



Water Conservation

Learning Objectives:

- To help children to be aware of the importance and worldwide scarcity of water as a resource.
- To link our actions to implications for developing nations
- To give children practical ideas of what they could do at home/school to save water

You will need:

- 10 litres of water in a tank and measuring jug
- 1litre plastic bottle, cistern, (toilet roll)
- Kettle and mug
- Toothbrush, and beaker
- Bowl of water from washing salad or potatoes, a vegetable (organic), washing up scrubber
- Hose and watering can
- Copies of the Record Sheet (one for each group)



Time: 30 minutes

Instructions:

Introduction

- Ask the children what proportion of their body is water (65%), hence its importance. What proportion of the earth is covered with water? (70%).
- Using 10 Litres of water in a water tank to represent the total amount of water in the world, ask the children what proportion is fresh as opposed to largely unusable salt/sea water (3%). Using a jug, measure this quantity out (300ml). Of this, 2% (200ml) is tied up in the ice caps leaving 1% (100ml) [use ice cube trays as clue to this]. Pour 200ml back into the larger container, leaving the small amount (100ml) to compare with large unusable volume (9.9L). Note that only 0.01% of water on the earth is drinking quality so that in our analogy 1 millilitre is available to drink i.e. 1 hundredth of the so called 'fresh' water - ref pollution).

Clue Scenarios

- Set up the following five clue scenarios:
 1. *1litre plastic bottle, cistern, (toilet roll)*
1litre of water can be saved every flush if a 1L bottle full of water/other ballast is placed in the cistern. 5 visits per day = 5L saving. (Use the 'water tank' from the initial demo as the 'cistern' with the toilet roll as a clue to it being a WC flush tank)
 2. *Kettle, mug*
Boil only what you use. On average most people use 10L for drinks and boil twice that, therefore potential 10L/day saving. The main saving here however is the reduced electricity to boil a reduced amount of water.
 3. *Toothbrush, beaker*
Use beaker of water instead of leaving the tap running. Potential for 10L/day saving.
 4. *Bowl of water from washing salad or potatoes, a vegetable (organic), washing up scrubber*
As above: not leaving tap running. Use resulting soily water to water plants. Potential saving 5L/day.
 5. *Hose versus watering can*
Use a watering can to water garden, rather than a hose.

- Split the children into 5 groups, each with a Record Sheet, and rotate around 5 numbered scenarios.
- The children have to work out what the clue is indicating regarding water savings that could be made and estimate what amount may be saved.

Discussion:

- Ask each group the method of water saving, asking for help from other groups if necessary. An individual could potentially save 50-100L a day which is 1-2 thirds of the average daily UK usage per person of 150L. Therefore a potential £500-£1000 saving on an average water bill of £1500 could be made. Compare the average consumption in the UK with the average water consumption of a person in the developing world: 10L/day.
- What other water-saving methods can you think of at home/school? [e.g. using mulch in the garden to reduce need for watering the garden, collecting rainwater in a water butt, ensure dishwasher/washing machine full, water efficient washing machines, take a shower (30L) as opposed to a bath (90L), wash car with bucket of water instead of a hose (300L saving) etc].

(Make sure the 10L of water used in tank is used for plant watering etc!)

From an original activity by David Wilde

Record Sheet

For each numbered situation, explain how a water saving could be made using the available clues. How much could be saved daily?

1.

2.

3.

4.

5.