a class. (A water footprint calculation site can be used.) If there is a computer that all students can access, they are made to calculate the water footprint individually. Otherwise, the teacher opens the water footprint questionnaire on the board, takes a vote, answers the answers of the class on average in line with the common decision and calculates the water footprint of the class. At this point, measures that can be taken to reduce the water footprint are discussed. For example, keeping the water off while brushing teeth, taking shorter showers, leaving the faucets completely closed, washing food in a container full of water instead of in running water, washing dishes in the dishwasher instead of washing them by hand are mentioned.

### Exit Ticket My Family at Work

As a water detective, students are asked to have a family member at home fill out the attached "Water Detective Questionnaire" about water use in a day. The students are asked to fill in the attached "Water Conservation Commitment Card" both by a family member and by the student himself/herself. A water saving commitment board is prepared in the school, the cards are hung there and students present their commitments to each other.

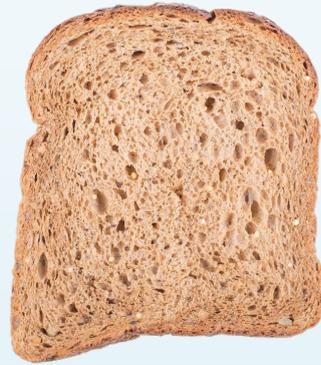
The students are asked to compare the next month's water bill that arrives at their homes with the water bill they saved before the activity. They talk about the difference. The feeling of achievement will be good.

APPENDIX: WATER FOOTPRINT CARDS

1 hamburger



1 slice of wheat bread



1 cup of milk



1 pair of jeans



1 t-shirt



## APPENDIX: WATER DETECTIVE SURVEY

Make sure that every member of your family completes the questionnaire.

Name:.....

Date: .....

Thank you for taking part in this survey as a water detective.

The information you provide will help us reduce our water footprint by raising awareness and enabling us to take action.

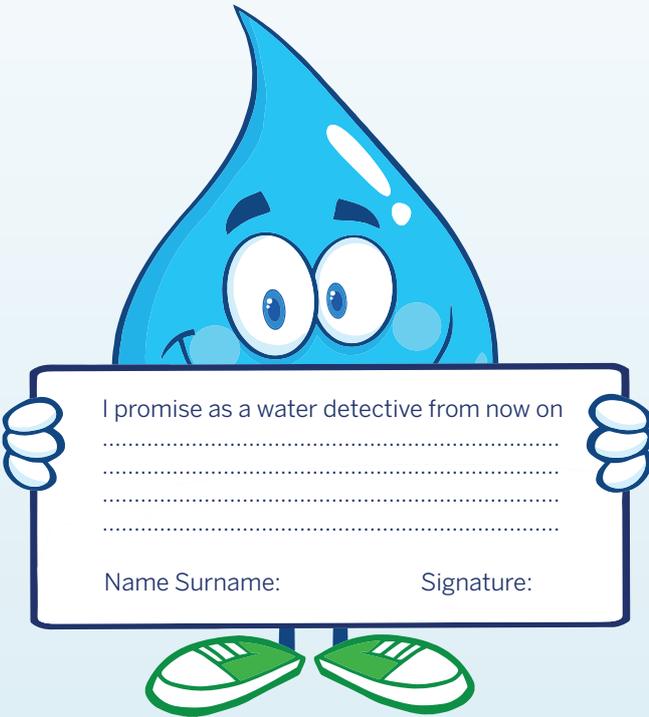
Please fill in the table below thinking about your water use for one day.



Time of Day	Activity	Duration	Notes	Leaveae this section blank so that your child can write down any water saving ideas.
For example 07.00	Shower	10 minutes	I turned off the water while shampooing my hair.	Reducing the duration of the shower

*\*This activity example was inspired by the website <https://www.sukasifi.org/download-resources>.*

APPENDIX: WATER SAVING COMMITMENT CARDS



I promise as a water detective from now on  
.....  
.....  
.....

Name Surname:                      Signature:

A cartoon water drop character with large eyes and a smile, wearing green sneakers, holding a white rectangular card with a blue border. The card contains a promise statement and a signature line.



I promise as a water detective from now on  
.....  
.....  
.....

Name Surname:                      Signature:

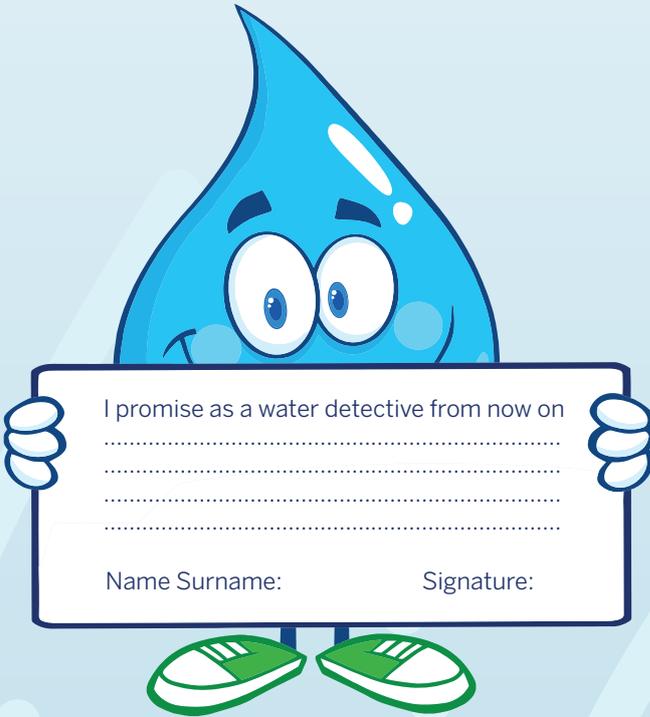
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