



DRY: the diary of a water superhero



Co-produced by Lindsey McEwen, Luci Gorell Barnes, Verity Jones, Sarah Whitehouse and Sara Williams
Illustrations by Luci Gorell Barnes

DRY: Diary of a Water Superhero

This story book, its concept and storyline were co-produced by Lindsey McEwen*, Luci Gorell Barnes, Verity Jones*, Sarah Whitehouse* and Sara Williams* (*University of the West of England, Bristol) as part of the About Drought project. The illustrations were produced by Luci Gorell Barnes – as an integral part of that process. Development of the accompanying teacher's notes was led by Verity Jones and Sarah Whitehouse.

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The book is available as an e-book at: dryutility.info and aboutdrought.info

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DRY: the diary of a water superhero

Illustrations by Luci Gorell Barnes



The story and commentary

The story starts in the United Kingdom after a long, hot summer. It follows dry conditions and then a worsening drought over a mainly dry winter, into a further warm, dry summer.

What the young people say:

"There are lots of ideas in the story on how to save water."

"I'd never really thought that the UK could have a drought... I've learned a lot."

"The activities were fun and interesting."

What the teachers say:

"This book and associated activities has really made me think about how I use water and I know it's a resource I'll be using again and again."

"A great story that supports geography and science topics."

It's so dry. There aren't many worms around.

I know. It's been hard to find food for a while. It's a drought but you don't hear that word used very often.

Indian Summer
will last all year!!
Get your cut price
sunblock **HERE!**

I'm so hot...
I'm so bored...
I'm so hot and bored...
There's nothing to
do round here.

True News

THERE'S LOLLY
IN LOLLIES
It's our best
year - ever!
say ice cream
sellers.

A fishy business

TODAY'S SPECIAL
Sustainable fishcakes
and organic chips

OPEN

BUBBLES Launder

hour
service
ashes



September

Days to Christmas: 107

Dear Diary,

It's a new school year and, to celebrate this, Miss Tereign has set a homework project.

"Find something interesting about your local area 6T."

Like what?! Nothing interesting ever happens here and it's too hot to think.

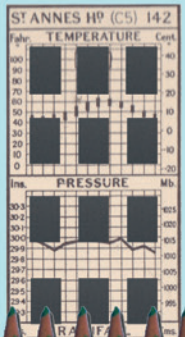
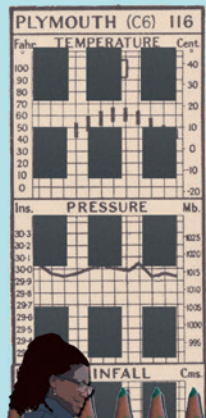
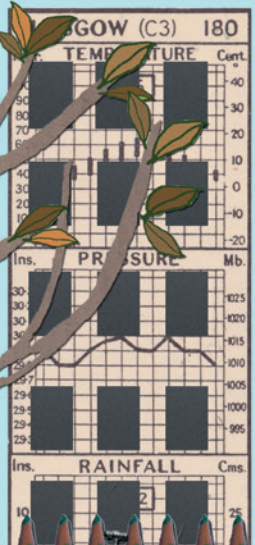




I'm parched.
There's nothing to
drink anywhere.

use water
wisely

It's another
lovely sunny day
for all you listeners
out there...



October

Days to Christmas: 69

Potatoes dug up: 1 BIG bag full.

Ideas for project: 0.

Dear Diary,

I love going to my Grandad's allotment. Today we dug up the first potatoes. Some of them looked like snowmen covered in soil. Grandad reckons they go that way if they haven't had enough water because it hasn't rained much this year (but it seems to rain all the time?).

He told me about a super hot summer, ages ago, in 1976. Great Grandma had to use as little water as possible in the house and they were told to, "let the yellow mellow and flush the brown down."

...ugh! DIS - GUS - TING!! There's no way I would do that, even if it didn't rain for ages - not that that would ever happen nowadays, it's always raining.





Do you **love** water?

BEN'S
ROOM
KEEP OUT!

38 loo flushes
(15 litres each
flush
= 570 litres!!!!!!)

Ben had 13
baths this week
(180 litres per bath
= 2,340 litres!!!!!!)

47 cups of tea
(500ml per cup
= 23.5 litres!!)

This dripping
tap wastes up
to 26 litres
a day

65 litres each
& every wash

The river's so low.
I could scoop fish out,
with my bare paws,
if I could be bothered.

What about
wildlife?


November

Days to Christmas: 45 ($45 \times 24 = 1080$ hours, $1080 \times 60 = 64,800$ minutes, $64,800 \times 60 = 3,888,000$ seconds).

Ideas for project: 1 (perhaps)

Dear Diary,

I really need to start this project. I think I might find something out about water. We use it as if it's never going to run out but the world only has a certain amount of water and we need to make sure it's used for the important stuff. Looking around, we seem to use it for loads of things...

- ♥ Baths (Ben has 2 REALLY long baths EVERY day)
- ♥ Washing up (the dishwasher's broken again)
- ♥ Washing machine (it seems to always be on - I think it's Ben's pants)
- ♥ Kettle filled to make cups of tea (constant supply required for Mum)
- ♥ Cooking pasta (my favourite food) 
- ♥ Cooking rice (second favourite food)
- ♥ Cooking snowman potatoes (tasty but weird to look at).

I'm dreaming
of a
wet Christmas

It takes nearly 4 litres
of water to grow one
almond and 14,218 litres
to grow 1kg of cashews!!

It takes 287 litres
of water to produce
1kg of potatoes

It takes 285 litres
of water to produce
1kg of sprouts

It takes 4,325 litres
of water to produce
1kg of turkey

It takes 17,196 litres
of water to produce
1kg of chocolate!!



December

Number of days it rained at all: 6 (no snow at all) ☹️

Number of days we had indoor play due to rain: 1 (I hate indoor play) 😊

Dear Diary,

It's CHRISTMAS!!!!!!!!!!!!!!!!!!!!!! 🎅 I have been given water goggles.

All I can see is the water that is in everything. Amazing! We don't just use the water from the taps but water is needed for all the stuff we make and buy. Did you know that only 2.5% of water on the Earth is drinkable? Using all of this water for stuff that's not essential has got some problems: it's costing money and we're not even using some of the things we buy that use lots of water (Dad didn't like his turkey and the nut roast was burned so he threw it away). Also, pumping water to homes and factories uses fossil fuels and that produces carbon dioxide.

(Days to my birthday: 188)

I thought it would never rain!

I know!
The worms should be a bit juicier now.

Are you having a
DRY JANUARY?
Get your cut price
umbrellas **HERE!**

Rain, rain
go away...

True News

WETTEST DROUGHT
ON RECORD!!
It's our best
month - ever!
say wellie boot
sellers.

A fishy business

TODAY'S SPECIAL
Low calorie fish & chips
for a **NEW YOU!**

OPEN

BUBBLES Launder

Your
vice
shes

Water, water everywhere
But not a drop to drink

Yep, it's still pretty
dry down here...



January

Days to Birthday: 142

Dear Diary,

Here's what I've found this week...

Rainy days: 3 (still no snow though ☹️)

Indoor play due to rain: 2 (☹️☹️)

Cups of tea made: 47 (500ml per cup = 23.5 litres!!)

Loo flushes: 38 (15 litres every flush = 570 litres!!!!)

Number of baths Ben has had this week: 13 (180 litres per bath = 2340 litres!!!!!!)

Getting people to drink less water isn't healthy but taking short showers, instead of baths, could really make a difference to how much water we use.

I'm still not sure if Great Grandma's idea about letting the yellow mellow in the loo is going to work - won't it smell? ☹️

Drought in the news

Main reservoir is now two thirds empty

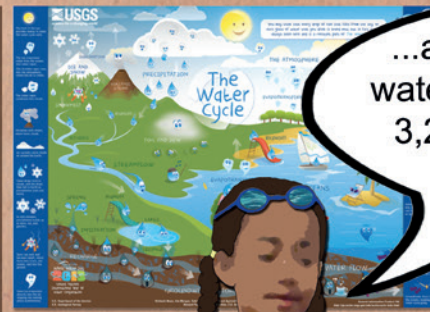


Maybe I shouldn't have so many baths?

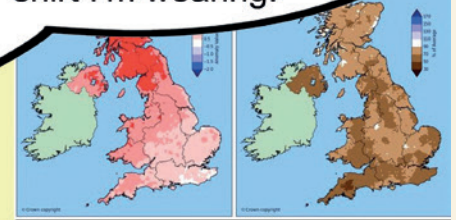


"Let's all start praying for rain" says Mayor

How can a drought be so WET?



...and it took 1,091 litres of water to make my phone, and 3,241 litres to produce the T shirt I'm wearing.



Temperatures and rainfall in UK will get more extreme



Hedgehogs get thirsty too!



Be clever - drink water!!

Your brain is 75 per cent water.

How can there be a drought? It's always raining!

My parents don't drink water all day in Ramadan, but I'm not allowed to fast because I'm too young and I need to drink water to stay healthy.

I think having a drought is better than it flooding.

February

Number of days until my birthday: 130

Dear Diary

I've done it – the project is completed.

Everyone was interested in my wonderful water facts and I shared lots of ideas for saving water and looking after people and animals in the dry weather. Miss Tereign has already bought a washing up bowl for the staff room as that's one way to cut down on the water you use when you wash up.

Number of snowy days: 3 (whoop whoop!)

Number of rainy days: 7

Number of days we had indoor play because of rain: ZERO (I'm not sure this is a good thing anymore).





March

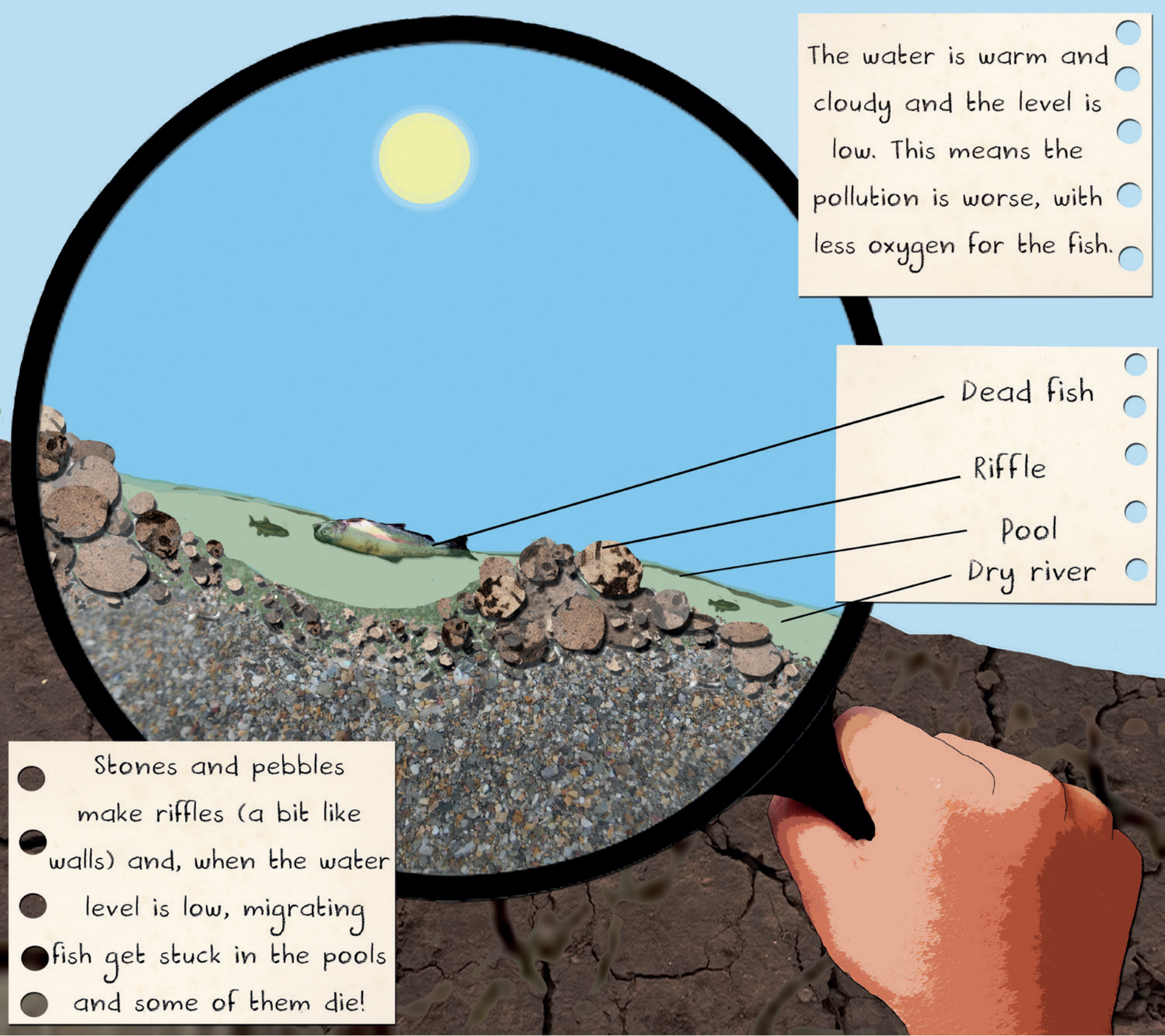
Days until my Birthday: 108

Dear Diary,

No one has really changed what they do: Ben still takes loads of baths, Dad still puts a pair of jeans in the washing machine on their own and thinks it's OK, Mum still buys loads of avocados, and no one else but me bothers to check that the birds in the garden have water. It's dark and it's cold and I can't seem to get people to change.

Number of days of rain: probably not enough to actually make a difference.

Water used: What's the point in counting? Can't do anything to reduce it, anyway.



The water is warm and cloudy and the level is low. This means the pollution is worse, with less oxygen for the fish.

Dead fish

Riffle

Pool

Dry river

Stones and pebbles make riffles (a bit like walls) and, when the water level is low, migrating fish get stuck in the pools and some of them die!

April

Days until my Birthday: 71

Dear Diary,

We've been on a school trip this week and it was awesome. We went to the river and saw a kingfisher. Ashani reckons she saw an otter. It's been raining loads but the rivers are still really low. There were even cracks in the ground because it's been so dry. Miss Tereign said they are called desiccation cracks. Callum dropped his sun cream down one. He could fit his whole arm in the crack but still couldn't reach low enough to get it out. He had to spend the rest of the day under the trees for shade.

Miss Tereign said it might be a good idea for the Eco Club to do some work on saving water at school. Sounds good to me. Finally, we might be able to do something about the way people use water.



HOW CAN YOU SAVE WATER?

Water storing granules in plant pot ✓

BEN'S room
KEEP OUT!

BEN KEEP OUT
of the bath!

Brick in cistern ✓

Taps fitted with aerators ✓
save 50% water

Kettle filled with just the right amount ✓

Washing up bowl in sink ✓

I love water too...

GREY WATER ✓

May

Days until my birthday: 44

Dear Diary,

I'm feeling far more positive. I'm going to make some changes at home and get everyone involved.

In this house thou shalt...

- * NOT have baths – and have a shower for no more than 3 minutes (timer put in shower)
- * Only put washing machine on when FULL
- * ALWAYS turn off tap when cleaning teeth.
- * Use the washing up water to water the plants
- * Put out saucers of water for the birds, to make sure they have plenty to drink.



I AM WATER WOMAN! I will help make these changes. 😊

I can't wait to see what we can do at school too.



I'm glad they've put some water out for me to drink.

Mulch! Mulch! Mulch!
It's the best way to keep the ground damp.

This pond will be a good place for frogs and newts to live, as well as giving other animals somewhere to drink.

I water either early in the morning or in the evenings and just give my plants one good soaking every few days, rather than doing it every day.

overwatering damages plants - no hoses please!

There's no rain forecast for this week - should we be worried? Ring in to let us know your thoughts...

June

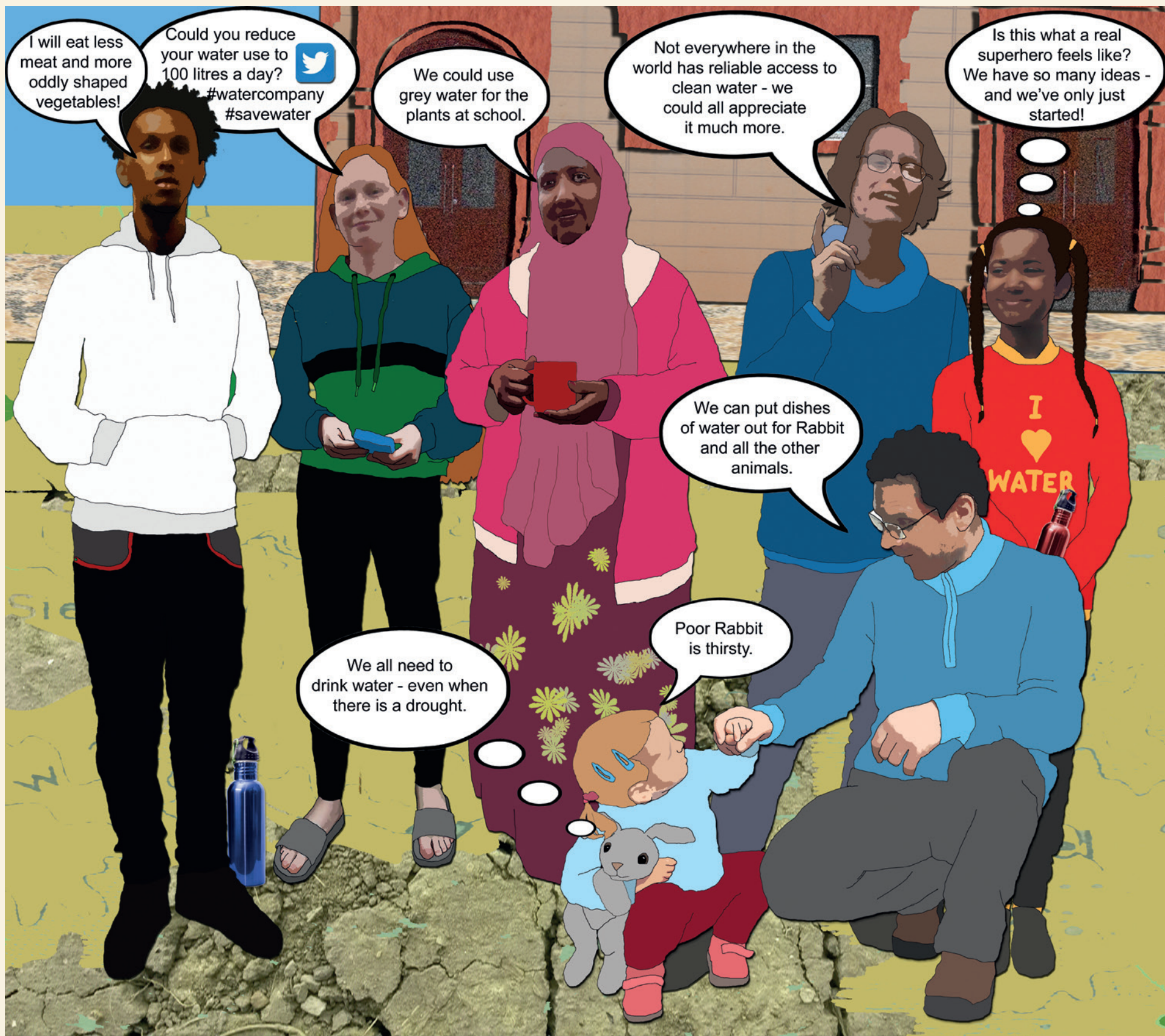
Days until my birthday: 14 (2 weeks)

Dear Diary,


Water Woman's work is going well! We had another school trip and visited Grandad's allotment. We got loads of ideas of how to reduce the amount of water we use at school. He showed us plants that don't need much water (he called them drought resistant). So we can eat tasty food that doesn't have to rely on as much water, as it grows.

The Eco Club are putting together an action plan for every class.

It hardly rained at all this month. Really light mizzle for about 10 minutes on 4 days. ☹️



I will eat less meat and more oddly shaped vegetables!

Could you reduce your water use to 100 litres a day?  #watercompany #savewater

We could use grey water for the plants at school.

Not everywhere in the world has reliable access to clean water - we could all appreciate it much more.

Is this what a real superhero feels like? We have so many ideas - and we've only just started!

We can put dishes of water out for Rabbit and all the other animals.

We all need to drink water - even when there is a drought.

Poor Rabbit is thirsty.

July

Rainy days: 2 drizzly, 1 amazing thunder storm.

Dear Diary,

IT'S MY BIRTHDAY!

I invited everyone from the street over for a party in the park. We got talking about the weather - grown ups love doing that! It seems like I'm not the only one who's worried about water and now we've got loads of ideas of what we can all do, in Riverdale Road. Just think how much water could be saved if all 20 houses switched from having baths to showers, turned off the tap while they brushed their teeth or used a washing up bowl, instead of the sink. Days to Christmas: 171





Grow plants

Use eco washing machines

Re-use grey water

Think mulch and no dig

Share knowledge

Create shade

Create habitats for wildlife

Watch out for early signs of drought

Harvest water


Take initiative

Work together to make positive changes

Take care of animals


Create reed beds to store water

August

Days  to Christmas: 135

Days of rain: 3 showers. There has been dew on the garden every morning.

Dear Diary,

I love  summer holidays. Hopefully it will rain. At the moment, it's sunshine all the time so I need to check on the water baths I've put out for the birds. Today, Grandad is going to show me how he plants vegetables in a way that takes even less watering and no digging!

I wonder how everyone else's plans for saving water are going? Hopefully the word is spreading. As Grandad always tells me, everyone can make a difference.

Acknowledgements

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The following people assisted in the evaluation of the book in schools: Charborough Road Primary School, teachers, young people and trainee teachers at UWE Bristol.

The image of temperature and precipitation in the picture for February (top right hand side) had copyright permission from the UK Meteorological Office.

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An ordinary schoolgirl transforms into a water superhero when a DRY summer becomes a DRY winter. Join her as she shares her new found love for water with her family, school and community, as the drought progresses.

This book has been created to help young people, parents, carers and teachers to discuss drought and its impacts on people and the environment in the UK. By stimulating conversations around personal water use, health and wellbeing, and sustainable water practices at home, in schools and the wider community, this story can be used to increase awareness of, and adaptation to, future drought. This book is accompanied by a set of teachers' notes with further information and ideas for classroom activities.



