

Plastic Planet

Activities for children aged 7–11 years

WWT has a well-established and well-loved education programme that we run across the UK at our ten wetland sites. We've designed these short activities based on one of our school activities. We've made it to connect you and your family to the natural world and help you to work with your children to feel great about nature and understand some of the things that WWT love and care about.

Why wetlands?

WWT works across the UK to save, conserve and build wetlands for wildlife and people. Wetlands are one of the most important habitats on earth – storing huge amounts of CO₂, providing a natural way of stopping flooding and serving as a home for huge numbers of different creatures.

This activity will help you and your children to explore the issues caused by plastic pollution and what we can all do to help.

These activities link to the National Curricula for science and geography in England, Northern Ireland, Scotland and Wales.

Stuff you need:

- Plastic Pollution Visual
- Plastic Audit Sheet
- Timeline Cards (see final pages of this document)

Note: Where you see a **Q** this indicates a question to ask your child

Indoor activities

(4 x 15 minutes)

Section 1: The causes of plastic pollution

(15 minutes)

- Look at picture one on the Plastic Pollution Visual.

Q What do you notice that is worrying or unusual about this swan's nest?

- The nest contains lots of plastic. Plastic is increasingly making its way into our wetlands and oceans.

Q How do you think it gets there?

- Some of the plastic in our wetlands is dropped on the floor as litter and blows into wetlands nearby.
- Other bits are flushed down the toilet and make their way to sewage works where the water is cleaned. When we have particularly heavy rainfall, some of the water at the sewage works is put back into a river or the sea without being fully cleaned. This water contains things like cotton buds and wet wipes.

Q Which plastic items do you have in your house? Which might cause most of an issue?

- Have a quick look around your house to see which plastic items you have. Kitchens and bathrooms tend to be good places to look for them but don't limit yourselves to these. Record up to 20 of these items on the Plastic Audit Sheet (try to include a mix of single and multiple-use items).
- Now use the second table on the sheet to categorise your items according to whether they are single or multiple use.

Q Which of these do you think will cause most harm to the environment; those that are single use or those that are used lots of times before being thrown away? Why?

- Single use plastics provide the biggest problem. Because they are only used once before being thrown away, lots more of them are produced. It also takes a lot of energy to make them and this is a waste of energy for something that is only going to be used once.

Section 2: The effects of plastic pollution

(15 minutes)

- Look together at pictures 2 - 5 on the Plastic Pollution Visual.

Q What problems do you think all of this plastic might cause for wildlife?

Plastic pollution causes two main problems for wildlife:

1 **Creatures getting tangled up and stuck in plastic items.**

2 **Animals eating the plastic. Larger pieces of plastic may get stuck in their throats. Plastics also break down into small pieces called microplastics. These can be swallowed by animals and build up in their bodies.**

- Greenpeace carried out a survey of 13 UK rivers in 2019. They found microplastics in every one.
- Look together at picture 7 on the plastic pollution visual. This shows a caddisfly larvae. Caddis fly larvae create a protective case around themselves using materials found on the riverbed. Usually this would be natural materials such as stones, leaves and twigs. Recently, however, we have started seeing bits of plastic being used.

Q What problems do you think this might cause?

- These caddisfly larvae may be eaten by another animal. This animal may then be eaten by another animal and, as this is repeated, the plastic will travel through the food chain.
- Because the bigger animals eat lots of the smaller animals, they end up eating more of the plastic. This is called bioaccumulation.

Key word: BIOACCUMULATION

When pollutants build up - or accumulate - in a food chain. The animals at the top of the food chain are worst affected.

- If you completed the food chains session, think back to that session.

Q Can you produce a food chain that includes a caddisfly larvae?

Imagine how bits of plastic could travel up this food chain.

Which animal do you think would be worst affected? Why?

Section 3: A long-lasting problem

(15 minutes)

- Another problem with plastic is that it takes a long time to break down (or degrade).
- Take the Timeline Cards.
- Get your child to match each object card with the length of time they think it takes for that object to break down.

Answers:



1 month



6 weeks



2 months



20 years



200 years



450 years

- This is why there is more and more plastic in the environment; we are adding it into the environment much more quickly than it can be broken down.

Section 4: What we can do to help

(15 minutes)

- Look back at the list of plastic items you found in your home.

Use these to get your child thinking about the following question:

Q What could you and your family do to help?

This might include:

- Using a refillable bottle instead of single use bottles
- Using reusable bags in place of plastic bags
- Using paper or metal straws in place of plastic ones
- Using cotton buds with bamboo or cardboard stems
- Using a re-usable coffee cup
- Using plastic free wrapping paper
- Using a bamboo toothbrush
- Using reusable beeswax wraps in place of cling film
- Use a bar of soap instead of liquid soap
- Buying wooden toys instead of plastic ones
- Buying loose fruit and veg and use a string bag
- Buying milk in glass bottles
- Buying bread in a paper bag
- Buy toilet paper wrapped in paper

- Make a pledge sheet as a family showing the things you will do to help reduce plastic pollution. Display it somewhere where the whole family will see it regularly.

Take it outside:

(15 minutes)

- Carry out a family litter pick. Use litter pickers if you have them. If not, make sure that you use gloves (preferably reusable) to avoid touching any potentially hazardous materials. Make sure children are supervised at all times.
- If you live near a beach, you might want to carry out a nurdle hunt. Nurdles are small plastic pellets used to make nearly all plastic goods. They are often spilt into our rivers and oceans. See nurdlehunt.org.uk to find out how you can get involved. The same guidance as above applies to this activity.

Q How did you feel doing your litter pick or nurdle hunt?

Did it feel good knowing that you were helping nature? Imagine you're one of the animals that might have been harmed by some of the items you picked up. How would you feel knowing that people are doing something to help?

- Make a picture or sculpture for your garden out of used plastic items.

Q Can you design your picture or sculpture to help raise awareness of plastic pollution?

- Use an old plastic bottle to make a bird feeder - see this week's make it activity.

Q Why is this a good use of a plastic bottle?

What would have happened to this bottle otherwise?



@WWTWorldwide



Have fun and do share your work to our social media accounts – we'd absolutely love to see it!

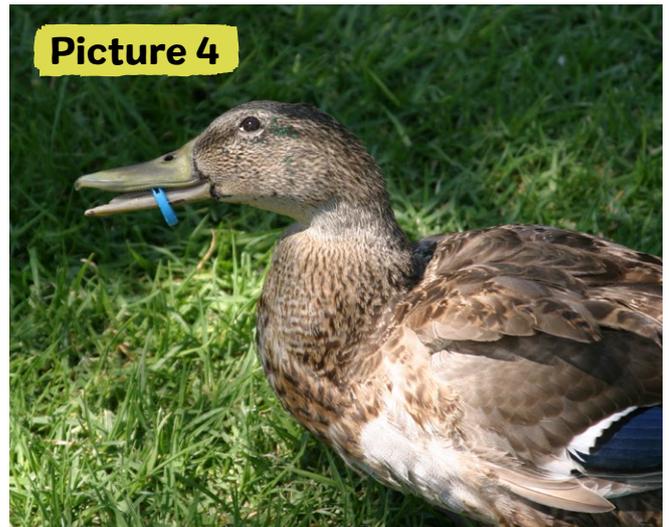
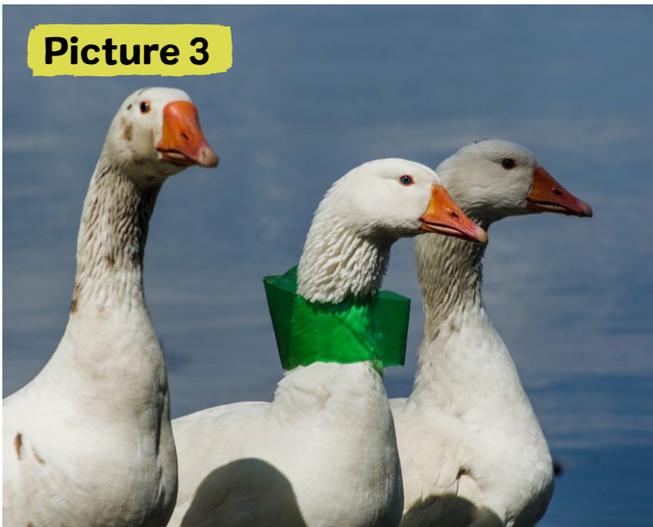
Plastic Pollution Visual

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Which are single use and which are used more than once before being throw away?

Single use	Multiple use
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Timeline Cards

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1 month

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6 weeks

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Cut

2 months

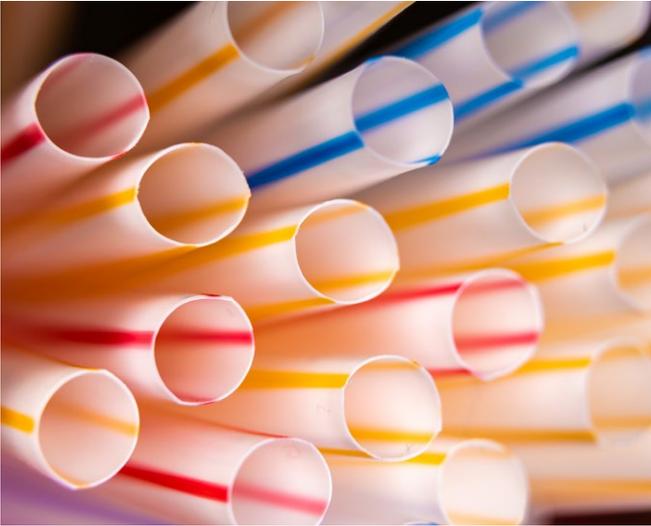
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20 years

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200 years

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450 years

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