



Home Learning: Activities & Resources



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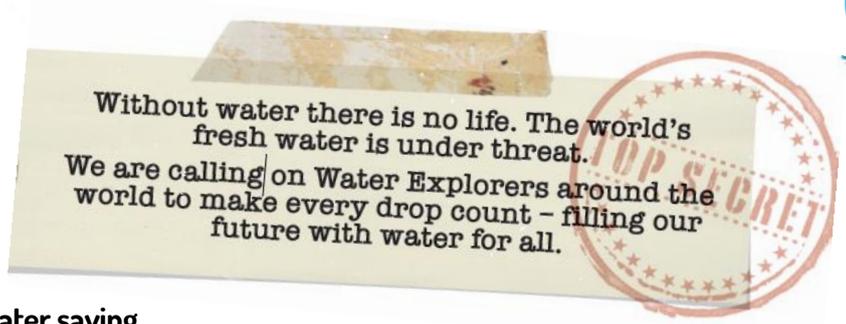


Introduction

Water Explorer inspires and equips students aged 8-14 all over the world to take bold and powerful action to save our precious water through fun water saving activities.

This pack is a collation of the activities from the Water Explorer programme that can be done at home. It includes a mixture of activities, ones that can be done independently by students and others that may require the support of a teacher, parent or guardian.

Please note: Some small sections of the activities may not be relevant for an at home learning experience but can be adapted to suit individual situations.



READY, SET, EXPLORE!



Map it!



SDG Links

5

6

10

water EXPLORER



Explorer Challenge: How do people around the world access water?

30
mins

Explore the different ways that people around the world access water using 2.1.1.
Discuss why you think it might be more challenging for some people to access clean drinking water. How does it affect women and girls when water is difficult to access?

Research the percentage of people in different countries who have access to clean drinking water. Using a blank map (2.1.2), **illustrate** the percentages that you have researched using a key, colours and symbols. For each country create a symbol or **write** down the main way people access water.

20
mins

Discover how to say 'we want clean water!' in the 10 countries that have the lowest percentage of people with access to clean water (2.1.3). **Write** these phrases on the maps you have created.

10
mins

Teach the whole school how to say these new phrases, and share your maps. Talk about what you learnt about how people access water around the world.

Points: 100 points

Time: 60 mins

Subject links:   

WHAT YOU NEED

- 2.1.1 – 2.1.3

THINK ABOUT

What you would miss out on if you had to spend hours every day walking to collect water? How would it impact the rest of your life?



EXPLORE FURTHER

Learn a traditional song from one of the 10 countries you explored and **perform** it in an assembly with some facts about access to clean water. **Count** how many people saw your assembly.

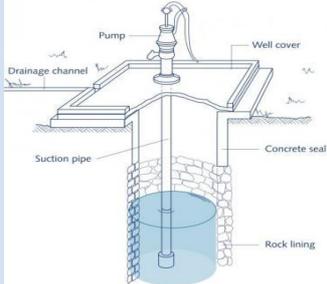
Count how many people you taught to say 'we want clean water!' in another language. **Count** how many people have seen your map.

MAKE EVERY DROP COUNT



GLOBAL WATER

People all around the world access water in different ways, even people in the same country can have different experiences accessing water. This table shows the main ways that people collect water around the world.

How do people access water? ¹	Is it safe to drink?	Explanation
<p>Bottled Water</p>		<p>Sometimes when there is no fresh water available people have no choice but to buy bottled water. Unfortunately not everyone can afford to do this.</p>
<p>Cart with small tank/drum or Tanker Truck</p>		<p>When piped water is not available some people might buy water from carts or trucks with water tanks. Using the tap on the truck they can pay for the water and fill up their own containers. People don't always know whether the water is safe to drink.</p>
<p>Dug Well</p>		<p>A hole is dug into the ground until the water table is hit. They are usually shaped like a cylinder with concrete or rock walls.</p>



GLOBAL WATER

<p>Public Taps or stand pipes</p>		<p>Hand pumps or taps that are placed somewhere in the middle of a town for all people to access.</p>
<p>Rainwater</p>		<p>Tanks such as water butts capture and collect rainwater.</p>
<p>Surface Water</p>		<p>Water that collects on the surface of the ground such as a river, dam, lake, pond, stream or canal. Surface water is not usually safe to drink unless it is treated.</p>
<p>Taps inside a building</p>		<p>Water is piped from a Water Treatment Facility into a person's house. They access the water by turning on their taps.</p>
<p>Tube Well or Bore Hole</p>		<p>An iron pipe with a steel point is dug into the ground until it reaches ground water. A suction pump is then used to bring the water to the surface.</p>
<p>Springs</p>		<p>A spring is where water naturally runs up from the ground to the surface. To make the water safe to drink the spring needs to be protected by a concrete barrier with a tap.</p>



GLOBAL WATER

Unfortunately, when people collect water it is not always safe to drink. The following table shows some countries and the percentage of people who have access to clean drinking water.

Country	Percentage of people with access to clean drinking water
Afghanistan	64%
Cambodia	71%
China	92%
Dominican Republic of Congo	47%
Ethiopia	52%
France	100%
Haiti	62%
Indonesia	83%
Ireland	100%
Mozambique	49%
Nigeria	64%
South Africa	95%
Switzerland	100%
Tanzania	53%
Zambia	63%

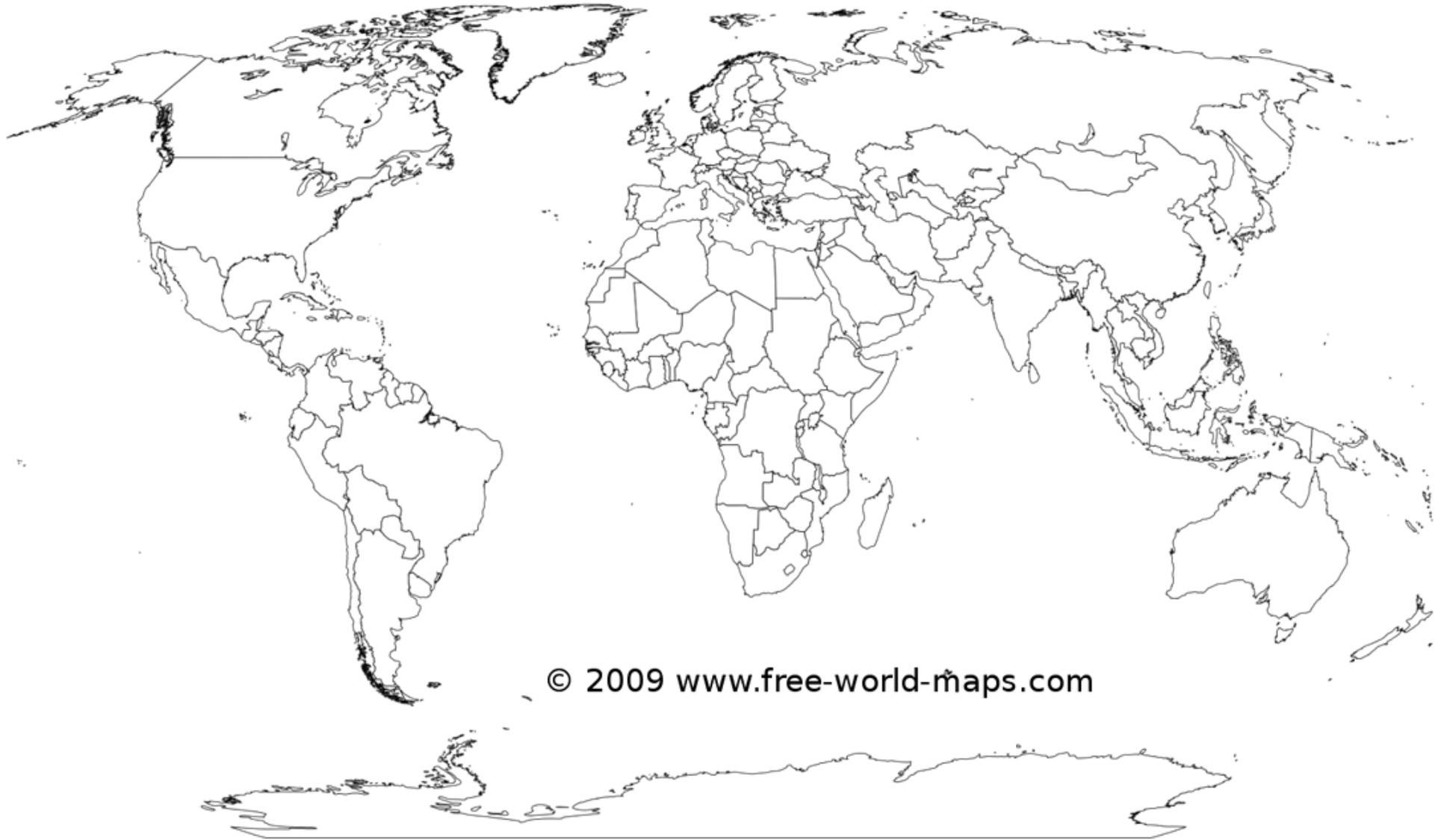
¹World Health Organisation (2016). Population using improved drinking-water sources. In *Global Health Observatory Visualizations*. Retrieved from (<http://apps.who.int/gho/data/node.wrapper.imr?x-id=8>)

Verill, C. (2016, March 2017). 17 images showing how countries facing dire water shortages across the globe get this vital resource. *Business Insider UK*. <http://uk.businessinsider.com/how-different-countries-get-their-water-2016-3>





GLOBAL WATER



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We Want Clean Water

Can you say 'We Want Clean Water!' in the language of 10 different countries with the lowest percentage of people with access to clean water?

Percentage of people with access to clean water	Country Name	Official Language	We Want Clean Water
47%	Democratic Republic of Congo	French	Nous voulons de l'eau propre
49%	Mozambique	Portuguese	Queremos água limpa
52%	Ethiopia	Amharic	ንጹህ ውሃ እንፈልጋለን nits'uhi wiha inifeligaleni
53%	Tanzania	Swahili	Tunataka maji safi
62%	Haiti	French	Nous voulons de l'eau potable
63%	Zambia	English	We want clean water
64%	Nigeria	English	We want clean water
64%	Afghanistan	Pashto	موړ پاکو اوبو غواړو
71%	Cambodia	Khmer	យើងចង់បានទឹកស្អាត yeung chngban tuk saat
83%	Indonesia	Indonesian	Kita menginginkan air bersih



Explorer Challenge: Create a rap about saving water!

10 mins **Reflect** on the ways different people access water around the world (2.2.1). Does everyone have easy access to water? If you found it harder to access water, would you change the ways you use it?

It is important for people around the world to use water wisely. **Brainstorm** some of the water saving tips you have learnt in the Water Explorer program.

Read the sample raps in 2.2.2 aloud. These raps have been written by children around the world. Which parts of each rap did you like? Why?

40 mins Using your brainstorm from earlier in the lesson **create** your own rap. Your rap should encourage people to save water. Try to create simple backing rhythm for your rap by using body percussion (e.g. by clapping your hands and/or stomping your feet). For some tips on writing your rap, look at 2.2.3.

Rehearse your raps with a partner in the class. Can you **describe** the parts which make their rap successful?

10 mins **Perform** your rap to another class or at your water festival. Why not **perform** this at lunch or after school in the playground – Flash Mob Style?

Points: 100 points

Time: 60 mins

Subject links:   

WHAT YOU NEED

- 2.2.1 – 2.2.3

THINK ABOUT

Rapping about water saving helps us to spread our message in a creative way. Can you think of other ways we can use our creativity to communicate?

EXPLORE FURTHER

Can you share your rap with even more people? **Video call** another Water Explorer team and perform your rap. **Film** your rap and **upload** it to your school website for other people to see. **Perform** your rap at a community event.

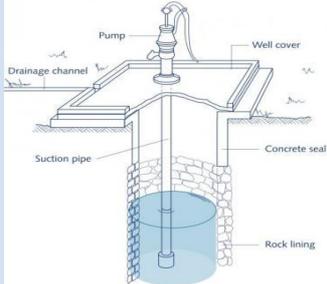
Count the number of people who heard your rap.





GLOBAL WATER

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GLOBAL WATER

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GLOBAL WATER

Water Rap



**Drink a litre every day,
Helps us learn, hip, hip hooray!
Water for us every day?
In some countries... no way!
Water's needed to keep us alive.
Without it...
We can't survive!**



GLOBAL WATER

Slow the Flow of H₂O!

**This is a rap about turning off your tap.
Save all the drops to feed all your crops!
We also care about water pollution
So picking up that rubbish is the real solution!**

**Bring the waste to a stop
Make sure you save every drop!
Water, water everywhere,
Try to save some if you really care!!**

**Be a pro and save H₂O
Before you nap turn off that tap!
Put a stop to that drip,
Come on, come on don't leave the tap on!**

(Written by one of our great Water Explorers!)





Key Message
Before you start writing make a list of all the water saving facts you want someone to learn from your rap.
e.g. taking shorter showers saves water

Rhyme
Rhyming words can make your rap sound catchy.
e.g. have a 4 minute shower not a bath, cut your water use in half!

Personification
Giving something a human quality or feeling can help us to connect more with an idea.
e.g. Raindrops cry when they fall down the drain instead of into a water butt

Metaphor
Making a comparison between two things that aren't alike but have something in common.
e.g. Don't be a pig, throw that rubbish in the bin so it doesn't pollute the water

Become a rap master & save water with these tips!



Repetition
Repeating words makes the listener remember them.
e.g. turn off the tap, turn off the tap, when you wash your hands, turn off the tap

Rhythm
Creating a pattern in rap helps your writing to flow. You can create rhythm by sticking to the same number of syllables in each line, or by creating a beat to stick to.

Similes
Comparing two similar things using the word like or as can help to build a picture of what is happening in your listener's mind
e.g. save rainwater - be like a bucket!





Explorer Challenge: How does your weather compare?

20 mins Weather conditions vary across the world. What is the weather like where you live?

Research the weather in your town, city or country. How much does it rain? Are there any weather patterns that affect how much rain you get? You can use the glossary of words in 2.4.1 to help you.

20 mins **Find out** about flooding and/or drought in your country (these might need to be provided by the teacher). **Look** at the news. Are there any droughts or floods at the moment? How are people's lives being affected? You could also look at old photographs or even talk to people who lived through a drought or flood. How do floods and droughts affect how people use or access water? Do you think there is a link between greenhouse gas emissions and climate change which can lead to flooding or droughts?

20 mins **Connect** with another school in a different country to **compare** the weather where you live. **Share** your own experiences with floods and/or droughts. You could have a video call, write the other school a letter or send them an email.

Points: 200 points

Time: 60 mins

Subject links:  

WHAT YOU NEED

- 2.4.1

THINK ABOUT

Communities that have been affected by droughts or flooding. How would they feel? How would life change during a drought or flood?

EXPLORE FURTHER

Create a flood or drought collage to remind people why we need to reduce our carbon footprint. Try to use as many recycled materials as you can. **Display** your collage in a public space like a community centre or library. **Count** how many people saw your display.

Count how many people you spoke to in the other school.





GLOBAL WATER

Glossary of Helpful Words

Word	Definition
Blizzard	A storm with heavy snow and strong winds.
Climate	The usual weather patterns or types of weather a place has over a long amount of time.
Climate Change	When the climate of a place begin to change.
Drought	When there is less rainfall than normal for long period of time, water sources start to dry up.
Flood	When a water source (e.g. rivers, dams) over fills with water causing the land around it to become water logged.
Greenhouse Effect	When heat energy from the sun reaches the Earth, lots of it bounces back up into the atmosphere (the gases around Earth). Some of it gets trapped by the gases in the atmosphere and helps to keep the Earth warm enough for people, animals and plants to live.
Greenhouse Gases	Gases that absorb heat energy from the sun.
Hail	Hard ball of frozen rain that fall from clouds.
Humidity	The amount of water vapor that is sitting in the air.
Hurricane	A type of storm with strong winds of more than 120kph that forms over tropical waters.
Meteorologist	A scientist that studies the weather.
Precipitation	Water (rain, sleet, snow, hail) that falls from the clouds.
Sleet	A type of weather in between snow and rain. It is best described as icy rain.
Temperature	The heat outside measured in degrees. E.g. 20°C
Thunderstorm	Strong winds of at least 88kph with heavy rain, thunder and lightning.
Tornado	A strong, spinning funnel of wind and air that reaches to the ground and destroys things in its path.
Tropical Cyclone	Also known as a hurricane.
Wind Chill	How cold it feels outside with the wind blowing.

Water Butt Challenge



SDG Links

6

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water EXPLORER



Explorer Challenge: Can you persuade your school leaders to collect previous rainwater?

10 mins When we get water from the tap it has gone through a long process of water treatment to make it potable, which means safe to drink. This water treatment process uses energy. Using energy releases greenhouse gases which leads to climate change, affecting the water cycle. Using rainwater is a great way to save energy, and money, and it's good for plants!

Discuss why you think it is important to collect rain water. **Read** 3.3.1 which contains information about Water Butts.

Explore local information from weather stations. How much does it rain where you live? Why do you think it rains this much? **Think** about the climate, latitude, elevation and other geographical features (e.g. mountains, valleys, lakes and oceans).

20 mins **Create** your own rain gauge using 3.3.2 to help you. **Measure** and **record** the amount of rain that falls over two weeks. **Calculate** how much rain you could save and collect if you had other water collecting systems in your school like a water butt.

30 mins **Create** and **present** a pitch to persuade your school to buy a water butt or persuade them to use the school's water butt in a different way. You can use the scaffolds in 3.3.3 to help you plan your speech. If you need more information try re-reading 3.3.1.

Points: 200 points

Time: 60 mins

Subject links:   

WHAT YOU NEED

- 3.3.1 – 3.3.3
- Rain Gauge Materials: plastic bottle, some small stones, ruler, masking tape, scissors and a marker pen.

THINK ABOUT

How do you normally feel when it rains?
Take time to appreciate rainwater as a precious resource and think about all of the ways that it brings life.

EXPLORE FURTHER

Explore how other people around the world harvest rainwater. Draw pictures and display them in your classroom or around the school. **Count** how many people saw your display.

Count how many people you discussed your pitch with.

MAKE EVERY DROP COUNT



PRECIOUS WATER

Water Butts Fact Sheet

What is a Water Butt?



A water butt is a large cylinder shaped container that collects and stores rainwater from your roof. To collect the water you need to set up your drainpipe so that it empties into the water butt.

The average water butt can store 250 litres of water! This water can then be used outdoors in the garden to water plants, clean the car, or wash windows.

Can you think of any other ways you could use the water?

Why should we use Water Butts?

- ◆ Plants grow better with rainwater because it contains more nutrients than tap water.
- ◆ You can save money because rainwater is free.
- ◆ Unlike tap water, rainwater isn't treated using energy before it reaches you.
 - Using rainwater instead of tap water therefore reduces greenhouse gas emissions.
 - This reduces the enhanced greenhouse effect which causes climate change
 - This means that by using a water butt we can lessen the impact of climate change.





PRECIOUS WATER

How could my school get a Water Butt?

- ◆ Check with your local council or water supplier as they may be willing to donate a free water butt to your school.
- ◆ Fundraise to buy a water butt for your school. Could you sell some of the food from your school garden to raise money?
- ◆ Research how to create your own water butt using recycled materials.





PRECIOUS WATER

Make a Rain Gauge

Meteorologists (people who study weather) use rain gauges to measure how much rain has fallen. This can help scientists to predict weather patterns and track the water cycle. They can also be helpful for people at home because it helps us to understand whether or not our plants need watering.

As a challenge you might want to place your rain gauges in different places around the school to see which areas receive the most and least rain.

You Will Need:

- A plastic bottle
- Some small stones
- A ruler with mm and cm
- Masking tape
- Marker pen
- Scissors

Plastic Bottle
Collects rainwater.

Small Stones
Adds weight so that
your rain gauge
doesn't fall over.



Scale
Shows how many centimetres
or millimetres of rain has
fallen.



PRECIOUS WATER

Instructions:

1. Cut the top off the bottle.
2. Place some stones in the bottom of the bottle (so the wind doesn't blow it over).
3. Pour water into the bottle until it reaches the top of the rocks.
4. This line of water will be zero.
5. Stick some masking tape to the side of your bottle.
6. Using your ruler mark the millimetres and centimetres on the tape. This is called a scale.
7. Place the rain gauge in an open area outside.
8. Regularly check the water level on your rain gauge by reading how many centimetres have fallen using your scale.



These rain gauges were made by Water Explorers just like you!





PRECIOUS WATER
Rainwater Record

Location: _____ Start Date: ____/____/____ End Date: ____/____/____

Week 1		
DAY	AMOUNT OF RAIN	COMMENTS
Monday	cm	
Tuesday	cm	
Wednesday	cm	
Thursday	cm	
Friday	cm	
Weekend	cm	
TOTAL RAIN		cm of rain that fell this week.

Week 2		
DAY	AMOUNT OF RAIN	COMMENTS
Monday	cm	
Tuesday	cm	
Wednesday	cm	
Thursday	cm	
Friday	cm	
Weekend	cm	
TOTAL RAIN		cm of rain that fell this week.

If we had a Water Butt we could have saved _____ (Total Rain Week 1 + Total Rain Week 2) in the last two weeks.





PRECIOUS WATER

Preparing a Pitch

A pitch is a way of sharing your ideas with someone in a short speech.

1. Who are you? Who are the Water Explorers?

2. Why are you giving this pitch?

3. What is a water butt?

4. How do Water Butts help to save water?

5. Why should your school buy a water butt or how should you use the school's water butt?



PRECIOUS WATER

Preparing a Pitch

A pitch is a way of sharing your ideas with someone in a short speech. The purpose of a pitch is to persuade the audience to agree with your ideas.

Helpful Ideas		My Plan
Introduction	<p>Introduce yourself and the work you have been doing as a part of your Water Explorer Team.</p> <p>Introduce the main ideas of what your pitch will be about.</p>	
Body	<p>Explain what a water butt is and persuade the audience to agree with how you think the school's water butt should be used OR why you think the school should buy a water butt.</p> <p>Talk about the benefits of a water butt and how they can help to save water.</p> <p>Try to include facts, emotive language and examples of how others have successfully used water butts.</p>	
Conclusion	<p>Remind your audience of the best arguments you made in your body.</p> <p>End with a call to action to encourage your audience to act now.</p>	



Challenge Your Family



SDG Links

6

water EXPLORER



Explorer Challenge: How many people can you convince to save water?

20 mins Your family has probably started to notice how much you've been trying to save water at home, especially if you've been working hard on your own water pledges. Now is our chance to get everyone that you live with saving water together!

Place four sheets of paper around the room to represent different places at home: bathroom, kitchen, laundry and outside. **Think** about how your family uses water in each of the places. Move around the room and **draw** or **write** your ideas about how water is used, how it could be wasted, and how it could be saved.

30 mins **Create** a leaflet for your family showing them how to save water around the house. Try to make it as exciting as possible using lots of water saving facts and pictures. You could even calculate how much water they could save if they started changing the way they use water. 3.5.1 is a useful teacher reference guide.

Take your leaflet home and **give** it to your family members to read. **Ask** them to make a pledge by choosing at least one water saving action from your leaflet. **Write** the same pledge onto two cards – keep one at home and bring the other back to school.

10 mins **Create** a display in school showing all of the leaflets and all of the pledges made by family members. You could also place your leaflets around the school for others to read such as in the school office for visitors or in the staff room for other teachers.

Points: 300 points

Time: 60 mins

Subject links:  

WHAT YOU NEED

- 3.5.1 and 3.5.2

THINK ABOUT

We are able to positively influence the people we live with help them to save water. Is there anyone else in our lives that we could have a positive influence on?



EXPLORE FURTHER

How can you encourage your local community to save more water? **Create** a leaflet for a local business giving them ideas on how to save water. E.g. How could you save water in a café?

Count how many people you gave a water saving leaflet to.
Count how many people made pledges.

MAKE EVERY DROP COUNT



Water in the Bathroom

How is water used?	How can water be wasted?	How can we save water?
To flush the toilet	Old style toilets can use up to 13 litres per flush Dual flush systems often use just 6 litres Leaking toilets can waste up to 200 litres a day	<ul style="list-style-type: none"> Use the small flush button Place a bottle full of water in the cistern to save the amount of water being used Check for leaks
To brush your teeth	Leaving the tap running whilst brushing uses 12 litres of water. Turning your tap off whilst brushing your teeth uses 0.2 litres of water.	<ul style="list-style-type: none"> Turn the tap off whilst you are brushing your teeth.
To wash your hands	A tap uses 6 litres of water per minute when it is left running.	<ul style="list-style-type: none"> Putting the plug in when you wash your hands can save 3 litres Leave the tap off when you are rubbing soap in
To bathe or shower	The average bath holds 80 litres of water. A five minute shower uses 35 litres of water.	<ul style="list-style-type: none"> Take shorter showers of 5 minutes or less Take a shower instead of having a bath.
Bathroom Taps	Leaking taps can waste at least 5,500 litres of water per year.	<ul style="list-style-type: none"> Always fix leaking taps Always turn the tap off when you are not using it





Water in the Kitchen

How is water used?	How can water be wasted?	How can we save water?
To wash dishes	The average sink holds 20 litres of water. Dishwashers use an average of 15 litres per wash.	<ul style="list-style-type: none"> Use a washing up bowl Only fill the sink halfway Only use the dishwasher when it is full Use the eco-wash setting on your dishwasher
To boil water	The average kettle holds 1.7 litres of water.	<ul style="list-style-type: none"> Only fill the kettle with the amount of water you need.
To cook (e.g. pasta, potatoes, rice, vegetables)	The average person in the UK uses 8 litres of water per day in the kitchen.	<ul style="list-style-type: none"> Only use as much water as you need in the pot e.g. The water only needs to sit just above potatoes, you don't need to fill the whole pot. Leftover water that you boiled vegetables can be used to water your garden. It has lots of nutrients so it is especially good for your fruit and vegetable plants.
To drink	Letting the kitchen tap run until the water is cool enough to drink.	<ul style="list-style-type: none"> Fill up re-usable drink bottles or jugs and put them in the fridge to cool.
To clean fruit and vegetables	A tap uses 6 litres of water per minute when it is left running.	<ul style="list-style-type: none"> Rinse fruit and vegetables in a washing up bowl. Water your plants using the leftover water.
Kitchen Taps	Leaking taps can waste at least 5,500 litres of water per year.	<ul style="list-style-type: none"> Always fix leaking taps Always turn the tap off when you are not using it



Challenge Your Family – 3.5.1



Water in the Laundry

How is water used?	How can water be wasted?	How can we save water?
To wash clothes	An older style washing machine can use up to 70 litres more per wash than a new and more efficient machine.	<ul style="list-style-type: none">◆ Only use the washing machine when it is full◆ Use the eco-wash setting◆ When you are able to upgrade your machine to a new, eco-friendly option.
Laundry Taps	Leaking taps can waste at least 5, 500 litres of water per year.	<ul style="list-style-type: none">◆ Always fix leaking taps◆ Always turn the tap off when you are not using it



Challenge Your Family – 3.5.1



Water Outside

How is water used?	How can water be wasted?	How can we save water?
To water the garden	Using a hose to water the garden for just 15 minutes can use up to 250 litres of water.	<ul style="list-style-type: none"> ◆ Use trays under pot plants to catch any leftover water ◆ Use watering cans instead of a hose ◆ Only water your garden in the early morning (before 10am) or evening (after 4pm) ◆ Plant native plants so that you don't need to water them as often ◆ Use mulch in your garden to stop the water evaporating ◆ Let your grass grow a bit longer so that it doesn't need watering as often. ◆ Use Water Butts or JoJo tanks to collect and store water
To wash bikes and cars	Washing a car with a hose can use up to 480 litres of water. Using four buckets of water to clean your car only uses 32 litres of water.	<ul style="list-style-type: none"> ◆ Use a bucket of water to wash your car or bike ◆ Wash your car or bike on the grass so that the run-off water soaks into the ground
To fill a paddling pool	A paddling pool can hold as much as 2,300 litres when full.	<ul style="list-style-type: none"> ◆ Always use a pool cover to stop the water evaporating ◆ Use the water from your paddling pool to water your garden when you're finished with it
Outdoor Taps	Leaking taps can waste at least 5, 500 litres of water per year.	<ul style="list-style-type: none"> ◆ Always fix leaking taps ◆ Always turn the tap off when you are not using it





PRECIOUS WATER



To save water I will...



To save water I will...



To save water I will...



To save water I will...

To save water I will...



To save water I will...



To save water I will...



To save water I will...



Explorer Challenge: How much water is hidden in our clothes?

15 mins **Present** a cotton t-shirt or item of clothing. Where do you think it was made? How was the fabric produced? **Ask:** If one sheet of A4 paper contains 10L of secret water and one cup of coffee contains 130L, how much secret water do you think this t-shirt contains?

It takes 2700 litres of water to make a cotton-shirt. That's enough drinking water to last a person for 900 days! Cotton is one of the world's thirstiest crops and is a heavy water polluter. Cotton makes up 40% of the world's clothing. If everyone in your class is wearing one t-shirt, how much secret water is being used?

Read the newspaper article in 4.4.1 to find out how secret water is used in clothes. How is the water being used? Where is the clothing being produced? How is it affecting the local community?

60 mins Reusing and upcycling clothes is a great way to save water and to lessen the impact of water pollution on local communities near factories. In groups or independently, **design** and **create** a water-saving item of clothing (e.g. tie-dye a t-shirt or sew colourful patches and patterns onto clothes). 4.4.2 has lots of ideas on how to recycle and upcycle clothes.

Present a fashion show to share your ideas (4.4.3). If you can, try and take some photos of you reusing or upcycling clothes. If you upcycled an item of clothing (such as adding rips to your old jeans to make them trendy) try and wear that item of clothing for the show. You could hold your fashion show at a school assembly or during your water festival.

Points: 200 points

Time: 75 mins

Subject links:  

WHAT YOU NEED

- 4.4.1 – 4.4.3

THINK ABOUT

Now that you know how much water is used to make clothes, how does it make you feel? Does it make you want to change anything?



EXPLORE FURTHER

Every time we reuse clothes we can save thousands of litres of secret water. Can you create more upcycled clothing, jewellery or accessories to share with others at your school? You could even create a stall and sell them to raise money for charity!

Count how many people you invited to your fashion show. **Count** how many people attended your fashion show. **Count** how many items of clothing were upcycled.





SECRET WATER

How can we stop water from becoming a fashion victim?

March 7 2012

As water scarcity becomes ever more prevalent, the industry must re-evaluate how it impacts on our most precious resource.

In direct terms, apparel production does not only heavily depend on water availability. However, the industry's usage patterns directly impact the global water profile through the use of pesticides for growing fibre crops, the discharge of waste water from dyeing and – importantly – laundry habits at home.

A mere 2.5% of Earth's water is freshwater and only 0.3% of it is readily accessible to humans. This is equivalent to 0.01% of all water on Earth. Of this fraction, 8% goes towards domestic use, 22% is used by industry, and 70% for irrigation. If the research is correct, humanity's water footprint will reach a level 40% above reliable, accessible water supplies by 2030.

Cotton accounts for 90% of all natural fibres used in the textile industry. It is used in 40% of all apparel produced globally, with synthetics accounting for 55%. Cotton farming is also the single largest water consumption factor in the apparel supply chain. For a simple reason: the regions where most cotton

is grown are dry – the southern US, India, Mali and the Aral Lake area.

The fashion industry's relationship with water goes beyond cotton. Some 14.4% of an apparel retailer's total water footprint relates to manufacturing. An estimated 17 to 20% of industrial water pollution comes from textile dyeing and treatment and an estimated 8,000 synthetic chemicals are used throughout the world to turn raw materials into textiles, many of which will be released into freshwater sources. Worse: the industry is rampant with players that don't respect the citizen's right to safe water.

This all said, the fashion industry's upstream supply chain is not solely responsible for its problematic relationship with water. The impact of people washing clothes at home is equally important: 40% of domestic water footprints stem from laundry, a significant proportion of which comes from washing clothes by hand in the developing world.

Laundry detergents, generally ignored in the water pollution discussion, add yet another dimension: 16% of the Danube's phosphate loads stem from detergents, causing the EU to take first

Fashionable Water – 4.4.1

legislative steps for a total ban on phosphates in detergents.

Water resources will be under progressive pressure as the world population increases and more extreme climatic conditions will impact our ease of access. As access to water becomes increasingly complicated, the textile and apparel industry's heavy reliance on thirsty cotton crop will shift.

The quest for alternative fibre sources – raw, natural, synthetic, renewable or recycled – is accelerating. The variety of available natural fibre species is vast, however, the proliferation of cotton has caused a lag in technological investments and industrial developments needed to improve their suitability for the apparel industry. Recent industrial research results are promising, and are bound to introduce new options.

Improvements in dye and laundry technologies, in industry as well as at home, are showing results; clothes (eg Levi's Water<Less) as well as washing machines with a low water and/or detergent footprint have already entered the market. With rising water and electricity bills, the rhythm of development and innovation for industry equipment and home appliances will no doubt increase further.

We also can expect a re-evaluation of what is produced and when. Some suppliers and retailers could find it difficult to operate their current business models under the shifted conditions. Products with higher margins – the mid to top segment in the apparel sector – will be able to meet



new financial and production constraints more easily and take up a priority position in the eyes of supplying manufacturers.

Low-margin, high-volume contracting retailers, on the other hand, could be challenged to find suppliers in possession of both the necessary manufacturing technology and reliable access to the amount of water resources required.

www.theguardian.com/sustainable-business/water-scarcity-fashion-industry



SECRET WATER



WHAT CAN YOU DO...
about all the secret water wasted in our clothes?

Look after your clothes.	Use the eco-cycle on your washing machine.	Buy sustainable, fairtrade, organic or 'better' cotton.	Let other people know about all of the secret water in our clothes.
Recycle: Find something cool in a charity shop.	Recycle: Donate your old clothes to the local charity shop.	Recycle: Pass outgrown clothes on to little brothers and sisters.	Recycle: Never throw out old clothes - take them to textile recycling bank.
Recycle: Have a clothes swap with friends.	Recycle: Make something new from the scrap fabrics bag.	Upcycle: Customise an old garment to make a jazzed-up new one.	Upcycle: Sew a layer of lace or other fabric at the bottom of your dresses to make them longer.
Upcycle: Sew patches or embellishments onto older clothes to make them trendy.	Upcycle: Turn a recycled t-shirt that's too big into a dress by adding a belt.	Upcycle: Use an old t-shirt to make a tote bag.	Upcycle: Sew old fabrics together to create a quilt.



How to make a tie dye shirt

You will need:

- A plain cotton shirt
- Rubber bands
- Gloves
- Garbage bags and masking tape
- Apron or paint smock
- Fabric Dye in any colour you like
- Cling film or sandwich bag
- Bucket

Steps:

1. Tape the garbage bags to your table using the masking tape
2. Put on your apron or paint smock and gloves. Dye is very messy and will stain.
3. Wet your shirt in room temperature water so that it is soaking wet.
4. Roll up your shirt in any way you like and wrap rubber bands to create your design. Wherever the bands are the dye will be lighter.
5. Prepare your fabric dye by following the instructions on the bottle.
6. Carefully pour the dye onto your shirt until it is soaked.
7. Wrap the shirt in cling film or put it in a sandwich bag.
8. Let it soak in the bag for at least 4 hours.
9. Put your gloves back on and rinse the shirt in a bucket of cold water.
10. Wash your shirt in the washing machine.
11. Now you can wear and enjoy your upcycled shirt!





How to make a Water Explorer T-Shirt

You will need:

- Pencil
- Black permanent marker or fabric markers
- Plain t-shirt
- Sun/Clothes Dryer/Hair dryer/Hand dryer

Steps:

1. Using a pencil draw your own design onto the t-shirt
 - a. Think about what you want to draw – do you want to have a water saving message, symbols, words?
2. Trace over your pencil design with a black permanent marker or fabric markers
3. Dry the ink: You could lay your shirt flat in the sun for about 2 hours to let the ink dry OR pop it in the clothes dryer for half an hour OR pop it under a hair/hand dryer for a few minutes.
4. Now your shirt is ready to wear!

You could wear your Water Explorer shirt to your fashion show or Water Festival.





Here are some other great fashion ideas from Water Explorers just like you!





SECRET WATER

How to make a t-shirt tote bag

You will need:

- An old t-shirt
- Scissors
- Felt tip pen
- Ruler

Steps:

1. Cut the sleeves off your shirt along the seam
2. Cut the collar off your shirt along the seam
3. Turn your shirt inside out
4. Using a ruler draw a horizontal line about three inches above the bottom of your shirt (line 1)
5. Draw a vertical line from the bottom of your shirt to line 1 every inch.
6. Use your scissors to cut along the vertical lines. Make sure you cut the front and back of the shirt at the same time to create fringes at the bottom.
7. Tie each front fringe with the back fringe to create a tassel.
8. Hold two tassels that are beside each other and tie them together so that there are no gaps or holes.
9. Turn your shirt back the right way (so that it isn't inside out)
10. Enjoy your new upcycled bag!

How to make shorts out of jeans

You will need:

- An old pair of jeans
- Scissors
- Felt tip pen
- Ruler

Steps:

1. Put your jeans on and draw a small line about 6 inches below the spot you would like them to sit on your legs.
2. Take the jeans off.
3. Using your ruler measure how far it is from the waist band to the line you drew (line 1)
4. Draw dots around your jeans at the same length as line 1.
5. Join your dots with a ruler to make a horizontal line.
6. Using your scissors carefully cut your jeans along the line.
7. Fold the last six inches of your jeans up (you might need to do this 2 or 3 times).
8. Enjoy your upcycled denim shorts!

Tip: It's a good idea to do this at the end of winter – especially when you are a kid who is likely to outgrow your jeans by the next year.



SECRET WATER

How to Run a Fashion Show

Step 1 – Organising the Fashion Show

- ❑ **Choose a location for your fashion show. E.g. A school hall or classroom**
- ❑ **Choose a time and date for the fashion show.**
- ❑ Decide **who will be invited to the fashion show e.g. parents, other classes**
- ❑ Invite **people to the fashion show by sending out invitations, putting up posters or writing a notice for the school newsletter.**
- ❑ Finish **your designs or posters to make sure they're ready to present.**
- ❑ **Upcycle your clothes and bring them in for the fashion show.**

Step 2 – Setting up the Fashion Show

- ❑ **Build a runway for the centre of the room. You could use a strip of carpet, masking tape or even your water walkway footprints for this.**
- ❑ **Create a space for the audience by placing chairs on either side of the runway.**
- ❑ **Create a gallery space around the outside of the room between the walls and the audience chairs.**
- ❑ **Display your posters or fashion designs in the gallery space.**

Step 3 – During the Fashion Show

- ❑ **Allow time for the audience to look at your gallery and to watch the fashion show.**
- ❑ **Groups can walk down the runway holding their designs up for everyone to see OR model the clothes they have reused or upcycled.**
- ❑ **Use a microphone to tell people about each design or water saving clothing idea as they walk down the runway.**

After the fashion show remind people to make water saving pledges!

