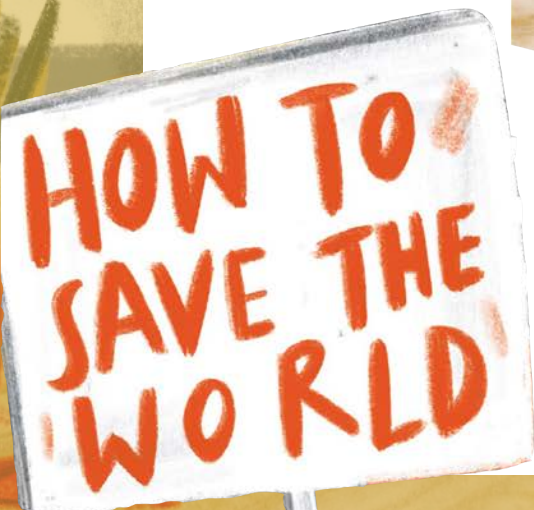


Why do we need to save water?

Lesson content

from

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Why do we need to save water?

There's lots of it! Can't we just go and get more if we're running low?
What's the big deal?

Good question. Water is an essential part of life. Humans need it, plants need it and animals need it. Thanks to the water cycle it's constantly being recycled by clever Mother Nature, and because we only have a finite source, the same water has been recycled for millions of years. This means the water you are drinking, washing in and cooking in has more than likely come into contact with penguins, dinosaurs, turtles, William Shakespeare, Mozart and the cute doggy down the road.

Watch a Met Office [video on the water cycle here](#).

Flash quiz!

1. How much of our planet is water? You can answer in a percentage or fraction.
2. Why might there be more water in the UK than in other countries?
Name two reasons.
3. What percentage of the water on earth is usable?
4. How many litres of water does each person in the UK use per day?
5. Can we desalinate (take the salt out of) sea water?

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Answers

1. Yes, there's lots of it: 71% of our planet is water, which is two-thirds.
2. The UK is an island, so it seems unlikely that we would ever run out. And yes, it's often raining in the UK. Flooding, even.
3. Only 0.3% of the earth's water is usable to us. The rest is in the atmosphere, the soil, the seas, and frozen in icecaps. 70% of the 0.3% we can use goes on growing food and raising animals. That leaves 30% of the 0.3% for seven billion people to use.
4. Each person in the UK uses around 149 litres of water per day. In a family of two around 276 litres are used; in a family of three, 367 litres; in a family of four 450 litres; in a family of five 523 litres; and in a family of six, 592 litres.
5. Yes, but desalination of sea water requires a huge amount of energy and has an environmental impact. If we remove sea water, we are also taking away the natural habitat of marine creatures and organisms.

'Water, water, everywhere nor any drop to drink.'

(From *Rime of the Ancient Mariner* by Samuel Taylor Coleridge)

So, why do we have so little available water?

- Water supplies are often contaminated. This further limits the amount of water available for human consumption.

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- When rain falls, nearly 50% either returns to the atmosphere through evaporation or is used by trees and plants. The rest is available in surface water or ground water.
- Every day, about 321 billion gallons of surface water is used by humans. Roughly 77 billion gallons of groundwater are used each day. We use a LOT of water.
- The UK receives less rainfall than you think: South East England receives less than the rest of the UK, and even then, London has less than Rome, Sydney, Miami and Barcelona.

Global warming

Whether it's due to climate change or cyclical changes to the planet, one thing is certain: summers are getting drier.

- Hotter summers means more water evaporates into the atmosphere and there is less on the ground. Heatwaves mean the need for water rises dramatically. This is predicted to happen more and more with climate change.
- Irregular rainfall makes it difficult to plan for water availability and droughts.

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- Tree planting is a vital step in combating climate change, but increasing the number of trees also means increased demand for water. If we don't start using less water, we won't be able to plant and care for the trees that we desperately need to help combat negative climate change.
- Climate change means there are increases in sudden heavy downpours. Lakes, rivers and reservoirs cannot cope with these downpours, and burst their banks. This leads to essential water being lost, and causes structural and environmental damage. There are also more flash floods, as paving over driveways, building car parks and the need for more housing as the population grows means that there is less open earth to soak the water up.
- A growing population means the demand for water is higher than ever, and will continue to rise.
- Water is used to create energy. Water needs to be pumped, treated and cleaned before it can be used again. This is costly and uses energy, which needs water.
- The available fresh water can't be turned around quick enough for the increasing demands. The infrastructure and processes of getting water are at unsustainable levels. There could be serious water shortages by 2050. This means not enough water for people, businesses, farmers, wildlife and the environment.

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Arrgghh! What can we do?

- Having shorter showers decreases the energy needed to heat water. Challenge yourself to take a shower in four minutes or less. Switching off the water to shampoo and turning it back on to rinse can help you stick to this.
- Use an efficient shower head – there are some initiatives offering these for free (depending on your area).
- Sort out dripping taps! If we decrease our consumption from 140 litres a day to 100 litres a day, there will be enough water for an additional 20 million people by 2050.
- Report any leaks and burst pipes as soon as you can. Water companies are helping too: they are committed to fixing leaks.
- Don't turn taps on fully and switch them off when they aren't needed (i.e. when you're brushing your teeth).
- Choose appliances that are water efficient.
- If you use a dual flush toilet, use the half flush when you can.

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- Put a lid on pots and pans: this can conserve 60% less energy.
- Eat less meat: more water is needed for animal production than plant production.
- Put a plug in the sink.
- Buy a bowl for the kitchen sink and use the water for plants and the grass.
- Water from baths, showers, washing machines, dishwashers and sinks amounts to 50 – 80% of household waste water (also known as 'greywater'). This can be used on plants and lawns, but avoid using it for vegetables and fruit.
- If you rinse out milk or juice bottles before recycling, use the water for your plants or grass.
- Get out the bucket and sponge for car washing.
- Let the lawn go brown once in a while.
- Choose plants suitable for dry conditions.

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