

How much water do you use?

Summary

This activity gets children to think about where their water comes from and the amount they use in a typical day. Children reflect on the effects of climate change, both in the UK and in Kenya.

There are two suggested approaches:

§ Children keep a diary of their own water use.

§ Children look at the water use of a fictitious family.

An extension activity sees the children using a spreadsheet (supplied) to model how much water can be saved.

Activities

1. Children keep a diary of their water use for one typical day. Alternatively, the children use the story of 'Janice and her family' to examine their water use.
2. The worksheet allows children to calculate the total water use.
3. Questions prompt children to reflect on the water usage and the effects of climate change in the UK and Kenya.

Teacher info

In the UK, the average water consumption is 160 litres per person per day.

Care should be taken with personal information such as the number of baths or showers. If necessary, the details can be taken from the story.

1 litre of water weighs 1kg. A typical 9 year-old would weigh 40kg.

Timing

Homework
20 minutes in class

Resources

Worksheet
Spreadsheet if chosen to draw graph.

Curriculum links

Numeracy – choose suitable number operations to solve a given problem – decide how best to organise and present findings – draw inferences from data in practical activities

ICT – use a spreadsheet to organise data and draw graphs

Differentiation

If the mathematics is a barrier to less able children, a spreadsheet is available from the web site that completes the calculations and draws the graph.



Janice's water diary

Janice kept a record of the water that her family used in one day. Janice lives with her mum, dad and brother Wayne. The totals are shown in her record below.



14 drinks



3 baths



15 flushes



Brushing teeth
3 times with tap off
5 times with tap
running



8 washes of hands and face



1 wash of
clothes in the
washing
machine



1 wash of the
dishes using
the dishwasher



1 shower

How much did Janice's family use?

Activity	Amount of water (litres)		Number of times in 1 day	Total water used (litres)
Brushing teeth (tap switched off)	1	x	=	
Brushing teeth (tap left running)	5	x	=	
Washing hands and face	5	x	=	
Shower	30	x	=	
Bath	80	x	=	
Flushing toilet	7	x	=	
Cup of tea / hot or cold drink	0.3	x	=	
Washing clothes (washing machine load)	70	x	=	
Washing clothes by hand	25	x	=	
Dishwasher	30	x	=	
Washing dishes in the sink	6	x	=	
Total amount of water used in 1 day (litres)				



1. Draw a bar chart to show the water used by each activity in one day.
2. Where do you get your water from?
3. Climate change may mean water shortages.
How could Janice reduce the amount of water her family uses?
4. The Massai people in Kenya have to carry their water from a river or well to their house.
What do you think is the weight of water Janice's family uses in one day??
Could you collect and carry that much water every day?

How much water do you use?

Activity	Amount of water (litres)		Number of times in 1 day	Total water used (litres)
Brushing teeth (tap switched off)	1	x	=	
Brushing teeth (tap left running)	5	x	=	
Washing hands and face	5	x	=	
Shower	30	x	=	
Bath	80	x	=	
Flushing toilet	7	x	=	
Cup of tea / hot or cold drink	0.3	x	=	
Washing clothes (washing machine load)	70	x	=	
Washing clothes by hand	25	x	=	
Dishwasher	30	x	=	
Washing dishes in the sink	6	x	=	
Total amount of water used in 1 day (litres)				



1. Draw a bar chart to show the water used by each activity in one day.
2. Where do you get your water from?
3. Climate change may mean water shortages.
How could you reduce the amount of water you use?
4. The Massai people in Kenya have to carry their water from a river or well to their house.
What do you think is the weight of water you use in one day??
Could you collect and carry that much water every day?

How to save water



Use the spreadsheet to see how changing what you do could save water.

How much water is saved by taking showers instead of baths?

How much water is saved by switching the tap off while you brush your teeth?

Is it better to wash the dishes three times a day by hand or just once a day in the dishwasher?

List the things you could change to save water. What is the total amount of water that this would save?