



## 2 Daily water consumption

- a) Find out where the water meter is at our school. Ask the caretaker which (parts of the) building are covered by this meter and write down the following information:

Meter no. .... Location of the meter .....

The meter covers the following (parts of the) buildings: .....

- b) If there are other meters (like an own meter for the gym for example), copy this checklist and do the tasks 1.a) and 1.c) for this/these meter/s as well.

- c) Read the meter throughout a whole week at the same time in the mornings and at the end of school in the afternoon, calculate the water consumption (present count – last count) and enter the data into the record. Discuss with your teacher about the best time to do the measurements.

Fixed times	Date	Time	Count	Consumption.....
Monday morning	.....	.....	.....	.....
Monday afternoon	.....	.....	.....	.....
Tuesday morning	.....	.....	.....	.....
Tuesday afternoon	.....	.....	.....	.....
Wednesday morning	.....	.....	.....	.....
Wednesday afternoon	.....	.....	.....	.....
Thursday morning	.....	.....	.....	.....
Thursday afternoon	.....	.....	.....	.....
Friday morning	.....	.....	.....	.....
Friday afternoon	.....	.....	.....	.....
Monday morning	.....	.....	.....	.....

## 3 Yearly water consumption

Evaluate the water bills of at least the last three years together with your teacher or the caretaker. Take notes of the specific billing period (1) and the consumption (2). In the following table.

Enter the cost for drinking water (3) and waste water (4) and calculate their sum (5). If there are other meters determine these values for each of them and eventually add them up.

Enquire the number of people at the school (pupils, teachers,...) (6). Calculate the consumption per person (7) and the amount of CO<sub>2</sub>, which is set free in the process of providing our school with the water needed water economy) – which is 0,622 kg per cubic meter water (8).

Meter no. ....

	Last year	Two years ago	Three years ago....
1 Period	.....	.....	.....
2 Consumption	..... m <sup>3</sup>	..... m <sup>3</sup>	..... m <sup>3</sup>
3 Cost drinking water	..... €	..... €	..... €
4 Cost waste water	..... €	..... €	..... €
5 Sum of the costs	..... €	..... €	..... €
6 Number of persons	.....	.....	.....
7 Consumption per person	..... m <sup>3</sup> /P	..... m <sup>3</sup> /P	..... m <sup>3</sup> /P
8 CO <sub>2</sub> water economy	..... kg	..... kg	..... kg

#### 4 Loss of water due to leaky taps

a) If you find any drippy taps or showers, measure their loss of water. To calculate this measure the amount of water gathered in a measuring glass in exactly one minute and then read the result (ml). Enter the data about the room, the points and the results into the checklist below.

Room no.	Name of the room	Kind of tap	Loss of water
.....	.....	.....	..... ml per minute
.....	.....	.....	..... ml per minute
.....	.....	.....	..... ml per minute
.....	.....	.....	..... ml per minute
.....	.....	.....	..... ml per minute

b) If you found other leaky taps calculate the sum of the water loss: ..... ml per minute

c) Translate this value into ml per year: ..... ml per year

d) Translate this value into l per year: ..... l per year

e) Have a look at the toilets! If they are leaky note it here:  
 .....  
 .....  
 .....

#### 5 Water flow

Look out for some water taps – for example a handwash basin and showers – and measure the water flow through. For this you put a bucket under the fully open tap or shower for exactly a minute. Then measure the volume of the water in the bucket and write down the value.

If the bucket is full before the minute has passed repeat the measurement with 30 seconds and multiply your value by 2.

Room no.	Name of the room	Kind or tap	Water flow
.....	.....	.....	..... l pro Minute
.....	.....	.....	..... l pro Minute
.....	.....	.....	..... l pro Minute
.....	.....	.....	..... l pro Minute
.....	.....	.....	..... l pro Minute

#### 6 Responsibility

Enquire who is responsible for the supply with water at our school:

- a) Who pays the water bills?.....
- b) Who cleans the toilets, washing rooms and showers?.....
- c) Who does repairs on the taps when they are broken?.....
- d) Who makes sure that toilets, washing rooms and showers are fixed?.....

## 7 Evaluation and presentation

Try to evaluate your results: What is good – what is less good about our water supply?

During your examination you certainly realised some things you already have an opinion on. Here are some more tips for your evaluation:

In the questions 2 and 3 you determined the water consumption. Now do informative diagrams on the basis of your data! Think well which type of diagram might be suitable best.

Is the daily consumption of water logic to you? If for example more water is used on one day during the week than on others or if a lot of water is used during a time when there was no class, you should find out if there were other possible additional events. If there is no logic explanation maybe someone left the water running or there is a leaky pipe.

Who has water consumption developed during the last few years? Compare this with other schools; you can find data here: [www.umweltschulen.de/wasser/k\\_wasser.html](http://www.umweltschulen.de/wasser/k_wasser.html).

In question 5 you measured the amount of water flowing through. Economical taps only use 4-5 l/min, and still its stream feels strong because it is bubbled up with air. Automatic taps, which close again by themselves, can help to save water – if they don't run too long. Are the taps in our school economical?

It is good...

It is less good...

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.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

Discuss what we could improve!

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Think about how you would like to present your results to other pupils and teachers!

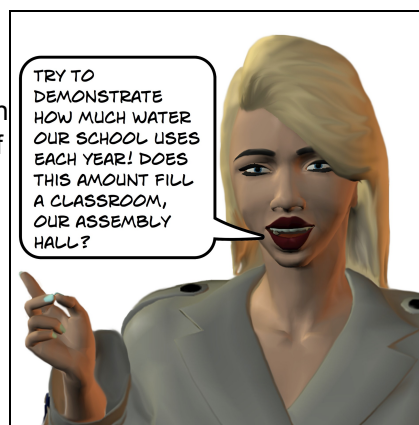
Prepare a short lecture for example on the topic "The water consumption of our school" or do a poster in which you ask for a more sensible use of water.

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Now get ready to present your results!

