

Fields	Content	Comments
Topic	Water I Use	
Sub-topic	Part 2 - Water audit	
Skills/knowledge accessed/developed	Mathematics, Data analysis (data collection, analysis and problem solving)	
Prior learning required	Addition, multiplication, division, subtraction Prefer to have completed - Water I Use - Part 1. Awareness about different vessels of water that are used for different purposes at home.	
Learning objectives	- Students <i>calculate</i> their direct (domestic) water footprint - Students learn to generate and use the data about their water usage to identify problems and suggest solutions.	
Suggested learning outcomes	- Students can <i>measure</i> their daily water usage. - Students can <i>analyze</i> their water usage and <i>identify</i> at least three ways of conserving water in their daily life. - Students can <i>identify</i> situations where water is wasted such as leaking taps, careless washing, or overuse and estimate how much could be saved.	Because learning outcomes are context-based. Teachers can decide on this based on the learners' lived experiences.
Use of teaching time	2-3 mins The facilitator/educator will explain to the students that we are doing this exercise not to make them feel guilty or shameful in any way. We are doing this to create awareness of what water we have, what water we use, and think about how we can use water in a more sustainable manner. 15 mins The facilitator/educator will divide students into groups of 2-3. Each group will be given one container and either one cup (2.5 L) or 1 L bottle to use as a standard. The	

	following steps for measurement will be explained: 1. They guess/estimate how much water their container holds. 2. They measure using a known reference (e.g..25 L cup or 1 L bottle - fill & count). It's better to use smaller vessels for this exercise to avoid wasting water. 3. OR 3-4 groups can separately guess the volume of a one jerrycan or a canari. Then each group can fill the vessel with different amounts of calculated water (not known to other groups) and then they can together add up the actual volume 4. All groups write and record: • Estimated volume (guess) • Measured volume (actual) • Difference between the two 5 mins All groups will present - Which did we underestimate? Which did we overestimate? Why? 35 mins The facilitator/educator will give each student a sheet or a booklet to calculate their total water usage in ONE day. Each student makes 5 columns on their sheet, namely - 1. Water used for 2. Container used 3. Number used 4. Volume of the container used (see section <i>Background content</i>) 5. Total volume (answer to 3 multiplied by answer to 4) In case of using a faucet or a tap, change points 2, 3 and 4 as given below: 2. Faucet/tap 3. Time used for 4. Per minute discharge of water They fill each column for different rows which will represent the different places where water is used - 1. Drinking 2. Bathing 3. Cooking 4. Handwashing 5. Cleaning home 6. Cleaning dishes	
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	7. Cleaning vehicles or carts 8. Animals or Garden 9. Rituals (hospitality, rituals) 10. Other uses can be added Each entry is for calculating water used in ONE day. An addition of all the total volumes will give the total amount of water used by each person per day. 15 mins Facilitator/educator will carry out the discussion using these reflective questions: 1. Which activity uses the most water? 2. Which container seems more efficient for this activity? 3. How can we save water or reduce wastage of water? Facilitator can wrap up the session by introducing and describing the term “Water Footprint” (see section <i>Background content</i>) Total time - approx. 1 hour 15 mins	
Methods and materials	Writing sheets and pens Different kinds of water cans Water	
Background content	<u>Sources of water</u> There are three major ways in which people get water to their homes. Water is used for different personal and home purposes. And different kinds of utensils are used for carrying water for different purposes. For example: Traditional Well: drinking, dishes, laundry, bathing, watering trees, watering animals, etc. Fountain at rural and urban levels: Drink, bath, laundry, cooking... Tap at urban level: Drink, bath, laundry, cooking... Other sources of water are the dams and backwater, but their water is not drinkable.	

Containers for water

Traditional well at the rural level: Traditional objects (canaries, jars, gourds), 20 liter cans (recycled), barrels.

Fountain at rural and urban levels: Traditional objects (canaries, jars, gourds), 20 liter plastic cans (recycled), barrels.

Faucet/tap at urban level: buckets, cups, basins.

For simplicity of calculations in the class, following approximate amount of water that each container can hold are the following-

Cup = **0.25 L**

Small gourd = **1 L**

Bucket = **20 L**

Jerrycan / common water can = **20 L** (useful standard)

Large jar/canari = **30 L**

Drum/barrel = **200 L**

A bit more details on the possible variations for each container is given below -

Canaris (clay water jars, “canari”) — 5–30 L (small household canaris ≈ 5–10 L; larger storage canaris 20–30 L)

Jars (large pottery/earthen jars) — 10–50 L (depends on shape; big storage jars can be 30–50 L)

Cans (metal tins / small fuel/food cans used for water) — 1–10 L (small metal cans 1–5 L; larger repurposed cans up to ~10 L)

Gourds / calabashes — 0.5–5 L (small drinking calabashes 0.5–1 L; larger ones used for carrying maybe 2–5 L)

Barrels / drums (plastic or metal drum) — 50–200 L (common drums are 50 L, 100 L, and 200 L — 200 L oil drums are widely reused)

Cups (drinking cups / teacups) — 0.05–0.35 L (~50 ml to 350 ml; standard small cup ≈ 200–250 ml)

