Water Saving Presentation Guidance Notes

In 2024, Churchmarketplace, the Catholic Church's national purchasing platform, working with their partners, Wodr, launched an innovative water services framework to provide cost-effective and environmentally sustainable water solutions to Catholic communities across England. Churchmarketplace and Wodr appointed water retailer, Business Stream, to help deliver the framework.

Included within the delivery plan is a commitment to provide educational materials to primary schools on the framework. These guidance notes and the accompanying slides are for teachers to use in class to teach pupils all about the importance of saving water.*
**Please view the slides in slideshow mode to include the animations.*

Slide 1 – Churchmarketplace introduction

"*Why are we learning about this topic? We're all part of creation. God made the air, the ground and the water. He made all the plants and animals too. And God has entrusted to us the care of all His creation. We must take good care of it, including the precious gift of water – as every living being (plants, animals and people) need water. This is a useful resource that primary schools on the framework can use, which aligns to our 'Care for our Common Home' campaign".*
Churchmarketplace

Slide 2

It's time to get started! We're going to use this lesson to learn lots about the importance of water and why we need to use it responsibly.

Slide 3

To begin, let's have a think as to how many different ways we use water. Ask the pupils to put forward suggestions e.g. drinking, brushing teeth, cleaning, washing, recreational activities, gardening, growing food and within our faith e.g. for the sacrament of baptism, in our churches (the water fonts when we enter Church) and to bless us at key religious feasts such as Easter.

"Let's start by testing our knowledge with a fun quiz…"

Slide 4-5

Activity idea: Ask the pupils to work on their own or in pairs to guess the answers to these quiz questions. Let them know the answers will be revealed in the following slides (answers provided below for reference). Feel free to provide multiple choice options if needed!

Q1. How much of the Earth's surface is covered in water? ***70%***

Q2. How much of the water on this Earth is available for us to use and drink? ***1%***

Q3. How many litres of water does the average person in the UK use in a day? ***150 (hint: It's not just what we drink but the water we use to wash, cook, clean etc.)***

Q4. How many litres of water are used if a tap is left running for 2 minutes? ***12***

Q5. How many filled bathtubs of water does it to take to make one pair of jeans and one cotton t-shirt? ***135 (hint: consider both the process involved in making the clothes and the water used to grow cotton for the t-shirt)***

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"Time for some fun facts…"

Slide 6, 7 and 8

On these slides, you'll find some facts about the amount of water that's on earth. Feel free to ask the pupils to volunteer the answers to the first two questions based on their quiz responses!

These answers highlight what percentage of the earth is covered in water and how much is available for us to use.

Most of the water on earth (around 97%) can be found in our oceans and of the tiny percentage that's not in the ocean about 2% is frozen up in glaciers and ice caps. The remaining 1% of water is freshwater that is available for us to use.

Slide 9

There's a high chance that the water we use today is the same water that thirsty dinosaurs were gulping about 65 million years ago. This is because of something called the water cycle which the next slide will explain in more detail.

Activity Idea: Ask the pupils to tell you all about the water cycle before moving on to slide 10.

Slide 10

You can see a diagram of the 'water cycle' on this slide. The 'water cycle' begins with the water in our seas and rivers, it warms up with the heat from the sun and rises into the sky as very tiny droplets. When it cools down, it forms clouds. When the clouds get really heavy the water falls from the clouds as rain, sleet or snow, and it goes back into our seas and rivers. Where the whole cycle starts again. This same water has circulated our planet for nearly **5 billion years!**

Slide 11

It's time for a song! Click on the link in the slides to take you to a fun and informative song all about the water cycle.

Activity idea: Water cycle experiment

It's easy to have a go at this water cycle experiment at home or at school! Here's what you need:

- a sealable, clear plastic bag (e.g. sandwich bag)
- permanent markers
- tape
- water
- blue food colouring
- and a window with exposure to sunlight.

Then, to do the experiment, simply follow the instructions and you're good to go. Pupils can take a look at the bag at different stages of the cycle and see how the water inside the bag changes form. They'll see as it evaporates, becomes condensation, precipitates, and then collects at the

bottom of the bag again. Make sure to check in every so often so that pupils can see every stage!

How do you make a water cycle in a bag?

1. Draw a diagram of the water cycle on a sealable plastic bag. Include the sun, clouds, and water accumulation.
2. Draw arrows and labels for evaporation, condensation, precipitation, and accumulation.
3. Fill a quarter of the bag with water.
4. Place two drops of blue food colouring into the water.
5. Seal the bag.
6. Tape the bag onto the window with plenty of sunlight exposure.
7. Observe the bag and identify different parts of the water cycle.

"Now it's time for some more fun facts…"

Slide 12 – 15

You'll find some facts about water usage on these slides. Again, you may want to encourage the pupils to call out their guesses based on their quiz answers before revealing the answers.

"Why should we use water responsibly?"

Slide 16

But remember, even though it's really important to save water, it's equally important to drink water for our health and wellbeing!

Slide 17-18

Final water saving fun fact to discuss!

Slide 19

Let's spend a little time talking about our rights and responsibilities. None of us could survive without water, which makes it a basic human right. However, we know that for some parts of the world, access to clean, healthy water isn't a given. And while we're lucky to have access to clean water – water is a finite resource that we need to protect.

20 – 29

These slides outline some of the reasons why it is important to try and use less water. More information to support each slide is provided below. Throughout, ask the pupils to put forward their suggestions on why we should be saving water and why we're now experiencing water shortage issues.

Slide 20 -22 - Protecting our water resources

There is a bigger demand for water today than ever before and in some parts of the UK we are already seeing water shortages. Unless we protect our water more, predictions are being made by the Environment Agency that in some areas in England there may not be enough water for everyone within the next 20-25 years – which is a scary thought! According to Sir James Bevan,

former CEO of the Environment Agency, by 2050, the amount of water available could be reduced by 10-15%, with some rivers seeing 50%-80% less water during the summer months. This will likely lead to higher drought risk, caused by the hotter drier summers and less predictable rainfall.

The '5 billion litres more' stat referenced in slide 18 is the equivalent of over two million wheelie bins full of water every day, on top of the water we already use!

As we explained before, only 1% of all the water on earth is available for us to use, so it's really important that we use it wisely and don't waste it.

Some of the reasons for our water shortage challenges are population growth, changing weather patterns and even peoples' habits – the average person in the UK is using around 70% more water than people used in the 1980s.

Slide 23 -25 - Protecting our environment

And by using less water we can also help to save wildlife too. Most of the water we use in our homes is taken from rivers and lakes that wildlife rely on to survive. So if we take too much water from the rivers and lakes then we can cause harm to the wildlife that live there.

When too much water is abstracted (taken out of) our rivers, it can be really damaging to the local environment as wildlife can suffer which threatens our ecosystems. There are a number of reasons for this (ask the pupils to put forward their ideas before sharing the below with them):

- Many rivers contain pollutants as a result of agriculture, industry and household waste. When water levels drop, the concentration of these pollutants increases—often to a higher level than wildlife and plants can tolerate.
- Water scarcity reduces the concentration of oxygen in the water, which again can impact wildlife and plants.
- Low water levels also prevent certain species of fish from migrating, which can disrupt important stages of their lifecycle.

Slide 25-27 - Climate Change

Treating water to make it safe for us to drink and use (as well as transporting water around the country to areas that get less rain) are both very energy intensive activities. So by reducing the amount of water we use, we can reduce the amount of energy used in treating and pumping water – which in turn reduces our carbon emissions, which contribute to greenhouse gases and Climate Change.

Let's take some time to discuss climate change and the impact it's having on our planet.

What is Climate Change?

Climate Change refers to long-term changes in our temperature and weather patterns. It's already impacting us - even here in the UK – as we're experiencing more unpredictable weather. We also know there are parts of the world that are experiencing changes in rainfall patterns, rising sea levels and melting glaciers.

The main cause of climate change is the release of carbon dioxide into the air. This acts like a blanket around the earth, trapping heat and making temperatures rise, known as the 'Greenhouse

effect'. Human activities are creating too much carbon dioxide and other greenhouse gases, and trapping too much heat.

What causes Climate Change?		
Burning fossil fuels	Farming	Deforestation
For over 150 years, industrialised countries have been burning fossil fuels like oil and gas. Q1. Why do we use oil and gas? What do we use it for? ○ **Petrol / Diesel Cars** ○ **Heating** ○ **Electricity** This has caused an almost invisible 'blanket' in our atmosphere that traps the warmth of the sun.	Livestock emissions, animal waste and fertilisers are the main sources of greenhouse gas emissions in agriculture. Believe it or not, when cows eat their dinner, they're also impacting our climate too. As they chew, methane – a greenhouse gas, builds up in their digestive system (belly) causing a big burp, which releases methane gas into the atmosphere!	Our forests absorb a huge amount of carbon dioxide – another greenhouse gas and exchanges it for oxygen. Did you know that the amazon rainforest is so large that is acts as one big, giant air conditioner to help minimise climate change? Sadly, many rainforests are being cut down for their resources or to make way for residential areas. One way you can help deforestation is by limiting your paper use. As you all may know, paper comes from trees so if you're mindful for how you use it, you too can help save the environment.

How does Climate Change affect us, the planet and our wildlife?

Climate change has caused a large disruption to our environment, causing more rainfall, changing seasons, shrinking sea ice and rising sea levels. Climate change is affecting our food supply, housing, jobs and our health.

And it is not just us that will face the consequences of climate change, but our entire ecosystem as well. Polar bears, orangutans, certain species of seals and even turtles have been negatively impacted by the rise in temperatures causing their homes to be lost and a decrease in their population.

This is why it is so important to be mindful of our impact on the environment and the steps we can take to help protect the planet.

Simple steps to help us protect our planet

Activity idea: Ask pupils to suggest ideas to help look after the planet. They can do this by calling out ideas or work in tables or pairs to write down as many ideas as possible.

<u>Some suggestions to share below:</u>

- Turn off any dripping taps and take away some of the tips we've already discussed today to save water!
- Avoid foods that contain palm oil – helping to prevent deforestation.
- Switch off lights when you're no longer using rooms to save on energy.

- Find out where your food comes from and see if you can choose more local, sustainable options.
- Make sure all devices are switched off when they're not being used to stop them wasting power.
- Use public transport whenever possible – cycle, walk or take the bus.

Activity idea: Ask each pupil to commit to one activity that they'll do to help the planet – you can write these down and ask them to report back at the end of the year. Even better, display their commitments on the wall as a reminder!

Slide 28 - 29 - Saving money

Businesses and organisations, including schools, have a lot of costs – including utility bills. By using less water, they can make environmental savings and reduce costs. And it's not just water bills that go down, energy bills can also be reduced if heating water.

To find out more about the £82,000 saving made by one primary school you can read the case study here: Renfrewshire Council - Business Stream

Slide 30 - 38

Before finishing we're going to focus on all the ways we can reduce water use – both at school and at home! How many of these ideas are you already doing? What are you going to make sure you do going forward?

These slides highlight some top tips to save water at school and at home. Before going through the slides, you can ask for some ideas of ways to use water wisely.

"Time to get creative"

Slide 39 – Design a poster

It's time for another fun water related activity! Ask pupils to design a poster which will encourage others to use water wisely. They can use some of the facts from earlier in the presentation, or create their own water saving superhero!

Please share pictures of their posters with us at CMP@makeitwodr.com - we'd love to see them!

We hope you've found this presentation useful and will help us to spread the word about saving water and caring for common home.

There are lots of things we can all do to save water and help protect the planet, even small changes can make a positive difference!