

Session title	Climate Champions	
Key Question	How are wetlands affected by climate change and how do they help lessen the impact?	
Session description	Explore the causes of climate change and the impact this is having on wetlands. Take on the role of a leaf and discover how plants have an important role to play in absorbing carbon dioxide. What role do wetlands play in helping to 'prevent' climate change and what can we do to help improve the situation?	
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 2 ▪ I can recognise that what I do, and the things I use, can have an impact on my environment and on living things. ▪ I can explore relationships between living things, their habitats and their life cycles. ▪ I can identify things in the environment which may be harmful and can act to reduce the risks to myself and others. Progression step 3 ▪ 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 2 ▪ I can recognise that what I do, and the things I use, can have an impact on my environment and on living things. ▪ I can explore relationships between living things, their habitats and their life cycles. Progression step 3 ▪ 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 ▪ I am beginning to recognise the effects that I have on the natural world. ▪ I have first-hand experience of the natural world and am beginning to recognise places which are familiar to me. Progression step 2 ▪ I can describe how people and the natural world may impact on each other. ▪ I can recognise the distinctive features of places, environments and landforms, and how these may change. Progression step 3 ▪ I can describe and give simple explanations about the impact of human actions on the natural world in the past and present. ▪ 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. ▪ I can give simple descriptions of how places, spaces, environments and landforms have changed over time.
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	- I can give simple descriptions of the processes that lead to change in the natural 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 take care of resources and not waste them, and I am conscious of the importance of creating a sustainable future. - 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	Most learners will	More able learners will
	Understand the processes causing climate change Know some of the impacts of climate change on wetlands Know that wetlands store carbon dioxide Know that plants absorb carbon dioxide and that this can help mitigate the effects of climate change Know some of the steps they can take to reduce their impact	Be able to name carbon dioxide as a greenhouse gas Understand the processes behind these impacts Understand the processes leading to carbon storage Understand the process of photosynthesis Understand how these steps reduce the amount of carbon dioxide being emitted into the atmosphere
Key vocabulary	Climate change Mitigation Photosynthesis Carbon Dioxide (CO₂) Greenhouse gases	Emissions Pollution Atmosphere Carbon sink Stomata Drought Evaporation Biodiversity Decomposition

Session Outline	Time
Introduction	5 mins
A quick introduction to the key question and what will be covered	
Activity 1: Who lives where?	15 mins
Learners visit the living collection to discover 4 bird species that live in different climates.	
Activity 2: What is climate and what impact is climate change on wetlands and other places?	15 mins
Learners return to the Water Lab to investigate what climate is using a large floor map – mapping where the different birds that they encountered (and others) live around the world. Learners move on to looking at what causes climate change through a simple activity using blankets to model the build-up of greenhouse gasses in the atmosphere. Learners study the water cycle and look at the impacts extreme heat (drought) and intensive rainfall can have on wetland environments, our wetlands, their wildlife and our local communities	
Activity 3: The role of wetlands in mitigating the effects of climate change	10 mins

Leaners take on the role of water, carbon dioxide, oxygen and sugars to model how plants absorb carbon dioxide and give out oxygen (through the process of photosynthesis), helping to reduce the impacts of climate change	
Activity 4: What can we as individuals do to help?	10 mins
Learners explore how we can all make small changes to our lives to help reduce the impacts of climate change	
Plenary	5 mins
We refer back to the key question, reviewing what we have learnt. There will also be time for learners to ask any remaining questions they may have	