



The dangers of flood water

This activity plan highlights the importance of sustainably managing our natural resources, focusing on the topic of flooding and the dangers it presents.



Natural Resources Wales' purpose is to pursue sustainable management of natural resources in all of its work. This means looking after air, land, water, wildlife, plants and soil to improve Wales' well-being and provide a better future for everyone.

Objectives

By the end of this activity learners will be able to:

- Identify their current location on a map
- Identify whether they are in a flood zone or if any flooding occurs in their locality
- List some components of flood water and explain why they are dangerous
- Relay the message to stay out of flood water

Time needed for activity

25mins

Location

Any

Curriculum links

KS2 Geography

Locating places, environments and patterns

1. Identify and locate places and environments using globes, atlases and maps

Understanding places, processes and environments

3. Describe the causes and consequences of how places and environments change

Investigating

Observe and ask questions about a place, environment or a geographical issue, e.g. Why does it flood?

PSE

Health and emotional well being

Understand the importance of personal safety

KS3 Geography

Locating places, environments and patterns

1. Locate places and environments using globes, atlases, maps and plans
2. Use maps, plans and imagery of different types and scales and ICT to interpret and present locational information

Understanding places, processes and environments

2. Explain the causes and effects of physical and human processes and how the processes interrelate

Study

The hazardous world

PSE

Active citizenship

Understand topical local and global issues

Equipment and resources

- Information sheet: What's in floodwater?
- Transparent pots or cups x 6
- Spoons
- Stones, conkers or a similar object
- Several different coloured paints
- Soil
- Little pieces of litter

What to do

- Explain to the learners that Natural Resources Wales (NRW) is responsible for ensuring that people living in areas at risk of flooding are made aware of the dangers of flooding and how to prepare for a flood.
- Look at a local example of flooding. (Find pictures and local facts to look at and discuss).
- Identify if you are currently in a flood zone. Maps are available on the NRW website: <https://naturalresources.wales/evidence-and-data/maps/long-term-flood-risk/?lang=en>
- Spilt into small groups of 4 or 5 and give them each a small pot or cup.
- Explain to the learners that there are many dangers associated with flood water. With reference to the *What's in flood water* information sheet, question the learners and use a metre stick to highlight facts discussed. E.g. 15cm/6 inches of fast flowing water can knock you off your feet.
- Ask the learners to think about what colour they might expect flood water to be and why? How would it vary from clean water?
- Ask them what nasties they might find in flood water. As each suggestion is made, discuss the dangers associated with it. Then add it (or a representation) to each of their pots.
E.g. **Blue paint** - things that might pollute the environment - oil, petrol
Red paint - harmful chemical from industrial or agriculture runoff
Brown paint - bacteria from sewage
White paint - milk
A spoon of soil, silt and sand, objects/rubbish
- Explain that as flood water moves around, so do the objects and chemicals. You can give them a spoon to stir the water in their pots.
- Explain that when flood water enters a building it not only makes things very difficult to see but can cause objects to move from one place to another. Therefore, even if they are really familiar with a room or place, in the event of a flood they should avoid entering the water in case they become injured or entangled by objects that they cannot see beneath the surface.
- To consolidate the message ask what they would do if they woke to find flood water had entered their house.

Suggested key questions

- Is it okay to walk in flood water?
- What dangers could there be?
- Would you be able to see your feet?
- What nasties do you think might be in flood water?
- What would you do if you woke to find flood water had entered your house?
- How could flooding affect local ecosystems and wildlife?

Adapting for different needs/abilities

Less able

- Use a large bottle and demonstrate the same process at front of classroom using volunteers.
- When thinking about what is present in flood water give more prompts to guide learners towards the answers. Keep the list simple.

More able

- Ask learners to look at maps and identify different areas, e.g. where they are, flood zones. Are they in or close to a flood zone? What features can they see? Write down grid references for each one.
- Try and elicit more information about the substances present in flood water and the dangers they present. This could include a more in depth discussion about where the pollutants come from and why flooding means that they are more likely to be present in the water. See *What's in floodwater* information sheet for more details.
- Discuss what pollutants could enter flood water from industrial sites, farms etc. and from the surrounding area.

Follow up activity/extension

Try out the *Preparing for a flood activity*



Additional information

Natural Resources Wales (NRW) have Flood Awareness Engagement Officers who work with communities at risk of flooding. They work to build resilience through supporting geographical communities to take positive action to prepare for flooding. Actions include signing up to receive free flood warnings, acting as a lead for the community and developing flood plans for individuals, schools, homes and businesses.

For more information please visit the NRW website: <https://www.naturalresources.wales/evidence-and-data/maps/long-term-flood-risk/?lang=en>
Or email us: education@naturalresourceswales.gov.uk



Alternative format; large print or another language, please contact:
enquiries@naturalresourceswales.gov.uk
0300 065 3000

www.naturalresources.wales



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