Session title	The water cycle, wetlands and me	
Key Question	What role do we play in the water cycle?	
Session description	Explore the part played by evaporation and condensation in the water cycle. Investigate the permeability of different surfaces to reveal the human impacts on this process. What role can wetland play in cleaning water and preventing flooding?	
Key Stage suitability	KS2	
Duration	1 hour	

Curriculum links	**Curriculum for Wales** **Science and Technology** Being curious and searching for answers is essential to understanding and predicting phenomena ▪ Progression step 1 o I can explore the environment, make observations and communicate my ideas. ▪ Progression step 2 o I can recognise that what I do, and the things I use, can have an impact on my environment and on living things. ▪ Progression step 3 o I can understand how my actions and the actions of others impact on the environment and living things. The world around us is full of living things which depend on each other for survival ▪ Progression step 1 o I can identify, follow and begin to create sequences and patterns in everyday activities. ▪ Progression step 2 o I can recognise that what I do, and the things I use, can have an impact on my environment and on living things. ▪ Progression step 3 o I can identify the threats to the development and health of organisms and recognise some natural defences, preventions and treatments. **Humanities** Our natural world is diverse and dynamic, influenced by processes and human actions ▪ Progression step 1 o I am beginning to recognise the effects that I have on the natural world. o I have first-hand experience of the natural world and am beginning to recognise places which are familiar to me. ▪ Progression step 2 o I can describe how people and the natural world may impact on each other. ▪ Progression step 3 o I can describe and give simple explanations about the impact of human actions on the natural world in the past and present. o I can describe and give simple explanations about the impact that physical processes have had on people, places and landscapes in the past and present. o I can give simple descriptions of how places, spaces, environments and landforms have changed over time. o I can give simple descriptions of the processes that lead to change in the natural world. o I can describe and give simple explanations on how and why some places, spaces, environments and landscapes are especially important to different people and for different reasons.

	- I can locate and give simple explanations for the distinctive features of places, spaces and landforms in my locality and in Wales, as well as in the wider world. - I can describe spatial patterns of places, environments and landforms in my locality and in Wales, as well as in the wider world. Informed, self-aware citizens engage with the challenges and opportunities that face humanity, and are able to take considered and ethical action - Progression step 2 - I am beginning to appreciate and care for living things and my own environment. - I can recognise that my actions and those of others impact upon communities and the environment. - Progression step 3 - I can understand that there are a range of factors that influence people's behaviour, actions and decisions. - I can understand the consequences of my actions and the actions of others, and how these affect local, national and global issues.	
Learning outcomes	All learners	More able learners	
	All learners will be able to describe the water cycle and the role wetlands play in absorbing precipitation. All learners will be able to use equipment appropriately to conduct a fair investigation into the permeability of different surfaces. All learners will be able to describe at least one measure that could be taken to reduce the incidence of flooding.	Some learners will be able to describe how new houses can be designed to reduce the risk of flooding.	
Key vocabulary	Surface Water cycle Precipitation Evaporation Condensation Groundwater Runoff Fair test	Flooding Absorption / absorb Permeability Working wetland Pollution Sustainability Population	Swale Semi-permeable SuDS Alleviate Groundwater recharge Variables

Session Outline	Time
Introduction	5 mins
Learners are introduced to the centre, staff and volunteers running the session and the key question, explaining what we will be focusing on today.	
Section 1: Where else has this water been?	5 mins
Learners discuss in pairs, where they think the water in a glass has been before it enters the building through the taps for us to use.	
Section 2: Water Cycle	10 mins
Learners create the water cycle as a class and begin to look at how wetlands play a vital part in the cycle.	
Activity 3: Permeability investigation	25 mins
Learners conduct an investigation of permeability of different surfaces and begin to discuss the impact humans have on this process.	

Activity 4: “We should drain wetlands and build houses on them”	10 mins
Learners split into 2 groups and debate this statement. Is there a way to compromise?	
Plenary	5 mins
Learners will review what they have learnt and ask any further questions	