



# WATER EFFICIENCY MATHS ACTIVITIES

The average person in the UK uses roughly 150 litres of water every day! Do you think you use more or less?

Look at the water consumption chart below which tells you how much water is used for each activity.

## DRINKING

*It is recommended that we drink 2 litres of water each day.*

A cup of tea/coffee  
= **250ml**

## BRUSHING TEETH

Tap on  
= **18 litres**

Tap off  
= **0.5 litres**

## SHOWER

*Are your showers longer/shorter than 5 minutes?*

A five-minute standard shower  
= **45 litres**

A five-minute power shower  
= **60 litres**

## BATH

*How far do you fill your bath tub?*

A bath filled up just halfway  
= **80 litres**

## FLUSHING THE TOILET

*The average person uses the toilet seven times a day.*

Standard flush = **9 litres**  
Modern water saving flushes  
= **5 litres**

## WASHING UP

*How many times do you fill the bowl up to wash the dishes?*

Using a bowl to wash up  
= **7 litres**

## DISHWASHER

Standard machine  
= **18 litres**  
Energy saving machine  
= **13 litres**

## WASHING CLOTHES

Standard washing machine  
= **60 litres**  
Energy saving machine  
= **45 litres**  
Washing clothes by hand  
= **17 litres**

## WASHING THE CAR

With a bucket from the tap = **8 litres**  
With a bucket from a water butt = **0 litres**  
With a hose = **9 litres per minute**

## WATERING THE GARDEN

With a watering can from the tap = **9 litres**  
With a watering can from a water butt = **0 litres**  
With a hose  
= **9 litres per minute**

## WASHING HANDS

Tap left on  
= **9 litres**  
Tap off  
= **0.5 litres**

## COOKING

1 small saucepan  
= **0.5 litres**  
1 large saucepan  
= **1.5 litres**



1 Can you work out how much water you use each day? You could write a list and do your workings out on a rough piece of paper/in your maths book or you could even use a computer.

2 If everyone in your house used the same amount of water as you, how much water would you use altogether?

3 The pie chart on the right shows what the average person uses water for each day.

Can you either draw or use a computer to make a pie chart showing what you use water for?

First, you will need to group the activities that you use water for into categories.

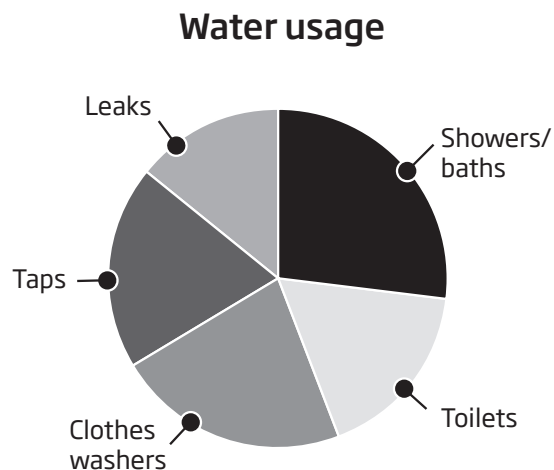
To work out the size of each section, use this formula:

$(\text{Amount used for activity} \div \text{Total for all activities}) \times 360^\circ$

This will give you the angle for the section, in degrees.

eg, if you use 25 litres flushing the loo and 150 litres altogether.

$$25 \div 150 \times 360 = 60^\circ$$



4 Identify the 4 main activities where you use the most water. What are these?

5 How can you reduce the amount of water that you use in these areas? eg, can you ensure that you don't fill your bathtub up as much if you are having a bath?

6 How much water would you save every day by reducing the amount of water in these 4 areas?

7 If everyone in your house saved this amount of water, how much water would you save altogether as a household?

8 If you had to save a further 200litres of water each week, how would you do this?