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The Yippittee!

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for kids who are crazy about conservation!

Issue 7 Summer 2011

Wet, wet, wet!

On a hot summer's day its great fun to have a water fight, splash in a pool and drink icy cold water. We take it for granted that when we turn on a tap, water will come out! Its a good job too, since we use it for so many things, like.... washing ourselves, clothes and dishes, cooking, cleaning, watering the garden and drinking.

It seems like we've got plenty of water so what's all the fuss about? Well there isn't an endless supply of water, it has to come from somewhere and sometimes there isn't enough. Let's not forget we're not the only ones that need water, plants and animals need it to survive as well. This issue of The Yippittee! follows the journey of water and reminds us just how precious it is!

What's Inside...

Water Facts

70% of an adult's body is water! (even more for a child).

About two-thirds of the earth is covered in water!

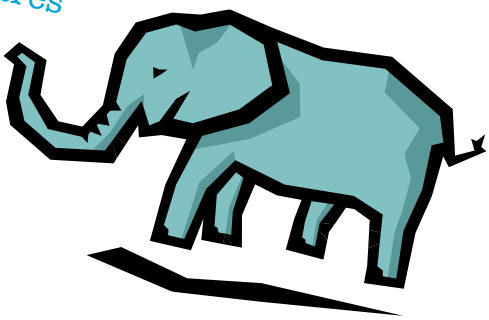
A human can only survive for about 3 days without water.

But....only 3% of the water on earth is drinkable - the rest of it is in the sea so its too salty!

And even most of that is frozen!

By the time you feel thirsty you are already 2% dehydrated.

An elephant drinks 190 litres of water a day!



There are more people in the world with mobile telephones than have access to a toilet!

The driest place on earth is the Atacama desert in Chile, South America

Some parts have not had any rain for over 400 years!

The ancient Romans had better water quality than half the people in the world do now!

Water boils at 100 degrees centigrade and freezes at 0 degrees centigrade. You can lower the freezing point by adding salt, which is why the sea rarely freezes and why salt grit is put on roads in the winter!

The chemical symbol for water is H_2O - that means that its a "compound" made of one oxygen atom and two hydrogen.

H_2O

When it rains, it pours!

A drop in the ocean

The drip, drip effect

It's raining cats and dogs!

Watered down

Like water off a duck's back!

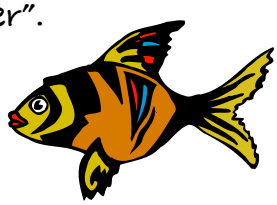
Can you find out the meanings of these sayings?

It's water under the bridge.

You can take a horse to water, but you can't force it to drink.

Aqua

is the Latin word for "water". That's why many words to do with water have "aqua" in them such as...



Aquamarine -- a greenish-blue colour.
Aquarium - a big fish tank.
Aqueduct - a man-made channel for water to travel along.

In Greek mythology the god of the sea was called

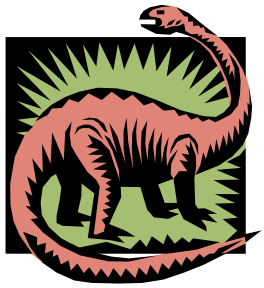
Poseidon.

This is where the French word "poisson" meaning "fish"comes from!

knightopia – CC BY-SA 2.0

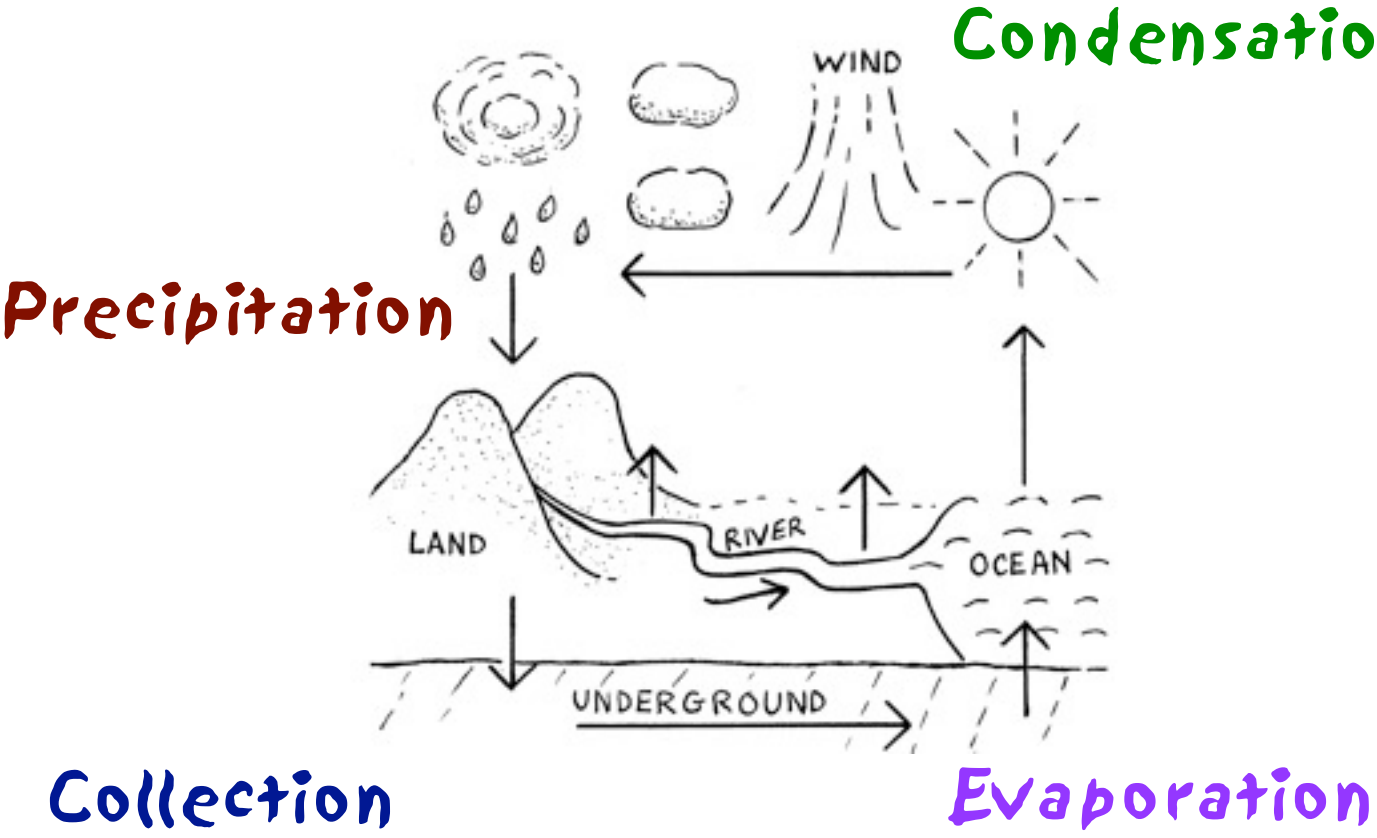
Neptune was the Roman god of the sea and of all water and was a new name for Poseidon. They celebrated his festival on July 23rd when water was at its scarcest.

THE WATER CYCLE



Did you know the water that falls on us when it rains is the same water which fell in the time when dinosaurs were said to have roamed the earth millions of years ago!

So where do the rain comes from? The clouds in the sky? That's true but what happens to it after that? And why doesn't the sea get deeper and deeper with all the rivers running into it? Read on to find out the answers to these questions and more....



Precipitation Water falls as rain, hail, sleet and snow.

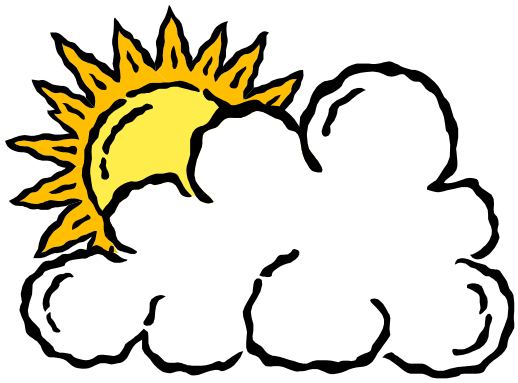
It soaks into the earth and also runs down mountains and hills in small streams.

When the streams join together they make a river. Sometimes rivers join together too to make an even bigger one. When this happens the smaller rivers are called **"tributaries"**.

Eventually all rivers flow to the sea. The place where they join is called the **"mouth"** of the river. If muddy sand is exposed when the tide goes out then it is also called an **"estuary"**. Many long legged wading birds find their food in the mud.

Evaporation

When the sun shines on a puddle, it dries up as the water evaporates. This is when the water heats up and turns from a liquid to a gas or what we call water vapour. Water in the sea also evaporates. Sea water is salty but when it evaporates the salt stays in the sea.



Did you know...?

Water is the only thing that can exist as a liquid (water), as a gas (water vapour, like steam) and as a solid (ice). It is the temperature of the water that changes it from one to another.

Condensation

Evaporated water goes up into the sky. As it cools down it condenses back into water droplets which make the clouds we see in the sky.

You can see condensation in your bathroom after someone has had a hot shower. As the steam from the hot water cools down it condenses back into water which is why the walls and mirrors can get very wet!

Eventually the clouds become so full of water and heavy that they burst and it starts to rain! By this time the clouds may have been blown by the wind from over the sea to over the land.

What is... water vapour?

When water heats up it turns into a gas - this is called water vapour. If you boil a kettle, have a bath or a shower you can see the water vapour as steam.

You can sometimes feel water vapour in the air. On a hot sunny day if it feels sticky and humid, then there's lots of water vapour in the air. Sometimes water vapour can be seen in the form of mist and fog.

Rainforests are very humid, muggy places to be, full of water vapour, because of all the water which has evaporated. Deserts are the opposite - they have a dry heat because there is little moisture in the air.

Why does it rain over mountains?

Warm air can hold more water vapour (gas) than cooler air. Mountains are a barrier which forces warm air up over it to a height where the air is cooler. This causes the water vapour to cool and forms clouds if there is enough moisture or fog.

Raindrops are falling on my head....

Droughts

Droughts are when there is no rain, sometimes for months on end, even years. It can be very difficult to survive in these conditions. As well as having nothing to drink, people cannot grow food without water either. In fact sometimes the ground can be so hard, baked by the sun, that it is impossible to plant seeds there in the first place! If there is water, it is often dirty and can make people really ill.

Even in Britain we can suffer from droughts. If we have little rain for months on end, reservoirs can run low which is when water companies ask us to be extra careful with how much water we use and sometimes impose a hosepipe ban.

Flooding

Flooding is the opposite to a drought. It when there is too much rain at one time. Sometimes floods are expected - these are called monsoons. They are needed to growing rice in flooded "paddy" fields.

Flooding is a natural event. In Britain there are fields called flood plains where the water can go if a river bursts its banks after heavy rainfall. However many houses have been built on these flood plains so now they get flooded - what a silly thing to do!!

How many gardens have you seen where the lawn has been covered in concrete? These are places where rainwater would be soaking into the ground like a big sponge. If the soil is covered in concrete there is nowhere for the water to go except down the drain and it can cause flooding.

Climate Change

This could be increasing the amount of droughts and flooding experienced by people around the world. The world's weather patterns are changing and this could be because of all the greenhouse gases we are releasing into the air.

A Flushing Problem

We're so used to flushing the loo, we can't imagine life without it!

Did you know...?
2.6 billion people, that's 40% of the world's population do not have a clean or safe place to go to the toilet.
World Heath Organisation/UNICEF

Did you know...?
Over 80% of sewage in poorer developing countries goes straight in to the rivers, lakes and sea, without being cleaned first!!

No School Today

Water is something we use everyday and just expect it to be there. We simply turn on a tap. And we don't expect that if we have a drink that it might make us poorly. Yet this is something which happens to thousands of children across the world.

You might like the idea of a day off school, but in Africa some girls never go to school. The reason? Well many them don't go because they are too busy walking miles to collect water for the family, or because the school does not have any toilets! So next time you go to the toilet at school, be thankful!

Join The Big Squat on World Toilet Day

19th November 2011

http://www.worldtoilet.org/wtd/

Did You Know...?
A man called Thomas Crapper invented the flushing toilets at the end of the 1800s. Before that people just threw their sewage down into the street - yuck!

Did you know...?
Everyday 5,000 children under 5 years old die of diseases caused by drinking dirty water.

Toilet Twinning

You've heard of town twinning, well this is toilet twinning! Give your toilet a twin loo in Burundi, Africa. It costs £60 - perhaps your school could raise money for one www.toilettwinning.org

Rain, streams & rivers

↓

Reservoir

↓

Cleaning station

↓

Pipes

↓

My house

↓

Down the plughole

↓

Sewage pipes

↓

Water treatment works

↓

Rivers and the sea

DOWN THE PLUGHOLE

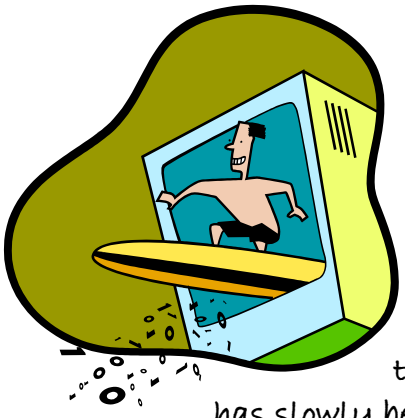
Where does the water go?

When you turn on a tap, do you ever think about how the clean water gets to you and what happens to it once it has gone down the plug hole?

- Water is collected in big man-made lakes called **reservoirs**. From there, when it is needed, it goes to a special cleaning plant where they filter it to take out any bits of dirt and clean it using chemicals such as chlorine to get rid of any germs.

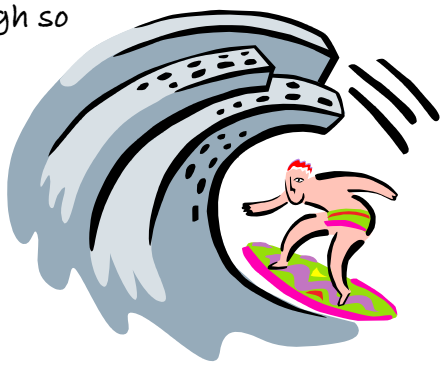
- It is then send along big pipes to your home.

- Once it has gone down the plug hole or into the sewers it has to go to another cleaning factory where they again filter the water to get bits of rubbish and food out. Toilet waste is left in big tanks so that the dirty bits can sink to the bottom or float to the top and get scooped off.



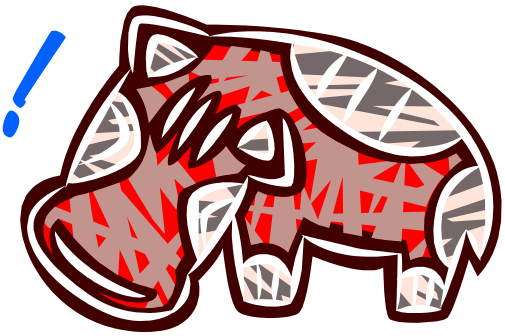
Surfers Against Sewage!

In Victorian times all sewage went straight out to sea through big pipes. This practice has slowly been stopped in the UK. However, after torrential rains when the drains fill up quickly with water, sometimes the factories can't clean the water quick enough so it goes straight out to sea. That's why we all need to make sure that we don't throw any rubbish down the toilet (apart from toilet paper) because it could just end up in the sea!



Make a Splash!

and save water!



Did you know...?

Every person in the UK uses about 150 litres of water a day! Compare this to some countries where they only have 5-10 litres! The amount of water each person uses has increased over the years and the number of people has also increased. This means we all need to be careful so we don't run out of water and so that the water cleaning factories don't waste energy.

Put a HIPPO in your toilet!

Yes that's right, but not the kind you find in Africa! No these are special bags which take up space in the tank part of the toilet (the part that holds the water before you flush). With the bag taking up space, the tank can't hold as much water, so every flush uses less water. Alternatively you can fill a plastic litre bottle with water, out the lid on, pop it in the tank and it does the same job.

Did You Know...?

A third of the water we use each day in Britain is for flushing the loo!

Turn off while brushing

Switch off the tap when you brush your teeth. If everyone in your street did that. in a year that could save enough water to fill an olympic sized swimming pool!

Fully loaded

If you hand wash the pots, use a bowl and rinse them, but don't leave the tap running. Make sure a dishwasher or washing machine is full before you use it. Although you can set them to half a load, it's still better to wash everything at once.

COMPOST - not just for fruit and veg!!

Here's a way of turning all your poo into something useful! Compost toilets don't use any water at all, instead the waste goes into a big hole in the ground. After a few years when it has rotted you are left with really good soil which can be put on your garden where you can grow vegetables!

Shower more, bath less

A full bath uses about 80 litres of water. That's twice the amount of water that a 5 - 10 minute shower uses, so save water by only bathing now and then and have short showers instead, or simply have a shallow bath. You can even share the water! Mind you power showers are just as bad as baths! You can also wash all the necessary places by filling up a sink with water and using soap and a flannel. You can even use the dirty water to water your garden or flush your toilet!!

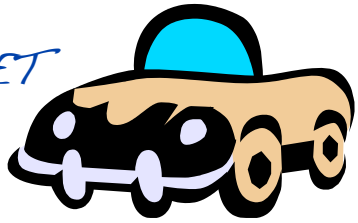
Do The CAN-CAN!

Using a watering can to water your garden will use less water than a hose pipe.

Did you know...?
a garden sprinkler uses between 640 and 1000 litres an one hour! That's more than a family of 4 would normally use in one day!

Did you know...?
in the second world war bath water was rationed to 12.5 cm a week!

Save BUCKET loads

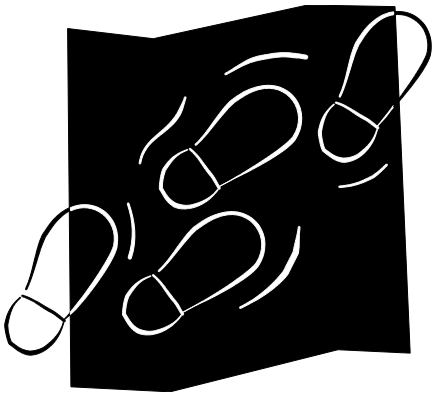


Washing the car using a bucket and sponge will use less water than leaving the hosepipe running all the time. However if you quickly just use the hose to rinse and switch off at other times, this will also save water.

Get a WATER BUTT.

What do you do when it hasn't rained in ages and you need to water the garden? Well now you can save water from rainy days for those dry days. All that water running off your rooftops goes straight down the drain. Instead of wasting it, you can divert the water from the drainpipe to a big barrel, called a water butt. These can hold about 200 litres of water and you'd be amazed how quickly they fill up.!!

Please note!
Whatever you do, drinking water is very important so you should NOT try to save water by drinking less - we all need it to stay healthy.



Water Footprints..... hidden water

Everyday in Britain each person uses about 150 litres of wter. However, everyday each person has an an extra 4,645 litres in "hidden" water use. This is the water that is used to produce the things we eat or use such as food and clothing - we call this a water footprint.

Here are the water footprints of some other products, as quoted from the website www.waterfootprint.org/page=files/productgallery

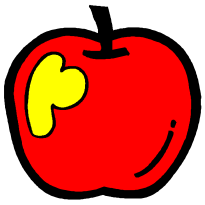
1 cotton shirt = 2,700 litres

Cotton, a plant used to make shirts and jeans needs an immense amount of water to grow. So, to produce one cotton shirt around 2,700 litres of water will have been used.

Beefburger = 2,400 litres of water - mostly from producing the beef.

1kg beef = 15,500 litres

The water footprint of animals is not just what they drink, its also what is used to water the plants that they eat and to keep their living areas clean.



Apple = 70 litres

1 sheet A4 paper = 10 litres

Cup of tea = 30 litres

Cup of coffee = 140 litres

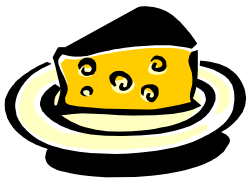
1kg Wheat = 1,300 litres

1 slice of bread = 40 litres

1kg Chicken = 3,900 litres.

What can we do?

- Eat less meat and dairy products
- Buy free range meat & dairy
- Buy organic cotton or clothes made from other materials
- Don't waste paper and recycle
- Don't waste food



Cheese - 1kg = 5,000 litres

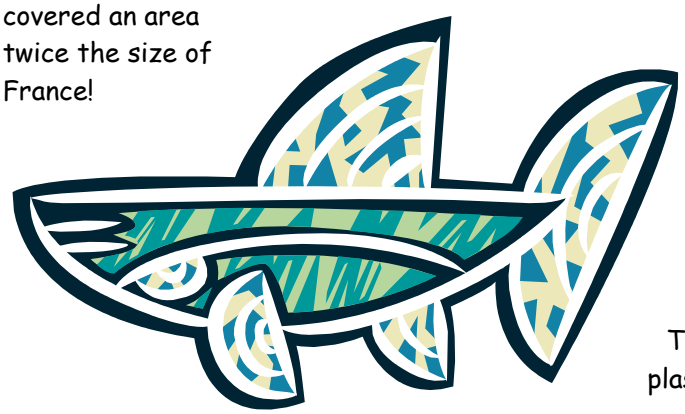
Have a look at the National Geographic's water footprint calculator http://environment.nationalgeographic.com/environment/freshwater/water-footprint-calculator/

Rubbish Soup!

There was once a named Charles Moore who in 1997 decided to take a short cut home after sailing in a yacht race on the Pacific ocean, the biggest ocean in the world. His route took him to an area ships usually avoided because of the strong, swirling underwater currents.

One day as he looked out to sea he made an amazing discovery. He found himself surrounded by rubbish, floating past him on all sides. This went on for days and days.

He reckoned there must be 100 million tons of rubbish in that place, mainly plastic. Later he found out that it covered an area twice the size of France!



Not only that but as well as it floating on the surface of the sea, it was up to 10 metres deep! So he nicknamed it "rubbish soup" and this soup is still there to this day.

The rubbish could have been dropped <u>anywhere</u> in the world, even in the middle of a city far from the sea. The wind could blow it and rivers could carry it out to sea. In fact it was discovered that only about 20% of the rubbish came from ships, the rest was from land.

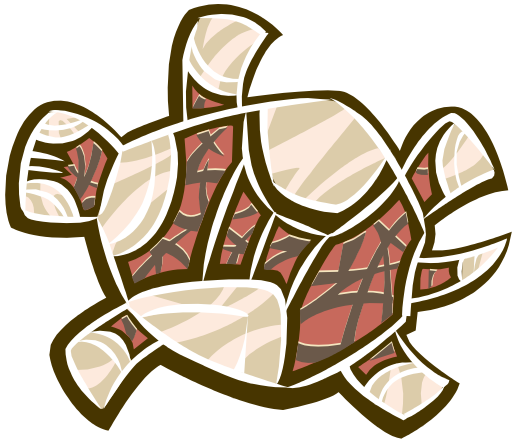
Rubbish soup is not a pretty sight, but apart from that it can be very harmful to wildlife. For example, not many sea creatures go shopping at supermarkets, so when a turtle sees a plastic bag floating around, it thinks "Yummy, a squid!" No! But too late, they try to eat it, choke and die. Even big creatures like whales can eventually be harmed as the plastic clogs up their insides.

Did you know...?

Every year over a million seabirds and 100,000 marine mammals die from eating plastic.
[United Nations Environment Programme]

Some of the beautiful beaches of the islands of Hawaii are strewn with rubbish and some of the sandy beaches at a closer look are actually made of tiny pieces of plastic!

The trouble is that plastic takes



hundreds of years to rot. It breaks down into smaller flakes that look just like fish food. Little fish think it's plankton and eat it. They may get eaten by bigger fish and the plastic chemicals could end up in them. Then we humans that created the mess in the first place might eat those fish and that might not be too good for us either.

Rubbish Soup Ingredients:

a football
a doll
lego pieces
plastic bag
toothbrush
washing up bottle
cotton bud
or anything else that is plastic and harms wildlife!

So what's the moral of this story? **Reduce, reuse and recycle your plastic but most of all don't drop it, bin it!!**

A lot of bottle!

If you wander around the supermarket you will find row upon row of bottled water in the drinks aisle. We're so fortunate in Britain to have clean, safe water on tap. So why do people buy it bottled?

In Britain at least one and a half billion litres of bottled water are drunk each year!

Did you know...?
Every year people in Britain together spend about 2 billion pounds on bottled water.

Myth: Bottled water tastes better!
Well sometimes -but blindfold taste tests have shown, people can't always tell the difference between them and many prefer the taste of tap water!

In a world where one out of eight people don't have access to safe drinking water, it seems crazy that some of us will pay to have bottled water when we have perfectly good water from the tap!

Myth: Bottled water is safer than tap water.

Did you know...
Some brands of tap water are actually just filtered tap water! It just costs a lot more!

Clean fresh water...
From a bottle?
Think again.....

Bottled water labels often have a picture of a pristine sparkling lake or a fresh mountain top. Yet buying bottled comes with a high environmental cost.

Making the bottles
A million tons of plastic was used in one year to make all the water bottles. Plastic is made from oil - so in one year enough energy was used to fuel a million cars for a whole year!

Transporting the water
About a quarter of bottled water is imported from other countries. This means lots of lorries are used to transport them which makes a lot of air pollution.

Did you know...?
Some bottled water travels 10,000 miles to get to us!

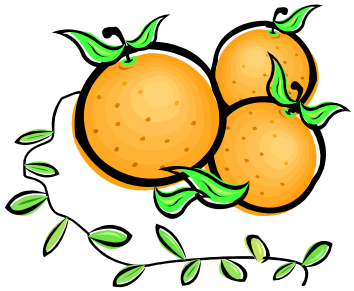
Bottles of waste
Only about a quarter of these bottles are recycled, the rest end up on a rubbish dump where they take 450 years to rot or are burnt and release toxic gases!

Myth: It's worth the money!
Tap water costs about £1 per 1,000 litres and whereas bottled costs 95 pence per litre.

What can we do?
- Don't buy bottled water!
- Fill a flask or bottle with tap water
- Ask for tap water in restaurants
- There is an exception - in some countries where the water quality is poor, then you have no option but to drink bottled water.

Find out more about the story of bottled water..... http://storyofstuff.org/bottledwater/

Acid Rain



Acid is something which if strong enough could burn your skin. What's more likely to happen to us though would be if we accidently squirted the juice from an orange into one of our eyes, making it sting! Lemon juice and vinegar are other examples of acidic things. Even rain is naturally very slightly acidic but the problems begin when we pollute the air.

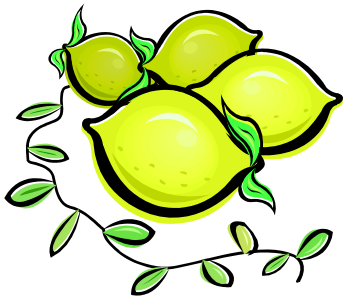
Cars, lorries, factories and electricity producing power stations can all make pollution - the air becomes dirty from the smoke they produce. In this smoke there are also invisible gases such as nitrogen oxides and sulphur dioxide which, when they mix with tiny water droplets in the clouds make "acid rain". This is far more damaging than normal rain because it can kill whole forests, and all the life found in rivers and lakes. As the gases are carried in clouds, the acid rain can fall far from where the pollution was first made.

New rules to help stop these gases from getting into the air in the first place mean that acid rain is not as huge a problem as it used to be. If we make electricity in cleaner ways, such as by using renewable energy, like wind, water and solar (sun) power instead of by burning coal in power stations, this should help solve the problem too.

What's Been Done About It?

Since acid rain became a problem, lots of things have been done to help solve it! Many countries have greatly reduced their emissions.
Power stations now have big "sulphur scrubbers" in their chimneys to wash out the sulphur with water and powdered limestone. Rivers and lakes can be made less acidic by adding powered limestone to the water. This is known as "liming".

What You Can Do.....



Try to walk short journeys or go on your bike instead of using the car.
Save electricity at home - switch things off when you're not using them.
Don't waste hot water - energy is needed to heat it up.
Re-use old things, don't always buy new things which have to be made in factories.

Water Wordsearch

Can you find the words hidden in the grid?

v g r e t t i l s
a a n t e l i o t
q e p i p e s o h
u l n o k t o n g
a c d u u n l i u
n y o c l r i a o
o c s h o w e r r
i g n e a b o u d
t n i h w a t e r
u i a w n a e c o
l h r d d k g f r
l s d x g s l e d
o a i n p o i s e
p w c l o u d s l
e i a d s h y h t
d s p t e w t e t
h c e e p r i a o
h a b i t a t m b
h d e s e r t e d

acid rain
aqua
bath
bottled
clouds
cycle
desert
drinking
drought
flood
habitat
hosepipe
litter
ocean
pollution
sewage
shower
splash
swim
tap
toilet
vapour
washing
water

Crazy About Conservation!

We'd love to show some of your letters, jokes, poems, stories or pictures so if you have any then please write to us or e-mail them. We'd also love to hear your ideas for future editions of The Yippittee! - please, let us know!!

Crazy about Conservation! YPTE, 3A Market Square, Crewkerne, Somerset, TA18 7LE

or e-mail it to us at... info@ypte.org.uk

Where am I?

"Water water everywhere and not a drop to drink...." see the bottom of the page for the answer!

Water to share.....

Apart from using water ourselves, there are a number of other ways it is used:

- In factories, to make things;
- By farmers, for their fields;
- By wildlife in rivers.

You're joking!

What runs but never walks?
Water.

What kind of hair do oceans have?
Wavy.

What's full of holes but can still hold water?
A sponge!

What's an ig?
An icy house without a toilet!

Keep in touch with the latest environmental news on the home page of our website. Also you keep in touch with what we're doing at YPTE on facebook and twitter @ypte .

Answer:

Where am I? - on the sea or at the north pole! Its either too salty or its frozen!

Websites:

Water Aid http://www.wateraid.org/uk/
Toilet Twinning http://www.toilettwinning.org/
Water Saving Tips http://www.water-guide.org.uk/tips.html
The Geography Site www.geography-site.co.uk
Water Footprint http://www.water-guide.org.uk/tips.html

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