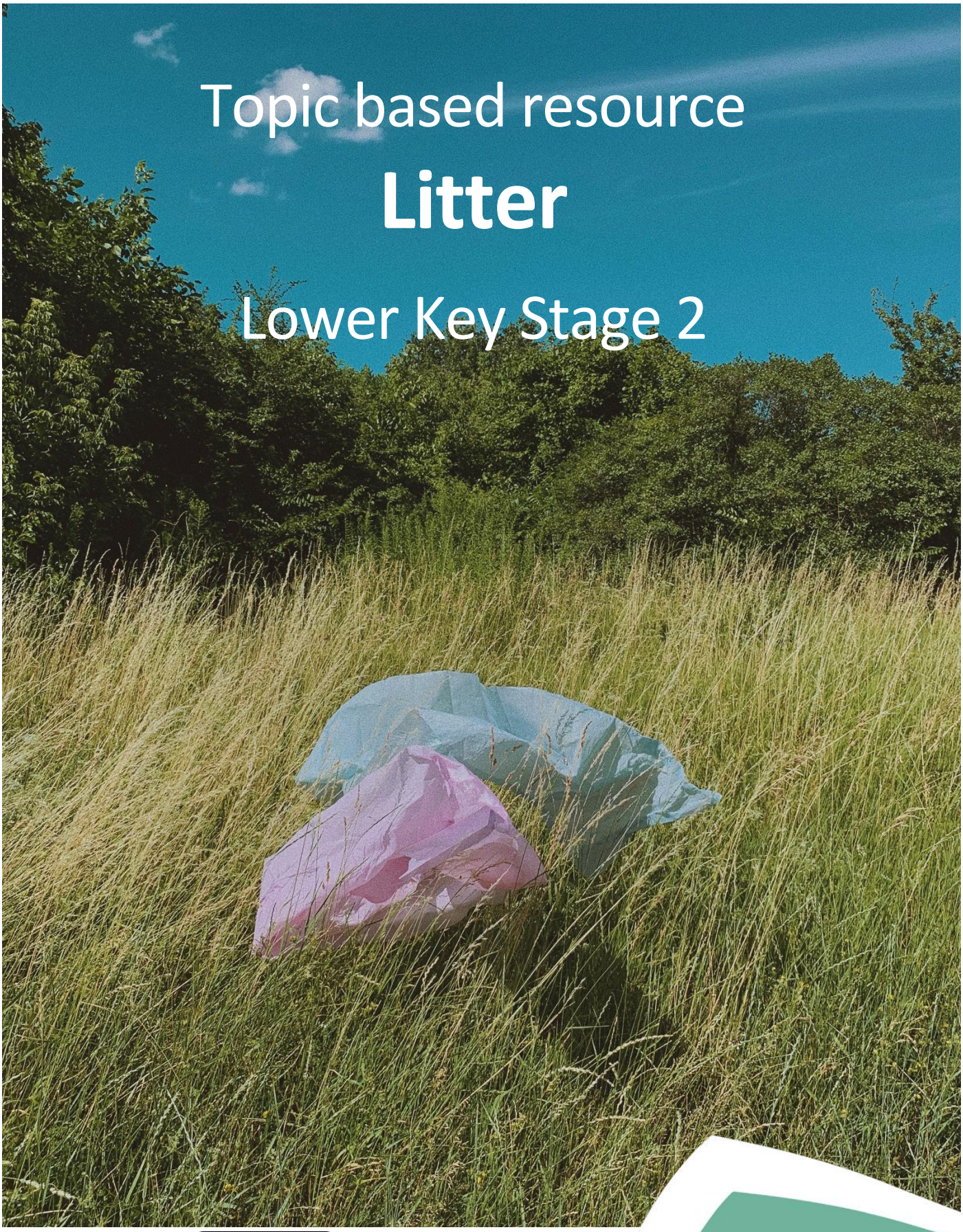
Topic based resource

# Litter

## Lower Key Stage 2



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# Background information

Litter is something that most children are aware of from a young age. Unfortunately, it is all around them, but it is something that they can actually make a difference to and feel empowered doing so. What children may not realise is that you cannot see all litter with the naked eye. When plastic breaks down it does not disappear, it just gets smaller and smaller, and even a very small particle can be harmful to a very small creature. They are eaten by natures invertebrate scavengers both on land and in the sea and are then passed down the food chain and can even be found in the foods we eat. We need to be aware of the harm micro plastics can do and take steps to stop them getting into the food chain.

# Climate perspective

Plastic is one of the most persistent pollutants on Earth. It can last for 400 years or more. At every step in its lifecycle, even long after it has been discarded, plastic creates greenhouse gas emissions that are contributing to the warming of our climate. As it breaks down in the environment it creates micro plastics which are polluting the ground and sea. It is important that we cut down on our use of plastic, particularly single use items. As children begin to realise what happens to items once we have finished with them, hopefully they will look at their own use of items and how they are disposed of.

# A Micro Plastic Food Chain
## Lower KS2

Microplastics are in so many things we use that the ground is full of them. This activity shows how these microplastics can travel through the eco system and can be found in many animals.

## Materials needed:

- **Earthworm picture**
- **What eats an earthworm cards**
- **Green and pink coloured paper cut into small pieces as tokens, you will need a lot more green than pink. (Allow approximately 5 tokens per child)**
- **A stopwatch**
- **A clipboard**

## Step 1

Begin by showing the picture of the earthworm and explain how it is nature's primary recycler, eating whatever decaying matter it finds in the ground and making it into soil. Usually this is leaves and dead plants but if it comes across micro plastics breaking down in the soil these get eaten as well. Once the worm has eaten them, they remain in its body.

## Step 2

Ask the children what might eat a worm and begin to make a list.
Show them the pictures which list many of the worm's predators although there are many more. How many did they get on their list.

## Step 3

To get started on the game identify a large space in the grounds and ask the children to spread out in the space so they are not too close, they are the worms. Sprinkle the green tokens over the whole area. Explain that a carrier bag was dropped in one area a long time ago and it has now broken down into microplastics. Scatter pink tokens to show where the bag was dropped.

## Step 4

Tell the worms that they have 45 seconds to collect as many tokens as they can but since they are worms and cannot move very quickly through the soil they will have to stay still and just reach out to collect the tokens. If the ground is dry, they could wriggle along the floor.
When the time is up, they need to count how many green and pink tokens they have collected.

## Step 5

Tell two thirds of those left that they are creatures that eat earthworms. They can be moles, blackbirds, hedgehogs, grass snakes or frogs.
They will have 30 seconds to 'eat' as many earthworms as they can. They do this by going to an earthworm saying 'munch, munch' and taking their tokens. Because they are carnivores they can move around to catch the worms.
When the time is up, they need to count up the number of green and pink tokens they have. They should notice that more of them have a mixture of the two colours.

## Step 6

The last children will be the secondary carnivores such as foxes, goshawk and badger. They will have 20 seconds to go in and 'eat' the primary carnivores by taking their tokens and saying 'munch, munch'. Once their time is up, they must count their tokens. They should notice that the pink tokens are mixed throughout and there are very few carnivores without microplastics in their system. Explain that this is what happens in the natural world.

# Curriculum Links

**Area of Learning and Experience** - Humanities

**Statement of What Matters:**

Our natural world is diverse and dynamic, influenced by processes and human actions.

Human societies are complex and diverse, and shaped by human actions and beliefs.

# Next steps and other ideas

- Investigate how this process happens with marine animals and how plastics enter our food chain.

Useful Websites

https://www.kidsagainstplastic.co.uk/

https://www.natgeokids.com/uk/kids-club/cool-kids/general-kids-club/plastic-pollution/


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