



ORGANISER GUIDE | AGES 16+ | ENGLISH C1

World Water Day school activity trail

WATER IN OUR HANDS

Six hands-on stations for older students

Turn your school into a water discovery trail. Participants estimate a water footprint, build a menu, investigate clothing, measure tap flow, map local water connections and propose a practical school improvement.

Plan	Details
Duration	120 minutes: 5-minute welcome; six 15-minute visits; five 3-minute moves; 10-minute discussion.
Group size	24–36 students in six groups of 4–6. Repeat sessions for more classes.
People	One staff coordinator and one briefed host per station where possible. Staff supervise the measurement station.
Locations	Library / IT area; canteen foyer; clothing display; approved sink; school-plan display; ideas wall.
Learning	Qualify claims, synthesise evidence, challenge assumptions, negotiate trade-offs and communicate a defensible recommendation.

How the trail works

Groups start at different stations and rotate 1 → 2 → 3 → 4 → 5 → 6 → 1. All stations work independently. Hosts prompt evidence-based discussion and initial the participant's trail record. Each pair explains one conclusion and responds to a challenge. Completion is based on taking part, not on the lowest footprint.

Access and participation

Provide shared devices, calculators, seated activities and large-print copies as needed. Offer the paper route at Station 1 and prepared measurements at Station 4. Students may write, draw, dictate or explain to a partner. Personal consumption data stay private; fictional examples are equally valid.

World Water Day

Run the trail on or around 22 March [1]. Keep the ideas wall open afterwards and take one proposal to the caretaker or school leadership. Prepare participation certificates using the wording on p. 14.



ORGANISER CHECKLIST

Set up the six stations

Station / print	Prepare
1 Footprint • p. 3	School-approved device(s), calculator QR code, paper alternative. Test the calculator before the event.
2 Menu • pp. 4 and 9	Cut out one food-card set per table; add a reusable plate or paper circle and calculators.
3 Wardrobe • pp. 5 and 10	Clean second-hand shirt, garment labels, optional fabric sample; cut out the decision cards.
4 Tap lab • p. 6	Approved cold-water tap, stable 2-litre measuring jug, tray, stopwatch, cloth and reuse container.
5 Water map • pp. 7 and 11	School plan or blank A3 sheet, coloured pens, route cards and local water-provider information.
6 Action wall • p. 8	A3 paper, markers, adhesive and extra copies of the action form on p. 8.

Before opening

- ☐ Agree locations, supervision, accessible routes and opening times with school leadership.
- ☐ Brief hosts using p. 14. Print pp. 12–13 per participant and p. 15 per group; display pp. 3–8.
- ☐ At Station 1, use the fictional profile if a form requests private information. No household income disclosure is required.
- ☐ At Station 4, check the tap and safe handling; arrange a suitable non-drinking use for collected water.
- ☐ At Station 5, check the local water source and wastewater destination with the provider or caretaker. Mark unverified links as unknown.
- ☐ Arrange permissions for any public photographs; keep participant worksheets private.

Event date / coordinator:

Hosts and locations:

Host timing: 2 minutes to introduce, 8 to investigate and 5 to defend and record a conclusion. For a free-flow event, allow about 15 minutes per visit. Use p. 15 for optional language support and C1 feedback.



STATION 01 | 15 MINUTES | ENGLISH C1

Your water footprint

ESTIMATE • CHANGE ONE INPUT • QUESTION THE RESULT

Can a calculator represent a person's water footprint convincingly? Choose the online or paper route. Personal information is optional; interrogate the model rather than judging its user.

Online route [2]

Open the calculator. Use voluntary estimates or the fictional profile below. Record its unit, change one input and hold the others constant. Explain what this comparison isolates within the model—and what it cannot establish in the real world.



<https://tools.waterfootprint.org/calculator/>

Fictional comparison profile: country Germany; form category female; average meat consumer; annual amount consumed US\$10,000. Change dietary habit to vegetarian and leave the other fields fixed. These are model inputs, not a suggested diet, income or identity. Clear the form before leaving.

Paper route • a small part of your footprint [3, 4]

Calculate the example or your selected quantities. Alter one quantity and calculate again. This partial consumption basket is NOT a total daily footprint; identify what would be needed for a fuller estimate.

Item / serving	Estimate	Example quantity
Coffee, 125 ml cup	132 L	1
Tea, 250 ml cup	27 L	2
Orange, 150 g	84 L	1

Global average production-footprint estimates; coffee and tea exclude milk and sugar. Choose zero if you do not consume an item. Paper example: $(1 \times 132) + (2 \times 27) + (1 \times 84) = \underline{\hspace{2cm}}$ L.

Before you move on

Give a 45-second appraisal: state the result, qualify its precision and identify an omitted variable. A partner challenges one inference. Record your revised conclusion on p. 12.

An estimate is not a meter reading. It depends on the tool, its categories, data and assumptions. Use “suggests”, “depends on” and “cannot establish” precisely. Results remain private.



STATION 02 | 15 MINUTES | ENGLISH C1

Water on your plate

BUILD A MENU • CALCULATE • REDESIGN

Use the food cards on p. 9. Put one base, one main ingredient and one extra on your plate. Invent a name for the dish.

1 Calculate the ingredient subtotal

For each card: $\text{grams} \div 1,000 \times \text{litres per kilogram}$. Add the three results. Round only your final answer to one decimal place.

BASE: dry macaroni OR potatoes

MAIN: beef OR green beans

EXTRA: tomatoes OR cheese

2 Change your menu

Replace one card; calculate the difference and percentage change. Display both versions with a 30–40-word caption that includes the estimate, its scope and a limitation. Avoid presenting modelled differences as measured savings.

$\text{Percentage change} = (\text{new total} - \text{original total}) \div \text{original total} \times 100$

3 Look beyond the number

Negotiate a recommendation with a partner prioritising either affordability or nutrition. Distinguish a lower estimated footprint from a demonstrated reduction in local water stress. State one condition under which you would revise your choice. These are not nutritionally equivalent meals.

What these litres mean [3, 5]

The figures combine different water-footprint components. They do not represent water poured from a tap into the meal. A total volume alone does not tell us the local environmental impact.

Component	Meaning
Green	Rainwater stored in soil and consumed by plants.
Blue	Surface water or groundwater consumed during production.
Grey	A calculated volume associated with assimilating pollution to a water-quality standard; not an actual volume poured away.

Cards use rounded published estimates. Product footprints vary by place and production. These subtotals exclude cooking water, energy, sauces and other unlisted ingredients. Record your comparison on p. 12.



STATION 03 | 15 MINUTES | ENGLISH C1

The hidden water wardrobe

HANDLE • INVESTIGATE • DECIDE

Inspect the shirt and label. Separate observable information from inference about fibre origin, processing and water use. Identify a claim you could defend and a claim the label cannot substantiate.

1 Make a prediction

How much water footprint might be associated with producing a 250 g cotton shirt? Make a private estimate before reading the evidence below.

2 Open the evidence [6]

The Water Footprint Network gives a global average estimate of 2,495 litres for a 250 g cotton shirt. This is a production estimate, not a measurement of the shirt on this table. Manufacturing location on a label does not necessarily identify where cotton was grown.

3 Calculate a different comparison

Allocate the production footprint over 20 and 100 wears. Calculate the percentage fall per wear. Challenge the claim “Wearing it longer saves 80% of its production water.” Distinguish an allocation metric from an avoided environmental burden.

Allocation	Your calculation
Production footprint per wear over 20 wears	
Production footprint per wear over 100 wears	

4 Run a wardrobe decision

Take a card from p. 10. Rank it as DO NOW, NEED MORE INFORMATION or NOT YET. Defend your judgement, acknowledge the strongest objection and negotiate a condition that could resolve it.

Leave one practical idea

Propose a school repair, reuse or swap activity. Explain how it could replace new purchases rather than merely increase consumption. Record a qualified recommendation on p. 12.

The per-wear exercise excludes washing, drying and end of life. A second-hand purchase does not automatically avoid a new purchase. Do not award yourself a fixed litre saving without evidence that production is actually avoided.



STATION 04 | 15 MINUTES | ENGLISH C1

Every drop counts

MEASURE • REPEAT • SCALE UP

Use an approved cold-water tap with the host. Your aim is to measure flow, not to test water quality or alter the plumbing.

1 Measure safely

Place the jug securely inside the sink. The host sets a steady flow. Collect water for 5 seconds, record the litres and turn the tap off. Repeat twice at the same setting. Stop early if the jug is approaching full; record the actual time. Keep the floor dry.

Trial	Litres collected	Seconds	Flow: litres ÷ seconds × 60
1			
2			
3			

2 Calculate a scenario

Find the mean of the three flow rates. At that rate, compare 30 seconds and 10 seconds of unnecessary running. Multiply the difference by 100 uses. State your assumptions. Do not shorten necessary handwashing or limit drinking water.

Paper alternative • invented measurements

Use 0.48 L, 0.50 L and 0.52 L, each collected over 5 seconds. Perform the same calculations. These are practice data, not findings from your school.

3 Check your method

Calculate the range of your flow readings. Is repeatability enough to establish accuracy? Explain why one tap cannot establish a whole-school saving. Give a 45-second briefing distinguishing measurements, assumptions and projected savings; record it on p. 13.

Host: use cold water only, supervise handling and reuse collected water promptly for an agreed non-drinking purpose, such as suitable plant watering. Do not taste samples, open fittings or fit devices. Switch to the paper route if the setup cannot be used safely.



STATION 05 | 15 MINUTES | ENGLISH C1

Where does our water go?

MAP • CONNECT • VERIFY

Use a school plan, or sketch a simple plan with the entrance, canteen and wash areas. Work at the table or visit only the locations approved by the host.

1 Mark the school

Use D for an approved drinking-water point, S for a sink and R for an outdoor rainwater drain. Add a question mark where a location or connection is uncertain. Do not enter occupied toilets or open any covers.

2 Build the wider route

Arrange the eight cards on p. 11 around your map. Draw arrows to connect the water source, drinking-water supply, school, wastewater system and receiving water. Place the ocean and rainwater-drain cards where the evidence supports them.

3 Test an assumption

Evaluate the claim “Everything washed down a school drain is treated before reaching a river.” Use local evidence, distinguish rainwater from wastewater and qualify any conclusion that exceeds the information available.

4 Add local evidence

Question	Host's verified information or UNKNOWN
Our drinking-water provider and source	
Our wastewater operator and destination	
Our rainwater drainage route	

Annotate each link with its source or mark it unverified. Explain which missing link most weakens your account. Brief a partner on the route without implying that an uncertain connection is established; record this on p. 13.

The ocean connection [7]

Rivers and the water cycle connect inland places with larger water systems. A local drainage map must still be checked: not all water takes the same route or reaches the sea directly.

This is a mapping activity, not a water-quality investigation. Use photographs or a table-based map where a walk is not accessible.



STATION 06 | 15 MINUTES | ENGLISH C1

Make change happen

DESIGN • DISPLAY • FIND SUPPORT

Select a water-related school issue. Negotiate a feasible action with a partner who questions its cost, inclusiveness or likely impact. Revise the proposal in response; specify one condition for proceeding.

Examples: clearer refill-point signs; a fault-reporting route; a clothing repair session; a canteen discussion about food waste. Your own idea is welcome.

OUR CLAIM — What action does the evidence justify?

FEASIBILITY — First step, resources and responsible person?

TRADE-OFF — Whose needs might conflict, and how will we respond?

EVALUATION — Indicator, baseline, review date and revision trigger?

Add it to the action wall

Display your proposal. Pitch it in 60 seconds, respond to one objection and revise a sentence that overstates the evidence. Peers identify which proposal is best justified and explain why. The coordinator will agree a next step with students.

Do not claim measured litre savings without suitable evidence. A useful outcome can also be a repaired fault, a clearer reporting process or improved access. Record your contribution on p. 13.



STATION 2 | PRINT SINGLE-SIDED AND CUT ALONG BORDERS

Build your menu cards

Choose one BASE, one MAIN and one EXTRA. Use the mass shown on each card. Calculate rather than treating litres per kilogram as the footprint of a serving.

BASE 01 DRY MACARONI Portion: 100 g, weighed dry Estimate: 1,850 L per kg Portion footprint: _____ L	BASE 02 POTATOES Portion: 250 g Estimate: 287 L per kg Portion footprint: _____ L
MAIN 01 BEEF Portion: 150 g Estimate: 15,415 L per kg Portion footprint: _____ L	MAIN 02 GREEN BEANS Portion: 200 g Estimate: 547.5 L per kg Portion footprint: _____ L
EXTRA 01 TOMATOES Portion: 200 g Estimate: 210 L per kg Portion footprint: _____ L	EXTRA 02 CHEESE Portion: 30 g Estimate: 3,180 L per kg Portion footprint: _____ L

Data: scaled from the Water Footprint Network product teaching sheet [3]; rounded source values are retained. These are illustrative estimates, not current measurements of a particular brand, farm or meal. Beans and beef are not nutritionally equivalent portions.



STATION 3 | PRINT SINGLE-SIDED AND CUT ALONG BORDERS

Wardrobe decision cards

Place each card under DO NOW, NEED MORE INFORMATION or NOT YET. There may be more than one defensible answer. State the condition behind your choice.

01 THE LOOSE SEAM A favourite shirt has a small tear. A volunteer offers a supervised repair session. What tools, skills and access arrangements are needed?	02 THE SWAP RAIL Students propose a clothing swap. Some do not have items to bring. How could everyone participate without embarrassment?
03 THE GREEN LABEL A new shirt says “water friendly”, but provides no figures, method or production location. What evidence would you ask the seller for?	04 THE SECOND-HAND BARGAIN A low-cost used shirt catches your eye, although you already own several similar ones. Would this replace a planned purchase or add another?
05 THE SCHOOL EVENT SHIRT An event team wants new matching shirts for one day. What could be reused, borrowed or designed differently?	06 THE SHORT LIFE A shirt is worn 20 times; another is kept for 100 wears. What changes in the per-wear calculation, and what does not?

All six situations are fictional discussion prompts. Aim for practical decisions, not judgements about what other people can afford.



STATION 5 | PRINT SINGLE-SIDED AND CUT ALONG BORDERS

Connect the water route

The letters identify cards, not a fixed sequence. Position them around your school map and label the arrows. Use solid lines for verified links and dashed lines for links still to be checked.

A WATER SOURCE River, reservoir or groundwater? Find out locally.	B DRINKING-WATER SUPPLY Treatment as needed and distribution to users.
C SCHOOL Drinking, hygiene, cleaning and other uses.	D WASTEWATER SYSTEM Collection and transport of used water.
E WASTEWATER TREATMENT Treatment before discharge or appropriate reuse.	F RECEIVING WATER Which local river or other water body receives discharge?
G OCEAN Add the river connection where appropriate; label uncertainty.	H RAINWATER DRAIN Its route may differ from the wastewater route. Check it.

Simplified system cards [7]. Local arrangements, treatment and reuse vary. The activity does not imply that all rainwater passes through a wastewater plant.



PARTICIPANT TRAIL RECORD | 1 OF 2

My water discoveries

Name or initials (optional): _____ Group: _____

01 Your water footprint

Route: online / paper. My result and unit (optional), or one finding from the example:

A limitation and my qualified interpretation of the comparison:

Host initials: _____

02 Water on your plate

Original cards and subtotal: _____

Revised cards and subtotal: _____

Difference / percentage change: _____

Our recommendation, a counterargument and a condition for revising it:

Host initials: _____

03 The hidden water wardrobe

Production footprint allocated per wear: 20 wears _____ L; 100 wears _____ L

Our qualified judgement, distinguishing allocation from avoided impact:

Host initials: _____



PARTICIPANT TRAIL RECORD | 2 OF 2

From measurement to action

04 Every drop counts

Route: measured / paper. Mean flow rate: _____ L/min

30 seconds: _____ L 10 seconds: _____ L Difference: _____ L

Difference for 100 uses: _____ L

Range of readings; what repeatability can and cannot establish:

Host initials: _____

05 Where does our water go?

One verified link, its source and what this evidence establishes:

Our most consequential uncertainty and how we would resolve it:

Host initials: _____

06 Make change happen

Our negotiated action and the strongest objection we addressed:

Success indicator and the evidence that would make us revise the plan:

Host initials: _____



FOR STATION HOSTS

Answers and facilitation notes

1 Footprint

Paper example: $132 + 54 + 84 = 270$ L for the selected items. It excludes the rest of the person's consumption. Online values depend on inputs and the current calculator: check its displayed unit rather than supplying a fixed answer. If the result is in m^3/year , $\times 1,000 \div 365$ gives L/day. Neither route measures a person's actual water use.

2 Menu

Portion values: macaroni 185 L; potatoes 71.75 L; beef 2,312.25 L; beans 109.5 L; tomatoes 42 L; cheese 95.4 L. Example: macaroni + beef + tomatoes = 2,539.25 L. Replacing beef with beans gives 336.5 L: a modelled difference of $-2,202.75$ L, or about -86.7% . This is an ingredient-footprint comparison, not an observed tap-water saving or a nutritional recommendation.

Accept menu choices with a clear calculation and a sensible limitation. Ask about water source, local scarcity, pollution and production rather than treating every litre as having the same impact.

3 Wardrobe

$2,495 \div 20 = 124.75$ L per wear; $\div 100 = 24.95$ L per wear. This allocates a fixed production estimate across more uses. The per-wear allocation falls by 80%, but the original production footprint stays 2,495 L; washing is excluded. An avoided purchase is a separate counterfactual claim. Discuss repair skills, inclusive swaps, evidence for marketing and whether reuse replaces a new purchase.

4 Tap lab

Practice flow rates: 5.76, 6.00 and 6.24 L/min; mean 6.00 L/min; range 0.48 L/min. Close readings show repeatability, not necessarily accuracy. At that rate, 30 seconds = 3 L and 10 seconds = 1 L. Difference: 2 L per use or 200 L for 100 uses. This assumes identical flow and genuinely avoidable running time. It is a scenario, not a verified whole-school saving.

5 Map and 6 Action

A possible route is $A \rightarrow B \rightarrow C \rightarrow D \rightarrow E \rightarrow F$, then G if the catchment drains to the ocean. H can have a different route. Reward explicit unknowns. For action proposals, check feasibility, inclusion, an adult contact and a review date; do not promise savings from an untested idea.

Close the loop and recognise participation

Within two weeks, tell students which proposal will proceed, who is responsible and when it will be reviewed. Issue participation certificates: "This certificate recognises _____ for taking part in Water in Our Hands, our World Water Day activity trail, and contributing to responsible water use at school." Add the school, date and staff signature.



LANGUAGE AND FACILITATION | OPTIONAL REFERENCE

Build and defend a qualified argument

Use this page while speaking, writing captions or negotiating a proposal. The aim is precise reasoning, a coherent line of argument and a flexible response to another perspective.

Move from a number to a defensible conclusion

Purpose	Language you can adapt
Define the scope	The estimate covers ..., while excluding ...
Qualify an inference	Although the figures suggest ..., they do not establish ...
Challenge a comparison	The comparison is informative only insofar as ...
Acknowledge an objection	That concern is justified; nevertheless, ...
Negotiate a condition	We could support the proposal provided that ...
State uncertainty	Our interpretation remains tentative because ...
Specify a revision	We would reconsider this recommendation if ...

Example of a qualified claim

"The redesigned menu has a lower estimated ingredient footprint under these assumptions. However, the calculation does not establish a corresponding reduction in water stress, nor does it compare nutritional value. Before recommending a canteen change, we would need information about sourcing, cost and dietary requirements."

Peer response during a station visit

Identify the strongest evidence in your partner's account. Challenge one assumption or missing perspective. Ask them to reformulate their conclusion so that its certainty matches its evidence. Do not interrupt the practical investigation to correct every language error.

Host feedback • four C1 dimensions

Look for	A successful contribution
Reasoning and synthesis	Connects evidence, assumptions and implications; identifies limits.
Interaction	Develops a response to objections and negotiates rather than repeats.
Precision and range	Uses accurate technical terms and varied language to qualify claims.
Coherence	Presents a structured explanation with a clear, proportionate conclusion.

Give one specific strength and one next step. These descriptors guide classroom feedback; they do not constitute formal CEFR certification. Participation certificates recognise involvement rather than language attainment.



REFERENCE SHEET

Sources and use

Background explanations are paraphrased. Tasks, scenarios and card layouts are newly written; no source photographs or screenshots are reproduced. The template and logos are retained from the supplied EU4Blue document.

Free to use for educational purposes. This material must not be sold. Third-party logos and linked resources remain subject to their owners' terms.

Sources

[1] UN-Water. World Water Day.

<https://www.unwater.org/our-work/world-water-day>

[2] Water Footprint Network. Simplified water footprint calculator; interactive tools.

<https://tools.waterfootprint.org/calculator/>

<https://www.waterfootprint.org/resources/interactive-tools/>

[3] Water Footprint Network. Product teaching sheet. Food quantities and water-footprint estimates; values scaled for the cards.

<https://www.waterfootprint.org/resources/schoolresources/Products.pdf>

[4] Water Footprint Network. Product Gallery: coffee and tea. The numerical panel values (132 L and 27 L per stated cup) are used.

<https://tools.waterfootprint.org/product-gallery/details.php?product=15>

<https://tools.waterfootprint.org/product-gallery/details.php?product=39>

[5] Hoekstra, A. Y., Chapagain, A. K., Aldaya, M. M. and Mekonnen, M. M. (2011). The Water Footprint Assessment Manual.

https://www.waterfootprint.org/resources/TheWaterFootprintAssessmentManual_English.pdf

[6] Water Footprint Network. Product Gallery: cotton.

<https://tools.waterfootprint.org/product-gallery/details.php?product=16>

[7] NOAA. The water cycle.

<https://www.noaa.gov/education/resource-collections/freshwater/water-cycle>

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