


Session Title	Plastic Planet	
Key question	How does plastic pollution affect wetlands and what can we do about it?	
Session description	Discover the main sources of plastic pollution and the problem this is causing for wetlands. How long does plastic stay in the environment and what can we do to help?	
Key Stage	KS2	
Duration	1 hour	

Curriculum links	<b>KS2 Science</b> <ul style="list-style-type: none"> <li>Recognise that environments can change and that this can sometimes pose dangers to living things.</li> <li>Construct and interpret a variety of food chains, identifying producers, predators and prey.</li> <li>The properties of metals and non-metals.</li> <li>The difference between chemical and physical changes.</li> <li>Earth as a source of limited resources and the efficacy of recycling.</li> </ul>		
Learning outcomes	<b>All learners...</b>	<b>More able learners...</b>	
	<p>Recognise that there are many everyday items made from plastic some of which may not be immediately obvious</p> <p>Understand the problems that plastic pollution causes for wetland wildlife and habitats</p> <p>Understand that microplastics can be passed through a food chain</p> <p>Recognise that plastics take a long time to break down</p> <p>Know some simple things that they can do to help improve the situation</p>	<p>Understand that plastic pollution in wetlands comes from a range of sources</p> <p>Understand that microplastics can accumulate through food chains acting as pyramids of numbers</p>	
Key vocabulary	Pollution Bioaccumulation	Microplastics Caddis fly and larva	Decomposition / rotting Food chain

Session Outline	Time
Introduction	5 mins
Learners are introduced to the session title and the key question.	
Activity 1: What is the issue?	15 mins
Learners investigate different items that create plastic pollution and where these come from, working in small groups to sort bags of materials and discuss which contain plastic. (All of them!)	
Activity 2: What problems does this cause?	10 mins
Learners look at the impact this has on wildlife including how micro-plastics can be passed through a food chain and accumulated in a food pyramid. They take part in a (horizontal) food pyramid where there are lots of caddis-fly larvae with micro-plastics stuck to the cases, several minnows which eat caddis-fly larvae, a few trout which eat minnows and one otter as top predator. The otter ends up accumulating all the plastic, which was in the caddis-fly larvae.	

Activity 3: How long does the problem last?	15 mins
Learners investigate how long different materials take to decompose and how plastics can remain in the environment for a long time. They work in small groups sorting new bags of materials and discussing the length of time they take to decompose, using our options cards.	
Activity 4: What can we do to improve the situation?	10 mins
Learners explore some of the alternatives to plastic and some of the small steps they can take to reduce plastic pollution.	
Plenary	5 mins
Learners review what they have learnt and have a chance to ask any questions they may have.	
	60 mins