

Water saving

Introduction

If we watch the consumption of drinking water on a water-gauge for a few days, we usually realise how much we waste. Our connection with water begins with turning the tap and ending with the drain, without realising the connection to the water and what happens to it after use. Problems with drinking water shortage are not only for developing countries, but also in Europe we can see changes in the water cycle. The riverbeds dry out, the groundwater level decreases, the rainfall activity is usually irregular and extreme. This evidence alerts us to the emerging problem. Scientists say climate change will affect up to half of groundwater resources in the next 100 years. It is therefore important that we protect drinking water sources and use water sensibly and deliberately.

Learn about the problem

Use the internet, (scientific / popular) literature or in collaboration with experts to find available information on water consumption and its waste. Also focus on the following questions:

- What sources of drinking water do we have and where are they located?
- Does our country have sufficient supplies of drinking water?
- How many litres of water does an average household use?
- What are the options for saving water at home?
- What technologies / devices can you use for this purpose?

Recommended resources

[Source 1:](#)

The Problems of water stress



[Source 2:](#)

WWF #ProtectWater



[Source 3:](#)

Close up — Water in the city



Verify the occurrence of a problem in your area with your own research

Goal

Students can calculate how much water they consume in the home. They are aware of the value and importance of drinking water and that its availability and quality are not a matter of course. Students know how to save water in the home.

Tools & Materials

- recording card
- calculator
- board / flipchart / tablet or similar
- camera / mobile to record activity

Implementation

Before starting the measurement, check whether your household has a separate water-gauge (for hot and cold water). If you do not have a water-gauge, choose another building with access to a water-gauge (e.g. apartment building, school) so you can take the measurement. In this case, remember to divide the measured consumption by the number of people connected to that connection. Prepare a table in which

you will transmit the water consumption values for each student before and after the austerity measures are implemented.

Measurement

Within one week, record how much water your household consumes. Measure the values every day at the same time to avoid distorting the results for each day. Measure the values at the end of the week and recalculate how much water you use per year. Then calculate what the annual water consumption is in your class. You can recalculate the result e.g. the number of Olympic pools. Finally, calculate the average water consumption for your class.

Analysis of results and proposal of solution

What values did you manage to measure? Compare your results to your class average and national average. Is your consumption bigger or smaller? Discuss how you could reduce the amount of water used in your home. Which solutions are unpretentious and which in turn require higher investment? Record your suggestions and choose the ones you can implement. After implementing the solutions, repeat the water consumption measurement

Implementation of the solution and evaluation

Have you noticed water savings during repeated measurements? If so, what amount have you saved? How did the environment react to your efforts? How much water has been saved by an individual and how much by the class? Have you also identified other water-saving solutions? Can you implement them in practice?

How did you feel after implementing the selected solution?

| | | | | | | |
|-----------------------|-----------------------|----------------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| Frustrated | Disappointed | Rather Negative | Neutral | Rather Positive | Satisfied | Enthusiastic |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Publicity

Record and share photos on social networks with [#mybioprofile](#) during the activity. Help others to join us.

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Example

| Recording card | | | | | | | |
|------------------------------------|-------------|--|-------------------|--|-----------------------|---|--|
| Name | | John Doe | | | | | |
| Class | | 9 | | | | | |
| School | | Elisabeth's Elementary school | | | | | |
| City | | London | | | | | |
| Number of household members | | 2 | | | | | |
| Day and Date Time: 17:00 | | Water-gauge reading (m³) | | Water consumption (m³) | | Total water consumed (m³) | Total water consumed per household member (m³) |
| | | Hot Water | Cold Water | Hot Water | Cold Water | | |
| 0. | 3. 5. 2019 | 50 | 100 | x | x | x | x |
| 1. | 4. 5. 2019 | 50,20 | 100,42 | 0,20 | 0,42 | 0,62 | 0,31 |
| 2. | 5. 5. 2019 | 50,35 | 100,67 | 0,15 | 0,25 | 0,4 | 0,2 |
| 3. | 6. 5. 2019 | 50,40 | 100,99 | 0,05 | 0,32 | 0,37 | 0,185 |
| 4. | 7. 5. 2019 | 50,55 | 101,40 | 0,15 | 0,41 | 0,56 | 0,28 |
| 5. | 8. 5. 2019 | 50,71 | 101,78 | 0,16 | 0,38 | 0,54 | 0,27 |
| 6. | 9. 5. 2019 | 50,83 | 102,01 | 0,12 | 0,23 | 0,35 | 0,175 |
| 7. | 10. 5. 2019 | 50,93 | 102,15 | 0,10 | 0,14 | 0,24 | 0,12 |
| Total per week | | | | 0,93 | 2,15 | 3,08 | 1,54 |
| Total per year | | | | 0,93*52=48,36 | 2,15*52=111,80 | 160,16 | 80,08 |

Recording card - Water saving

| Recording card | | | | | | | |
|-----------------------------|---------------------------------------|------------|-------------------------------------|------------|--|--|--|
| Name | | | | | | | |
| Class | | | | | | | |
| School | | | | | | | |
| City | | | | | | | |
| Number of household members | | | | | | | |
| Day and Date Time: | Water-gauge reading (m ³) | | Water consumption (m ³) | | Total water consumed (m ³) | Total water consumed per household member (m ³) | |
| | Hot Water | Cold Water | Hot Water | Cold Water | | | |
| 0. | | | X | X | X | X | |
| 1. | | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |
| 6. | | | | | | | |
| 7. | | | | | | | |
| Total per week | | | | | | | |
| Total per year | | | | | | | |