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| Session title | Climate champions | |
| Key question | What is climate change and how can wetlands help? | |
| 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 | KS2 | |
| Duration | 1 hour + | |

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| Curriculum links | Key Stage 2 Science<br>▪ Recognise that environments can change and that this can sometimes pose dangers to living things.<br>▪ Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.<br>▪ Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.<br>▪ Describe and understand key aspects of geography including… climate zones, biomes.<br>▪ Recognise that living things have changed over time.<br>▪ Identify how animals and plants are suited to their environment in different ways and that adaptation may lead to evolution. | |
| Learning outcomes | All learners will… | More able learners will… |
| | Be able to name and describe two types of climatic zone.<br>Be able to explain how the oceans and atmosphere cause the climate to operate, and cause changes in the weather.<br>Be able to explain some of the causes of human-induced climate change.<br>Understand that green leaves use carbon dioxide from the air and convert it to carbohydrates.<br>Understand that wetlands store carbon in the form of organic matter. | Be able to explain how water currents carry heat around the world.<br>Be able to explain how carbon in the form of carbon dioxide is released back into the atmosphere when animals breathe, including the microbes that make dead things rot. |
| Key vocabulary | Climate, weather, ocean current, circulation, atmosphere, nitrogen, oxygen, carbon dioxide, greenhouse gas, pollution, carbohydrate, (sugar, starch, cellulose) | |

| **Session outline** | Time |
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| Introduction | 5 mins |
| Learners are given a brief intro to WWT Martin Mere and are introduced to the key question: What is climate change and how can wetlands help? | |
| Activity 1:  What is climate change? | 10 mins |
| Learners work in pairs to investigate what climate is using a giant floor map and packs of climate type models with plastic animals as prompts.<br>Leader demonstrates how water absorbs more heat than air (using two balloons), how ocean currents move and how warm water cools down and sinks into the ocean depths at the poles (blue ice cube in tall jar), causing a conveyor belt circulation. | |
| Activity 2:  The impact of climate change on wetlands | 5 mins |
| Learners look at the impacts extreme heat (drought) and intensive rainfall (floods) can have on wetland environments and their wildlife. | |
| Activity 3: The role of wetlands in holding back the effects of climate change | 30 mins |
| Leaners take roles in the Leaf Factory activity to show how plants absorb carbon dioxide and sunlight energy and give out oxygen, producing their own food in the form of carbohydrates.<br>Learners go outside to lift ‘something solid and heavy’ made from sunlight, air and water. Leader shows bucket of sphagnum moss, passes round boxes of 1,000 year-old soil, bog-oak and coal, to show how wetlands store carbon underground for a very long time. | |
| Activity 4: What can we as individuals do to help? | 10 mins |
| Leaders encourage children to suggest small changes we can make in our lives to help reduce the impacts of climate change | |