

Pollution



Subject – Environmental Studies
Year – 6, 7 & 8
Key Stage – 2 & 3

Pre Activity – How much water do we use?

Objective – To discover how much water each person uses on a daily basis, and what we use it for.

Activity Description – Ask children to design their own table for data collection. Ask them to fill it in over a period of 1 week, to discover how many baths they have, how many times they flush the toilet, how many times they brush their teeth etc. (a table to help with this activity can be downloaded from our additional worksheets section) Bring this with you on the day of your visit.

Background – On average each person in the UK uses 155 litres of water per day. In developing countries this is reduced to 20 litres per day.

As a guideline to typical amounts of water used for various activities see downloadable sheet on guidelines for water usage - found in additional worksheets

Post Activity – Cabbage Juice Testing!

Objective- Make and test your own solutions for signs of pollution (acids or alkalis)

Activity Description – Grate a red cabbage and boil in water for 20-30 minutes. The water should turn a deep purple colour. Cool down solution and give children a small sample in a beaker. Gather together some samples to test. You will require an acid (e.g. lemon or vinegar) a sample of distilled water, and an alkali or base (e.g. baking soda in water.) Add a few drops of cabbage juice to each solution. If the solution contains an acid the mix will turn pink. If it contains an alkali or base, it will turn green. There will be no change in neutral solutions.

Background - Pollution can easily go unnoticed especially in the marine environment. The cabbage juice test will allow you to test liquid samples for signs of pollution, even though they may look ok to the naked eye.

Further resources –

www.madsci.org

<http://pbskids.org/zoom/activities/sci/waterfilter.html>

<http://waterwise.fortune-cookie.com/domestic/calculator/usage.asp>