

Reservoir safety

A teacher's guide

Introduction

United Utilities own more than 180 reservoirs across the North West – we supply water to, and take away used water from, our seven million customers across the North West.

When the weather starts warming up, people (especially young people) may be tempted to take a dip in their local reservoir to cool down. But rather than being a bit of fun, swimming in reservoirs, quarries, lakes and similar bodies of open water, is very dangerous. That's why we've produced this guide to help teachers highlight important messages around water safety to children.

It's full of useful information, presented in sections, so you can concentrate on particular topics that are relevant to, and suitable for, your students. There are three different short films available for you to show in your classroom, each packed with detail and offering plenty of scope for discussion and further activities.

You can use all three films to develop discussion and support activities among your students, or, depending on age ranges and suitability, you can use any of them independently.

Please be aware that some people may find the content in the videos upsetting.

Teachers are advised to view all three films before showing to young people.

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1. Getting started

Here are some chilling – and surprising facts and figures. You may want to use some, or all, of them to introduce the subject and the films.

Did you know?

- Reservoir temperatures rarely get above 12°C, even in summer. That's cold enough to 'take your breath away', make your arms and legs numb, and induce hypothermia.
- Reservoirs are often deceptively deep, with sudden drops you can't see.
- There may be hidden currents from water pipes below the surface.
- Hidden obstacles, such as active machinery for water treatment, broken glass or other rubbish is commonplace beneath the water's surface.
- It's hard to get out of a reservoir once you're in – the sides are often very steep and slippery.
- Invisible algae can build up at the water's edge, producing toxins that cause skin rashes and stomach upsets.
- Drowning is the third most common cause of accidental death among young people aged under 16.
- Drowning claims the lives of more than 50 young people under the age of 16 every year.
- In 2011, 405 people drowned in open water across the country.
- You are more likely to drown if you are a strong swimmer - that's because you're more likely to go into the water in the first place.

2. Film 1

'Not a game' (5:19)

A hard-hitting, short fiction film aimed specifically at teenagers. Chillingly realistic, the mini-movie uses video game-style graphics to deliver serious messages about the potentially deadly consequences of swimming in reservoirs.

[youtube.com/watch?v=i27iGYgYBqc](https://www.youtube.com/watch?v=i27iGYgYBqc)

Learning points

- If you lose a life in a computer/video game, you simply start again. But real life isn't like that, and far from being a fun game, swimming in reservoirs can be fatal – with no second chances.

Discussion topics

David went into the water because he was hot. What else made him want to go into the water?

- He was showing-off and trying to impress Lauren.
- A false sense of security – he boasted he was a good swimmer.

Lauren obviously realised it was dangerous – was there anything more she could have done to

- Stop him?
- Help him?

Was she right not to get into the water herself to try to help David?

- He was panicking and could have dragged her under with him.
- She wouldn't have been strong enough to drag him to safety and may have ended up in trouble, too.

Given he was a strong swimmer, why did David get into difficulty so quickly?

- The icy coldness of the water put his body into shock, so that it couldn't function properly.
- It caused cramps, breathing difficulties, heart problems and panic.

What should you do in a water safety emergency?

- **NEVER GO INTO THE WATER YOURSELF – CALL FOR HELP IMMEDIATELY!**



- If you have a mobile phone, dial 999. If not, shout for help as loudly as you can, or run to find someone who can call the emergency rescue services for you.

3. Film 2

A cold that can kill: Dr Sarah Jarvis (1:55)

Straight-talking GP and TV medical expert, Dr Sarah Jarvis, explains why jumping or diving into open water is so dangerous. Sarah talks about the immediate and major life-threatening effects that cold water has on your body, and how it affects your ability to get yourself out of danger.

[youtube.com/watch?v=sGVT7Ong4xo](https://www.youtube.com/watch?v=sGVT7Ong4xo)

Learning points

- Don't assume that reservoirs and lakes are safe places to swim. It takes just seconds for someone – even the fittest people and the strongest swimmers – to get into trouble in open water. And it takes only minutes for that person to drown.
- The initial shock of diving or jumping into cold water can affect some people in water temperatures as high as 77°F (25°C). And in fact, nobody – not even the fittest and strongest – is immune to the dangers if the temperatures are below 60°F (15°C).

Discussion topics

What do you remember most about Dr Sarah's descriptions of what happens to your body when you jump straight into very cold water? Can you imagine what it feels like:

- When the shock of hitting the water suddenly 'takes your breath away'?
- To 'hyperventilate' (over-breathe)?
- Be unable to reach out for help because your muscles are so un-coordinated?
- To have a heart attack in the water because your vital organs can't cope.

Does it surprise you to hear how quickly your body starts to struggle and what happens to it when you dive or jump into cold water?

- Even on a warm day, the deep water in reservoirs remains very cold, sending the human body into shock within seconds.
- It doesn't mean you're out of danger even if you don't run into problems in the first few minutes after getting into the water.
- As your body cools down, the muscles in your arms and legs don't work effectively – even strong swimmers may find they can't stay afloat or get out of the water.

As well as the 'body shock' effects of hypothermia and drowning, what other hidden dangers can be found in open water sources such as reservoirs, ponds, lakes, quarries and rivers and canals?

- Disease: water is untreated, leaving swimmers vulnerable to illness from, for example, lead poisoning, infections, allergies, parasites and bacteria.
- Injury: from underwater hazards, such as dead animals, active machinery for water treatment, sharp-edged objects such as debris or rocks.

4. Film 3

Dylan's Story: Beckie Ramsay (6:33)

Dylan Ramsay was a strong, athletic teenager, but drowned when swimming in a quarry lake in Lancashire. In this short film, Dylan's mother, Beckie, and his grandfather Jim, talk about his tragic death and the real impact it has had on their lives and the community.

youtu.be/mnsv-z3Yxe4

Learning points

- Don't ever think that this couldn't happen to you! Tragedy happens to real people like your friends, or your sister or brother.
- A single playful action like jumping into a cold lake can have fatal consequences and has a lasting impact on friends and family.
- Five minutes of fun isn't worth the risk – stay out and stay safe.

Discussion topics

Open water is very tempting, especially on hot, sunny days. Why are reservoirs/quarry lakes dangerous places?

- They are very cold and deep, with steep drops you can't see. The cold can kill even if you are a strong swimmer.
- They are often remote and isolated, sometimes with no mobile phone signals. This means that even if someone managed to call 999, the chances of help arriving in time is unlikely.
- Reservoirs and quarry lakes can have strong underwater currents and underwater debris, pipes and active pumping machinery that you can't see from the surface.
- Slippery banks may cause you to fall into the water and prevent you from getting out.

What can you do to stay safe around open water?

- Stay safe, stay out.
- Don't ignore signs posted near reservoirs and other open water sources. Obey the signs, they warn of local dangers.
- Stay away from the edges of open water sources, such as reservoirs. You only have to lose your footing slightly to get into danger.
- Remember, you can visit swimming pools on your own or with friends if you fancy splashing about in the water during the holidays.

It's not just your life that could be affected by taking water risks

- Imagine receiving a phone call about family member/friend.
- Imagine being part of the rescue team/police that has to inform people that a loved one had drowned.

5. Additional activities

These suggestions for further activities may help reinforce the serious messages around reservoir safety – by encouraging students to think originally and positively about what they've learned from the films and subsequent discussions.

Drama

Your students' new-found knowledge will give them plenty of ideas of their own about making a drama out of a reservoir crisis. Or you could get them to pair-up and:

- Recreate the parts of David and Lauren – as if David was talking to Lauren after he had drowned. What would he say?
- One can play the part of an emergency services operator, while another is a distressed caller whose friend/brother/sister is struggling in the water. How would the operator calm the caller to get the information he/she needed to send help?
- Set-up an imaginary TV studio and create a short news bulletin about the dangers of swimming in open water. The newsreader will be armed with the facts and figures, while interviews could feature, for example, a reservoir manager, members of a family that have arrived for a picnic at the local reservoir and a rescue team member.

Your students may feel confident enough to share what they've learned with fellow students. Any of the above reservoir safety scenarios could be performed as an educational 'grand finale' at an end-of-term assembly.

Writing

Writing is one of the most powerful communication tools we have and one of the best ways to get people to remember what matters – they take more care in thinking things through before committing to the page/to print.

Ask your students to:

- Create a 500-word story about a boy/girl who was lucky enough to survive after being pulled from a reservoir by rescue services. Tell the story from the survivor's own eyes.
- Write a script for a 30-second TV advert on reservoir safety. Get students to time their work, and then read it to their classmates.
- Write a front-page newspaper article to raise awareness of reservoir safety among local communities.

Art

- Design a reservoir safety poster that can be used around school and other community buildings.

6. Other useful resources

For further information and ideas for bringing the reservoir safety messages to your classroom, visit:

unitedutilities.com/reservoir-safety.aspx

www.manchesterfire.gov.uk/safe4summer/Water-Safety.html

www.cheshirefire.gov.uk/public-safety/campaigns/outdoor-safety/water-safety

facebook.com/DoingItForDylan