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October 2014

Dear Leaders

Please find enclosed with this letter the Severn Trent 'Waste Water and Me' Challenge as advertised in our Adventure in the Midlands Booklet.

The pack is divided into four themes: -

1. Waste Water - fun activities related to waste water to help you understand what happens to it and how you can help Severn Trent by raising awareness of misuse.
2. Water Efficiency - climate change means we will have even less water in the future. These activities involve how you can look at your water use and can reduce it.
3. Water Aid - activities relating to Water Aid help you understand issues surrounding water and sanitation in other countries and by completing this challenge and purchasing badges you will be contributing to vital Water Aid funds. There is also a sponsor form to complete if you choose to take part in the sponsored walk carrying a 10 litre bucket of water.
4. Love Your River - these activities are designed to help you understand how the drains take our rain to rivers and about the animals that we find there.

All you need to do to complete the challenge is to participate in one activity from each section plus one other of your choice.

When you have completed the challenge place your badge order (form enclosed) and send together with sponsor money and forms if appropriate. Cheques should be payable to 'The Guide Association - Midlands' at the following address: -

Girlguiding Midlands, 21 Lower Church Street, Ashby de la Zouch, Leicestershire LE65 1AB

If you have a really newsworthy idea then contact your County PR Adviser or Girlguiding Midlands Office who will be able to help you to make the most of this media opportunity.

Look out for the facebook and twitter feeds too!

Once again, thank you for taking part in this Community Project that will make such a difference to Water Aid and our environment.

Sally Illsley
Chief Commissioner

supported by Environment Agency

SEVERN TRENT WATER

waste, water and me

Midlands

WE DISCOVER, WE GROW

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Girlguiding Midlands

Waste, Water and Me

Find out more about water and get the badge!

Contents

waste, water and me themes

Theme 1 **Waste Water**	Sewage is everything that goes into drains and sewers – including rainwater and waste water from washing machines, dishwashers, sinks and industry. Severn Trent Water handles more than 2.5 billion litres of water every day. Activities related to waste water help you to understand what happens to it before it can be returned to the environment. The activities also show how you can help Severn Trent Water by raising awareness of sewer misuse.
Theme 2 **Water Efficiency**	Climate change, a growing population and our modern lifestyles means we will have even less water available in the future, so we need to do something now. It's increasingly important that we preserve our natural environment for future generations. Scientists are predicting that climate change could lead to significant changes in our weather patterns, including longer, hotter and drier summers. Activities related to water efficiency help you to look at your water use and how you could reduce it.
Theme 3 **WaterAid**	WaterAid is an international non governmental organisation whose mission is to transform lives by improving access to safe water, hygiene and sanitation in the world's poorest communities. Activities relating to WaterAid help you to understand issues surrounding water and sanitation in other countries. Through completing this badge, you will also be helping to raise vital funds.
Theme 4 **Love your River**	Rivers are the lifeblood of our country – we want you to play your part in looking after them. Many of our drains lead directly to local brooks, streams and rivers and we all play a role in making sure our water does not become polluted. These activities will help you understand how the drains that take our rain to rivers need to be protected and about the animals that we find there.

Share the message

Waste Water

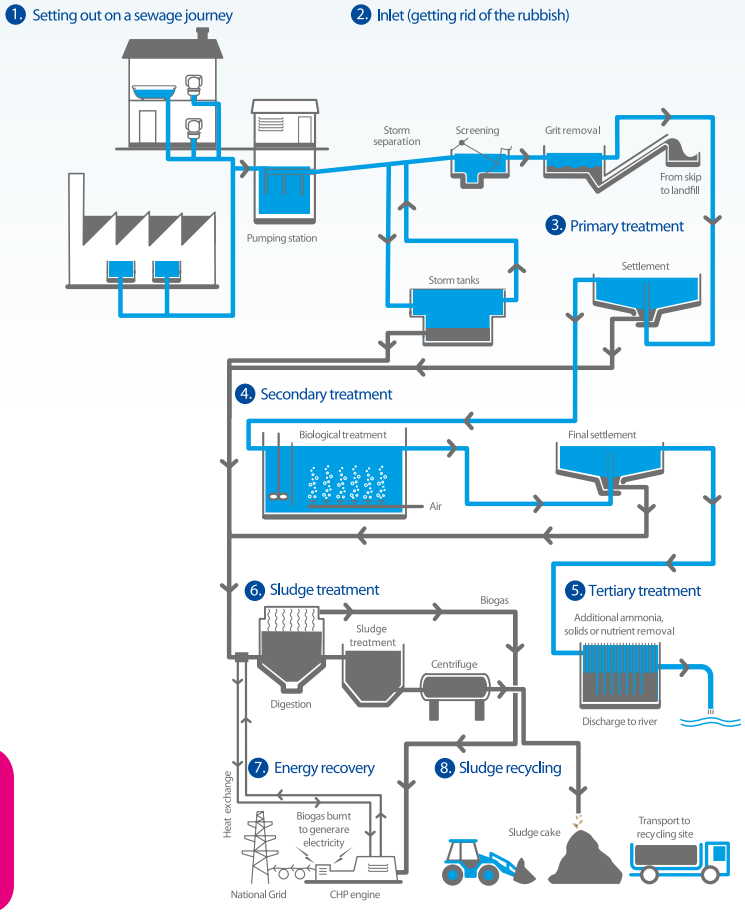
Help share the message by creating a poster.

Lots of people don't like talking about going to the toilet or what happens after you've been. They often find it embarrassing, but it's an important part of Severn Trent Water's business to make sure this used waste water is taken away and cleaned properly.

If you ask people what they think happens to sewage, many will say it goes into the sea or river. Some people know it is cleaned but not how useful it can actually be!

Use the information provided to design a fun cartoon showing the journey of something that gets flushed down the toilet.

This could be displayed in the toilets at your hall to educate other people who use your toilets.



Did you know?

The average person spends three years of their life on the toilet!

Turn over for more information about what happens to sewage on its journey back to the environment.

Information:

www.stwater.co.uk/treatingwaste **www.stwater.co.uk/cleaningsewage**

Cont'd overleaf

1. Setting out on a sewage journey

Every time we have a bath, brush our teeth or do the washing up, the water we use gets dirty. As this dirty water, known as sewage, leaves our home it travels in pipes, known as sewers, along with other waste water that is washed, flushed or drained away. It is collected in an underground network of sewers (known as the 'sewerage system') and transported to a sewage treatment works. The waste water begins a journey that will eventually see it turned into clean water again.

2. Inlet (getting rid of the rubbish)

Next, the sewage arrives at the treatment works, where cleaning it up begins. Metal nets called 'screens' remove rubbish like sticks and bricks that could damage equipment or even block pipes. The sewage passes through channels or chambers where small stones are removed, before it continues its journey to be cleaned.

3. Primary treatment

The next part of the journey takes place in the primary settlement tanks. These large tanks receive incoming 'screened sewage' and fats, oils and grease float to the top and are removed by scrapers on the top of the tank. 'Sludge' that has sunk to the bottom of the tank is regularly removed by scrapers and pumps for further treatment.

4. Secondary treatment

The fourth stage of the clean-up journey is really clever. We get help from millions of tiny bacteria and other micro-organisms to 'eat' most of the remaining organic matter in the sewage, leaving nearly clean water, carbon dioxide and nitrogen. We provide the bacteria with ideal conditions in which to 'work' and they grow, using the organic matter in the sewage as their 'food'.

At this stage, the water is suitable for putting back into the environment or continuing on the journey for more treatment.

5. Tertiary treatment

There are strict rules around the quality of cleaned water that we put back into rivers and streams. These are enforced by the Environment Agency. Sometimes, where there is a need for very high quality of clean water, we have another final stage in the treatment journey, known as tertiary treatment. Here we can remove nutrients such as phosphorus and nitrates from the water through chemical or biological treatment.

6. Sludge treatment

Sludge is always produced when we clean sewage. Sludge contains organic material and valuable nutrients that can help farmers grow more crops but it needs more treatment before it is safe to use on land. Bacteria break down the sludge and destroy any potentially dangerous substances. We are then left with gas, water and treated sludge, which we call 'cake' for recycling on farms and other sites.

7. Energy recovery

The biogas produced by digesting sewage sludge is mainly methane and we can burn the gas to make energy. Usually, we produce more of this biogas than we need to as part of the treatment process, so wherever possible we use it to generate electricity.

8. Sludge recycling

In the old days, sewage treatment works were known as sewage farms, because sludge has always been used in farming. Sludge contains nutrients like nitrogen and phosphorus, that can help crops grow. Modern treatment methods, and strong environmental controls, mean we can provide a safe and valuable service to farmers.

Make your own fat trap

Waste Water

Drains and sewers are designed to take away waste water from homes, schools and businesses but people often dispose of other things there too. A big problem for Severn Trent Water is fats, oils and greases which go hard in the pipes when people pour them down the sink.

Severn Trent Water has fat traps which customers can collect from visitor sites or order free from our website **www.stwater.co.uk/fat-trap** but you could always make one (or two!).

You will need:

- An old 1 litre bottle (preferably with lid) or a used can
- A funnel (if using a bottle)
- Paint
- Paint brushes
- Decorations and glue (optional)

Instructions:

1. Remove any labels from the tin or bottle
2. Use the paint and decorations to decorate the bottle or tin to suit the kitchen it is going to be placed in. You can decorate it any way you like, but our advice is to make it pretty and colourful so that people will use it. You could even include some messages telling people to put used cooking fats, oils and greases in it instead of down the sink
3. Once your fat trap is dry, give it to your parents or family member and tell them to pour used fat into it after cooking. REMEMBER: to let the fat cool first
4. If you're using a bottle and it has a lid, you can reseal the bottle to make sure that any smells are kept inside

Points for discussion:

Why shouldn't people put fats, oils and greases down the sink?

Why does the fat get stuck in the pipes?

Who is responsible for fixing a problem if a pipe is blocked?

What could happen if a pipe got blocked?

See **www.stwater.co.uk/pipes-leaks-and-drains**

waste, water and me

Sewage soup

Waste Water

Sewage is a mix of everything that goes down the toilet or plug hole. This includes used water and human waste. Some items in sewage are clear to see and often easy to remove but others are much more difficult.

Have a go at this activity and see how clean you can get your water sample.

The unit will need:

- 1 large clear container half full with tap water
- 4 pieces of toilet paper
- Pinch of salt
- 1 crisp packet
- Handful of cereal
- Small squeeze of toothpaste
- Sprinkling of soap powder
- Couple of leaves
- Squirt of shower gel
- Squirt of washing up liquid
- 1 cotton bud
- Small squirt of oil
- Small handful of soil or compost
- Short length of dental floss
- False/pretend teeth
- 1 wet wipe
- Piece of 'pretend' poo
- 100ml of 'pretend' wee

Each group will need:

- Plastic tray to save spillage whilst the group treats the 'sewage'
- Clear plastic bottle
- 2 plastic cups
- Plastic beaker
- Filter paper
- 1 litre jug
- Colander
- Funnel
- Sieve

Instructions to create pretend poo and wee

Make the 'poo' by mixing Weetabix with gravy granules and a small amount of water. Shape into rough cylinder shapes and wrap loosely in the toilet paper. Make the 'wee' by squeezing a used tea bag into tap water to the desired colour.

Cont'd overleaf

Instructions

To set up the sewage:

1. Place all your ingredients in a big box at the side of the room and ask the girls what they think they might find in sewage
2. Pull out the items you have as they are called
3. One ingredient at a time, ask volunteers to help you add each to the container/tank of tap water, mixing well after each new ingredient is added
4. Look at and discuss what happens to each ingredient. Does it dissolve, disperse, melt, sink, float...?
5. The liquid in the tank at the end of the activity is your sewage

To clean the sewage:

1. It is suggested that all cleaning activity should be done over the trays to collect any spilt liquids and prevent mess
2. A participant from each group collects some sewage from the tank using their 1 litre jug. This is taken back to the group
3. Group members decide for themselves how to clean their sewage using the remaining items of equipment
4. Your cleanest sample of water should be put into the clear plastic bottle for comparison

Points for discussion:

What large objects do you think might get into sewage that shouldn't be there?

Which substances were hardest to remove/could you not remove? Why?

Did you know?

Sewage is 97% water!

Information:

www.stwater.co.uk/cleaningsewage

Write a song or poem

Waste Water

Toilets are designed to remove human waste and toilet paper from your home, school or workplace. When a toilet is flushed the sewage eventually goes into a sewage treatment works.

We often find blockages in our sewers caused by people putting the wrong items down the toilet; you'd be amazed at what we find! This is because a lot of people do not know which items should be flushed and which items shouldn't.

It's not only toilet waste that goes into our drains and sewers, it's also the waste from sinks, showers and baths. It's really important that only used water and small amounts of cleaning fluids, such as shower gel, hand wash and washing up liquid go down the plug hole.

Sometimes our sewers get blocked by people putting food waste, used cooking fats, oils and greases down their sinks. They may go down runny but as soon as they reach the cool walls they go hard and clog up the sewers.

Putting the wrong things in the sewers causes lots of problems and can be very unpleasant, so we need your help.

Write a song or poem that you could perform to your unit or perhaps write it out neatly and display on a notice board.

It might be about things that are acceptable to go down the toilet (poo, wee, toilet paper, water and cleaning products) or maybe what shouldn't go down the toilet and/or sink and why.

Points for discussion:

What items shouldn't be flushed and why?

Why shouldn't we put fats, oils and greases down the plug hole? What happens?

What do you think would make people change their behaviour, for instance, knowing they might pollute the environment, knowing it might flood their garden, etc?

What can you do to help keep the sewers flowing?

Make your own mini water butt

Water Efficiency

Rain water is fantastic for plants so when there is plenty, you can collect it and store it. In drier times, you don't need to use clean drinking water to water your plants, but you can use the water you have saved. Cleaning water to make it good enough to drink uses a lot of energy, so by using rainwater, we are helping to save energy as well.

You will need:

- A large milk bottle (6 pints ideally) and its lid
- Strong garden twine or cable ties
- Outdoor paint
- Paint brushes
- Scissors
- Decorations and glue (optional)

Instructions:

1. Clean and dry the milk bottle and remove the label
2. Carefully cut the base from the bottle (close to the bottom). You may need adult help to do this
3. Use the paint and decorations to decorate the bottle to suit the garden area it is going to be placed in. It could be pretty colours or it could involve water saving messages. (Remember your bottle will be fixed with the lid pointing downwards)
4. Once dry, use the twine or cable ties to attach the bottle to a fence with the lid securely fastened and pointing downwards. When it rains, your mini water butt will collect the water and you can unscrew the lid to release it into a watering can when you need to use it

Points for discussion:

Why can plants use rainwater but we can't drink it?

Why is saving energy important?

Encourage your family to buy a full size water butt:

www.stwater.co.uk/savewater

Design a poster

Water Efficiency

SEVERN TRENT WATER

WE DISCOVER, WE GROW Girlguiding Midlands

Lots of people know that we should save water. It's a precious resource and by using less, we also save on the amount of energy used to clean and transport it.

Sometimes it is easier for people to be involved in something if you tell them how, as well as why.

Share your knowledge of how to save water through a poster that could be displayed in your hall, on a notice board or at home.

Remember to attract people's attention, your poster needs to be bright and clear.

You could change somebody's mind from never thinking about water to being very aware, and saving it, which will help the environment.

Points for discussion:

What does the group use water for?

Why do people take water for granted?

Do you think it will ever run out?

waste, water and me

Reduce your flush

Water Efficiency

More and more often we see toilets that have a button to flush them. This usually means they are low flush, or they have two buttons so you can choose whether to use a big flush or a smaller flush, depending on what needs flushing away.

If you have a toilet with a traditional chain or handle, you could reduce the amount of water that each flush uses by making a simple device to go in the top of the toilet (cistern).

Please note: Your created device isn't suitable for low flush or dual flush toilets

You will need:

- Some coloured sand or different coloured pebbles
- A few pebbles small enough to fit into the bottle
- An empty 1 litre plastic bottle (e.g. milk bottle)

Instructions:

1. Check the bottle will fit in the cistern and doesn't interfere with the flushing mechanism (you may need to ask an adult to do this)
2. Rinse and clean the bottle
3. Place a few pebbles in the bottom to weight it down
4. Use sand or pebbles to build up a pattern in the bottle and top up with water, alternatively you could just fill it with water
5. Replace the lid tightly
6. Place in the toilet cistern (you may need to ask an adult to do this) taking care that the bottle doesn't stop the flushing mechanism working correctly
7. Wash your hands to avoid spreading any germs

Information:

You could always order a free 'save a flush' from the Severn Trent Water website, visit

www.stwater.co.uk/savewater

Did you know?

Archaeologists found evidence of flushing toilets from as early as 2000BC!

waste, water and me

Water use in your family

Water Efficiency

SEVERN TRENT WATER

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Complete an audit of water use in your family.

We tend to take water for granted because we turn on the tap and it's always there. Do you know how much water you really use each day? Ask your family to help you complete the questions for your house and another family house. Input the information into the Severn Trent Water website and see how much water you use each day. The report produced will give you some suggestions of how you could still do the same things with water but use slightly less.

Instructions:

1. Use the printed questions to gather the information. Remember to ask all the people who live in the house unless one person can tell you about everybody
2. When you have collected all the information, type it into the water audit on the Severn Trent Water website at the following address **www.stwater.co.uk/homeaudit**
3. If you have access to a printer, print out the report about water use in your two houses and take them with you to the next meeting so you can discuss what you found

Did you know?

The average water use in the Severn Trent Water region is 130 litres per person, per day. That's a whopping 65 fizzy pop bottles.

waste, water and me

Cont'd overleaf

Waste Audit

Question	Answer		Notes
1. Family name			
2. How many people live in the house?			
3. How many days is your house empty each year?			How many days are you all on holiday?
4. Does your house have a water meter?			Yes/No
5. How many toilets do you have?			Low flush or single flush with save a flush
			Single flush without save a flush
			Dual flush
6. Number of dripping taps in the bathroom			
7. Number of washes each day			Hands and/or hands and face
8. Number of baths each week			
9. Number of showers each day	Number:	Minutes:	Standard shower (minutes each)
	Number:	Minutes:	Power shower (minutes each)
10. Number of times teeth are brushed per day			Tap running
			Tap off
11. How many meals are prepared each day?			
12. How many drinks are made each day?			
13. Number of dripping taps in the kitchen			
14. Number of times dishes are washed			By hand, each day
			By dishwasher, each week
15. Number of times clothes are washed			By hand, each week
			By machine, each week
16. How many times is a car washed each year?			With a bucket
	Number:	Minutes:	With a hosepipe
17. How many times is the garden watered per week?			With a watering can
	Number:	Minutes:	With a hosepipe
18. How many water butts do you have?			
19. Does your hosepipe have a trigger gun?			Yes/No/No hosepipe

Create a supply network

Water Efficiency

SEVERN TRENT WATER

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Ever wondered what it would be like to be a Severn Trent Water engineer?

Have you ever wondered how water gets from the water treatment works to your house or school? You may already know that it is carried by pipes under the ground from the works to your tap. This challenge has been created to test your problem solving skills and to see if you can create a supply network of your own, to carry water from one point to another.

Your challenge:

Your team challenge is to create the longest supply pipe - without leaks! The water needs to travel from one end of the pipe to the other.

Get into groups of four or five people and see which team can create the longest working pipe. Each team will have the same materials and your pipe will be tested with the same amount of water.

These are the kind of challenges faced by engineers at Severn Trent Water every day. Being creative and enjoying solving problems are just some of the skills we look for in new members of our teams.

You will need:

- Plastic drinking straws
- Sellotape
- A funnel (to pour the water into your supply pipe)
- A cup (to catch the water at the end)

Points for discussion:

Read one of the employees' profiles in the careers sections of the Severn Trent Water website. What do you think of their jobs?

Discuss the types of jobs you think there are at Severn Trent Water. What job would you like to do?

www.severntrent.com/careers

Did you know?

Severn Trent Water has 46,000 km of pipe work supplying our water!

waste, water and me

How easily germs spread

WaterAid

SEVERN TRENT WATER

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Bacteria and viruses ('germs') can make us poorly. They spread very quickly once they are on our hands, which is why it's important that after using the toilet, we wash our hands thoroughly with soap and dry them.

Having flushing toilets to take away human waste is very important to keep people healthy. It is part of the reason why so many children and adults become ill in developing countries with poor sanitation. To demonstrate the spread of germs you will need some glitter. The activity can be done one of two ways depending on how far you want the glitter spreading.

1. Wet hands and put a small amount of glitter in the palm of one or two people's hands
2. Continue with the meeting as normal
3. Towards the end explain to everyone what you did and that the glitter represents germs. Ask them to see where the germs have spread to. (Common places are: other people, door handles, light switches, etc)
4. **Don't forget!** Wash your hands thoroughly with soap and dry them

OR

1. Sit everyone in a circle
2. Place a small amount of glitter on the hand of one person and everyone shake hands in turn around the circle
3. When the hand shake is back to the start ask everyone to look at the hand they shook
4. It has probably got glitter on it!
5. **Don't forget!** Wash your hands thoroughly with soap and dry them

Points for discussion:

Why is it important to dry our hands?

How should you wash your hands to make sure they are thoroughly cleaned?

When else is it important to wash your hands?

waste, water and me

Sponsored walk

WaterAid

SEVERN TRENT WATER

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Arrange a sponsored walk carrying a 10 litre bucket of water.

Young children in developing countries often have to walk long distances each day, carrying containers to collect water for use in the family home. Unfortunately, this water is often dirty and there isn't a lot of it. People in the UK use an average of 150 litres per person per day. People in developing countries use only an average of 10 litres per day. To help you to understand what it would be like to have to carry a container of water each day, arrange a sponsored walk carrying a 10 litre bucket of water. Collect sponsorship from your friends and family and remember to collect your money after the walk to hand in at your next meeting.

Did you know?

In developing countries, up to 2,000 children die each day from diarrhoea caused by drinking dirty water.

As you walk around have a think about:

How much harder the activity would be if the weather was very hot and you had bare feet walking on rough ground?

How you would manage with only that much water for a whole day?

How would you feel if you had to drink the dirty water but knew it might make you very poorly?

British pupils often complain about having to go to school but who do you think has the easiest lifestyle and why?

There is a blank sponsorship form in this pack.

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Make your own WaterAid TV advert

WaterAid

SEVERN TRENT WATER

WE DISCOVER, WE GROW Girlguiding Midlands

What's your favourite TV advert? Why do you like it?

Adverts help to persuade us to do or think about something. See if you can create and act out an advert to persuade people to raise money for WaterAid.

Firstly, decide on your message. What do you want people to remember about the work that WaterAid do?

Ideas:

Think about the type of advert you want to do... will it be like a news report, with people being interviewed? Will you make up a song or jingle?

Will your advert be happy, sad, serious or funny?

Will you need any special props? (Buckets, bottles of water, etc)

Perform your advert to the rest of the group.

waste, water and me

Make your own riverside wildlife

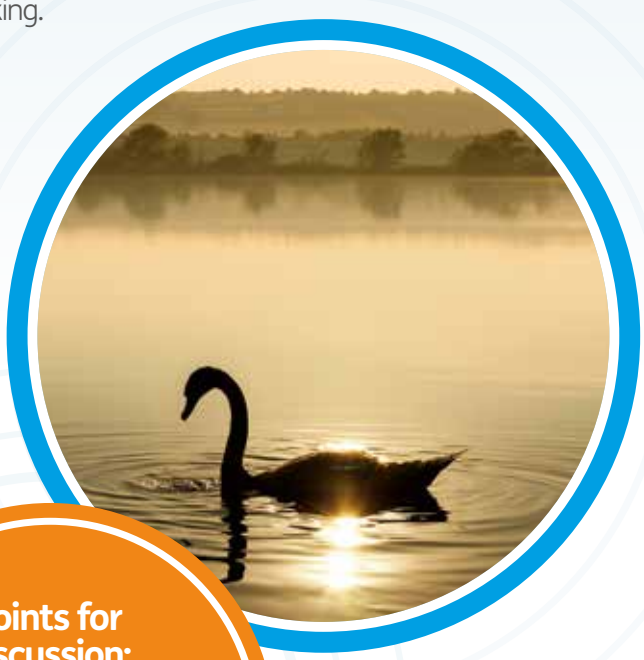
Love your River

The wildlife that lives in our rivers depends on fresh clean water just as we do! The water we drink comes from the natural water cycle, from rivers, aquifers and reservoirs. We need to look after this water both for us and for wildlife.

Rivers and other water courses are very important to people; they are also a great place for wildlife. All kinds of birds, plants, animals, insects and trees live there. In this challenge you will discover three animals found in and around the British waterways and have a go at some model making.

You will need:

- Pencils
- Paper/card
- Tracing paper (optional)
- Scissors
- Packaging, cardboard boxes, cereal packs, plastic bottles, egg cartons, newspaper, etc
- Different colour paper, glue, glitter, paints, etc for decorations



And/or:

- Old rags, clothing, cloths, tights, buttons, socks and laces, etc
- Padding material (old cushions, etc)
- Needle and thread

Instructions:

1. Decide which animal you would like to make
2. Either use the suggested modelling materials or decide on your own materials
3. Then plan how you will make your model and get started. Enjoy!

Points for discussion:

Why is water so important to wildlife?

Why is wildlife in our rivers so important to you?

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Cont'd overleaf

Otter

Size: Head/body length: 60-120cm; tail 40-45cm.

Description: Brown fur, often pale underside, long slender streamline body, small ears, long thick tail and webbed feet.

Found: On coasts and estuaries and in fresh water habitats with suitable cover.

Suggested modelling materials: To make a small 3D version you will need stuffed brown tights for the body, cloth covered cardboard for the tail, a button for the nose and old rags sewn together for hands, feet, and ears. Create whiskers, mouth and eyes with other fabric materials available.

Mallard Duck

Size: Head/body length 50-62mm and a wing span of 81-98mm.

Description: Males have metallic green heads, brown breasts and their bodies are mostly grey. Females are mottled brown.

Found: Throughout the world anywhere there is water.

Suggested modelling materials: To make 3D paper versions - scrunch several sheets of newspaper into a duck shape, do the body and head separately and glue together, once happy with your shape decorate with coloured paper, paint, etc.

Damselfly

Size: Body length is 45mm.

Description: Brown thin bodies. Males have a dark blue-black band across the wings and the females have pale-green wings.

Found: Along slow lowland streams and rivers common in most of England (south of the Humber) Wales and Ireland.

Suggested modelling materials: To make a small 3D version you will need several toilet roll tubes inserted together for the body, cardboard wings with different coloured paper to show whether it's male or female, string for the legs, cardboard egg packaging for the head, glue together and decorate with glue and glitter.

Oil off a duck's back

Love your River

SEVERN TRENT WATER

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Oil and fuels can end up in rivers and brooks washed from roads or by being tipped down drains. They can pollute the water harming the animals that live there. This activity will show how difficult it is to clean up oil in water.

The unit will need:

- 1 large bowl
- 1 measuring cup
- Water
- Cooking oil
- Feathers
- Different dishwashing detergents (one normal brand, one eco-friendly brand)
- Paper towel/pieces of cloth
- Sponges
- Spring

Instructions:

1. Fill half a bowl with water
2. Measure 1/4 cup of oil and pour into the bowl of water
3. Gently shake the bowl to create 'waves'. Did the oil and the water mix?
4. Place the feathers in the oil and see what happens to them. Try to clean them with the detergents
5. Now try and clean up the oil using a paper towel or cloth
6. Use string to make a border around the oil and try to move the oil to the side of the bowl
7. Use a sponge to try and soak up the oil
8. Try and clean the oil with each kind of detergent

Points for discussion:

What would happen to any wildlife that got covered in oil?

How could your reduce the amount of pollutants you add to the environment?

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Only rain down the drain - yellow fish activity

Love your River

SEVERN TRENT WATER

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Do you know that outside drains can take rain straight to your local waterways? Any pollution that gets into these drains could pollute your local brook, river or the sea. Let people know not to pollute outside drains by colouring a yellow fish on the drains outside.

You will need:

- Cardboard/paper
- Pencil
- Scissors
- Chalk

Instructions:

1. Visit: **www.gov.uk/government/publications/avoiding-pollution-yellow-fish-scheme** to download and print the yellow fish template
2. The template can then be used or transferred to another material (e.g. card, cardboard, lino, plastic)
3. Carefully cut out the yellow fish
4. Use chalk and draw the fish onto the pavement beside the drain
5. Display a poster to tell your neighbours what the yellow fish mean

Points for discussion:

What might happen if the local brook or river was polluted?

Where is your nearest brook or river?

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Polluted water

Love your River

SEVERN TRENT WATER

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Most houses connect into two types of sewer system. Surface water drains take water from roofs and the ground to streams and rivers. Foul water drains take waste water from homes to a Sewage Treatment Works.

Sometimes waste water is wrongly connected into the surface water drains. This can cause a pollution to local streams and rivers. In this activity you will look at different water samples and decide which drain it should go in.

Points for discussion:

Why would polluted water be harmful to the local stream or river?

What might happen to the wildlife?

What can we do to help stop pollutants entering local streams and rivers?

You will need:

- 5 plastic bottles
- Tap water
- Paint
- Cooking oil
- Washing powder
- Sewage (refer to sewage soup p6-7)
- Paper and pencils

Instructions:

1. 5 Bottles to be made up by the Leader before the unit meeting, making sure the lids are screwed on tightly:
   - Water and cooking oil
   - Water and paint
   - Water and washing powder
   - Water and sewage
   - Tap water
2. Using the 5 bottles the group can complete the grid below, answering the questions with a yes or no for questions 1, 2 and 3

   For question 4, the group should decide if it belongs down a foul drain inside their home or a surface drain out in the street

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
When the sample is shaken do bubbles appear?					
Does the water look clean?					
Does the water have an odour?					
Do you think the sample belongs in a foul drain which is inside your home or a surface drain which is out in the street?					

The water quiz

Water Efficiency, Waste Water

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Do you have good habits when using water and disposing of waste water? Why not find out by doing the quiz below.

1. When you brush your teeth, do you...

- **A** Keep the tap running
- **B** Turn off the tap
- **C** Use a cup or mug

2. When having a wash, do you have a...

- **A** Bath (or long shower)
- **B** Short shower
- **C** Sometimes a bath, sometimes a shower

3. How long do you spend in the shower?

- **A** More than 8 minutes
- **B** Less than 4 minutes
- **C** 4-8 minutes

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4. When washing your hands and face, do you...

- **A** Keep the tap running
- **B** Turn the tap off
- **C** Always use a plug

5. When your family washes pots, pans, fruit and vegetables, do they...

- **A** Keep the tap running
- **B** Use a bowl with the tap off
- **C** Always use a plug or turn the tap off

6. When your family waters the garden, do they...

- **A** Sometimes use a hosepipe and or sprinkler
- **B** Use rain water from a water butt with a watering can
- **C** Always use a watering can

7. When washing your family car, does your family...

- **A** Use a hosepipe
- **B** Use a bucket and sponge
- **C** Go to a car wash

Cont'd overleaf

8. **When using a dishwasher, does your family?**

A Put it on when half full

B Always put it on fully loaded

C Sometimes put it on fully loaded

9. **Fats, oils and grease - does your family sometimes pour left over cooking grease and fat down the sink?**

Yes

No

10. **When flushing the toilet does your family put anything other than poo, wee and toilet paper down the toilet?**

Yes

No

Answers:

Mostly As

Oh no, bad luck! You have some work to do before you can become a super water saver! Read the quiz again, pay note to option B. Then over the next 21 days follow option B where you can. After 21 days play the quiz again and try to become a super water saver.

Mostly Bs

Congratulations you are a super water saver. Continue the good work!

Mostly Cs

Good try! You are half way there, you save water in many ways but you could do a bit more. Read the quiz again, pay note to option B. Then over the next 21 days follow option B where you can. Play the quiz again and try to become a super water saver.

Questions 9 and 10

Yes

Oh no, bad luck you have some work to do before you can become a super sewage saver! Read question 9 & 10 again, pay note to the No option. Over the next 21 days help your family to follow the 'no' option. Play the quiz again and try to become a super sewer cleaner!

No

Congratulations you are a super sewer cleaner! You dispose of waste water correctly. By you and your family acting this way, you help keep the sewers stay free of fats, oils, greases and help to stop blockages!

Record card

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Girls must complete one activity from each section, plus one extra, in order to qualify for a badge

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Girl's Name	Waste Water					Water Efficiency					WaterAid			Love your River			
	Designing a poster	Making a fat trap	Sewage soup	Writing a song or poem	The water quiz	Making a mini water butt	Designing a poster	Reducing your flush	Water use audit	Creating a supply network	How easily germs spread	Sponsored walk	Making a TV advert	Making riverside wildlife	Oil off a duck's back	Marking drain with yellow fish	Comparing polluted water

Sponsor form Gift Aid

Your details

First Name: Postcode:

Surname: Phone Number:

Address:

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Girlguiding Midlands
21 Lower Church Street, Ashby de la Zouch
Leicestershire LE65 1AB

Cheques to: The Guide Association Midlands

Gift Aid declaration. We who have ticked the Gift Aid column would like WaterAid to reclaim the tax we have paid on all our donations made in the last four years, and any future donations we may make. We each pay as much UK income and/or capital gains tax as WaterAid (and any other organisation we may support) will reclaim in each tax year (6th April to 5th April) currently 25p for every £1 we donate. We understand that VAT and council tax do not qualify and that Gift Aid will be used to fund WaterAid's general work.

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Mr	Joe	Sponsor	12 Example Road	ET2 2BZ	£25	✓	✓	joesponsor@example.com	✓

Tell us what you thought of 'waste, water and me'

We hope that your group have enjoyed taking part in all the activities to gain the waste, water and me badge.

We would like to hear your feedback on the activities you completed. Please answer the questions below.

Which section did you work on the challenge with?

☐ Rainbows ☐ Brownies ☐ Guides ☐ Senior Section

What was the girls' favourite activity? What did they enjoy about it?

Which was the girls' least favourite activity? Why?

Are girls saving water at home because of completing this badge?

☐ Every day ☐ Sometimes ☐ Don't understand how to save water

Could girls explain how to care for the sewers to a friend who hasn't completed this badge?

☐ Every day ☐ Sometimes ☐ Don't understand how to save water

Do girls understand more about how we clean and treat your water?

☐ Yes ☐ No ☐ Not sure

Would you encourage other Rainbow, Brownie, Guide and Senior Section groups to do this badge?

☐ Yes ☐ No

Badge order form

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I require ..... **waste, water and me badges.** (£1 each)

Cheques payable to:

"The Guide Association Midlands"

£ ..... **is enclosed.**

Name

Address

Postcode

Please post completed order forms to:

Girlguiding Midlands
21 Lower Church Street
Ashby de la Zouch
Leicestershire
LE65 1AB

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