

# Teacher's Pack

## School Plastics Challenge KS1 & 2

This teacher's pack aims to be a complete guide to the **School Plastics Challenge**.

It provides clear steps to move through a six week unit of work, including details of engaging activities for you to conduct with your class.

The first section is an introduction to this cross-curricular, environmental project. Please read through this for an overview of the work unit. The second section provides all the details you need to help you to plan your topic including key themes and National Curriculum links.

Section three of the pack takes you through the six lessons in detail. Each lesson is focussed on a specific theme containing teachers' notes, a short presentation to promote discussion, and a fun, hands-on activity.

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# Section 1 Work Unit Overview

## Topic introduction

The Canal & River Trust is the charity that cares for 2,000 miles of waterways, because we believe life is better by water. Litter has long been an issue for the Trust and as a charity, we want to work with communities, schools and young people to help to make things better for the future.

We hope that this unit of work will help to raise awareness of the impact of littering on our environment, and in particular, on the wildlife in and around our canals and rivers. There is a good deal of evidence to show that animals can become entangled in litter or mistake smaller items of plastic for food. As well as being extremely damaging to nature, it’s unsightly and puts people off wanting to visit their local canal or river.

Not only does litter affect our inland waterways but much of the pollution in our oceans arrives directly from rivers. Around 80% of the plastic in our oceans comes from litter dropped inland.

Pollution in the form of plastic continues to be one of the greatest environmental challenges. Plastic can be a useful and robust material but when people throw plastic away it doesn’t disappear, most of it isn’t biodegradable. It doesn’t rot, like paper or food. Instead, it can hang around in the environment for hundreds of years.

## The core project

The **School Plastics Challenge** hopes to support you on a journey to raise awareness and understanding of the environmental and social issues surrounding litter and plastics. Over six weeks you will guide your class through an engaging and hands-on unit of work designed to inform, inspire and empower your learners.

How far you take the project beyond this is up to you. There are lots of opportunities to link the project across the curriculum, and this pack is full of ideas and resources to help you plan schemes of work relevant to your pupils. We encourage you to get outside and be active as much as possible. All aspects of the project and the resources provided are **FREE!**

After you have finished the six activities in the School Plastics Challenge, award your class members with the official [School Plastics Challenge completion certificate](#).



## Organise a litter pick on your local canal or river .....

During **School Plastics Challenge** work unit we would like to encourage you to spend as much time as possible outdoors. Each activity outlined in section 3 gives an idea on how to do this. One of the most rewarding activities you can do outside is your own **litter pick** and we would love for you to conduct this along your nearby river or canal towpath.

### Planning

Take a look at our [Visit Planning Guide](#) for general advice on planning a visit to a canal or river.

Please use the [Organise a Litter Pick on Your Local Canal or River](#) document for detailed information and safety advice.

### After the litter pick

The ‘Sorting Out Litter’ activity (page 14) is a great way to follow up your litter pick. You could also try one of the ideas below:

**Eco bricks:** An Ecobrick is a building block created by packing clean and dry used plastic into a plastic bottle very tightly. For ideas about how they can be used visit: [www.ecobricks.org](http://www.ecobricks.org)

**Crisp packets:** Crisp packets are not suitable for most council recycling services however there are other options. You could sign up to the [Terracycle Crisp Packet Recycling Scheme](#) and earn money for your school. Or, if you are feeling crafty, why not get your class involved in some [crisp packet weaving](#). These bracelets could then be sold to raise money for your school or a chosen charity.



## Section 2 Session Planning

### Key themes & questions

#### Key Stage 1 themes

- Our world
- Materials
- Seasides
- No place like home

#### Key Stage 2 themes

- The water cycle
- Our local area
- Earth matters
- Our environment



#### Key questions

- What is plastic and what are the positives and negatives about this material?
- How does plastic pollution impact the world around us?
- How is litter in canals and rivers linked to the ocean?
- What are microplastics and how do they affect us?
- How can we reduce plastic pollution?
- How can we make more environmentally conscious consumer choices?
- How can we spread the message about the dangers of plastic pollution?

### Recommended books

#### Key Stage 1 books

**Somebody Swallowed Stanley** by Sarah Roberts

**A Planet Full of Plastic** by Neal Layton

**One Plastic Bag: Isatou Ceesay and the Recycling Women of Gambia** by Miranda Paul

**Duffy’s Lucky Escape: A True Story About Plastic In Our Oceans** by Ellie Jackson

**Don’t Throw That Away!** by Lara Bergen

#### Key Stage 2 books

**Plastic: past, present, and future** by Eun-ju Kim

**What A Waste: Rubbish, Recycling, and Protecting our Planet** by Jess French

**Not for me, please!: I choose to act green** by Maria Godsey

**Kids Fight Plastic** by Martin Dorey

**The Tale of a Toothbrush: A Story of Plastic in Our Oceans** by M. G. Leonard

## National Curriculum links for wider unit .....

### Key Stage 1

#### KS1 NC Links English:

- Pupils develop poetry writing skills.
- Pupils read aloud their own writing, using appropriate intonation, tone and volume.

#### KS1 NC Links Mathematics:

- Pupils interpret and construct simple pictograms, tally charts and block diagrams.
- Pupils ask and answer simple questions about totalling and comparing categorical data.

#### KS1 NC Links Science:

- Pupils observe, use simple equipment and perform simple tests.
- Pupils use their observations and ideas to suggest answers to questions.
- Pupils distinguish between an object and the material from which it is made.
- Pupils explore and compare the differences between things that are living, dead, and things that have never been alive.
- Pupils identify that living things live in habitats to which they are suited and understand how they depend on each other.

#### KS1 NC Links Art and Design:

- Pupils use a range of materials creatively to design and make products.
- Pupils design purposeful, functional, appealing products based on design criteria.

#### KS1 NC Links PSHE:

- Pupils understand what improves and harms their local, natural and built environments and develop strategies and skills needed to care for these.

### Key Stage 2

#### KS2 NC Links English:

- Pupils perform their own compositions, using appropriate intonation, volume, and movement.

#### KS2 NC Links Mathematics:

- Pupils interpret and present data using appropriate graphical methods.
- Pupils solve problems using information presented in tables and graphs.

#### KS2 NC Links Science:

- Pupils set up simple practical enquiries, comparative and fair tests.
- Pupils identify, compare and describe physical properties of a variety of materials, including wood, plastic, glass, metal, water and rock.
- Pupils recognise that environments can change and that this can sometimes pose dangers to living things.
- Pupils ask relevant questions and use scientific enquiries to answer them.

#### KS2 NC Links Geography:

- Pupils describe and understand key aspects of the water cycle.

#### KS2 NC Links Art and Design:

- Pupils develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design.
- Pupils use criteria to inform the design of innovative and functional products that are fit for purpose.

#### KS2 NC Links PSHE:

- Pupils know that they have different kinds of responsibilities and duties in the community and towards the environment and understand the consequences of human action and making good choices.

## Writing opportunities

### Key Stage 1

Write a diary entry as an animal affected by litter.

Write instructions for how to carry out a litter pick.

Write an invitation to a single-use plastic free party.

Write a letter to a local councillor to ask about local provision for recycling.

Write a setting description of a canal covered in litter.

Keep a waste diary at home.

### Key Stage 2

Create a persuasive poster on the issues discussed during the unit. For example; encourage people to stop dropping litter; encourage people to recycle or reduce their use of plastic.

Write to local supermarkets to encourage them to reduce plastics in the store. For example; provide cardboard boxes for shoppers to use instead of plastic bags; stop plastic packaging for fruit and vegetables.

Write a debate about whether plastic bottles should be banned.

Write a newspaper report about the damage plastics are doing to marine life.

## Recommended websites

### Key Stage 1

[What should I do with my rubbish animation](#)

[Blue Planet live lesson](#)

[Reduce, reuse and recycle resources](#)

### Key Stage 2

[Join Eco-Schools](#)

[How are plastics recycled?](#)

[Keep Britain Tidy](#)

[Recycle your waste](#)

# Section 3 Plastics Challenge Lessons

## Activity overview

Each weekly lesson features a PowerPoint presentation and a suggested hands-on activity. The presentations aim to set the scene for the activity and provide opportunities for discussion. You are able to adapt these presentations and activities to suit the requirements of your class. Guidance on how to do this is in the teacher’s notes for each lesson.

### 1. A Plastic Problem – 30mins

The Plastic Problem PowerPoint presentation provides your class with an overview of the problems related to plastic pollution and helps to introduce the topic as a whole.

**Activity:** Science experiment about decomposition featuring an activity sheet to plan the experiment and record results.

#### National Curriculum links

##### KS1 Science:

- Pupils observe closely, using simple equipment and perform simple tests.
- Pupils use their observations and ideas to suggest answers to questions.
- Pupils distinguish between an object and the material from which it is made.
- Pupils explore and compare the differences between things that are living, dead, and things that have never been alive.

##### KS2 Science:

- Pupils set up simple practical enquiries, comparative and fair tests.
- Pupils identify, name, compare and describe physical properties of a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.
- Pupils recognise that environments can change and that this can sometimes pose dangers to living things.
- Pupils ask relevant questions and use scientific enquiries to answer them.

### 2. Sorting Out Litter – 30mins

This is a great lesson to follow up a real litter pick of your own – ideally to a canalside location. The PowerPoint presentation sets the scene with a ‘fictional school group litter pick’. This can be used to compare your own litter pick results.

**Activity:** Create a visual/physical playground graph showing the types of litter you found on your own litter pick – take a photo of your graph to share your findings.

## Activity overview continued

### National Curriculum links

#### KS1 Mathematics:

- Pupils interpret and construct simple pictograms, tally charts and block diagrams.
- Pupils ask and answer simple questions about totalling and comparing categorical data.

#### KS1 PSHE:

- Pupils understand what improves and harms their local, natural and built environments and develop strategies and skills needed to care for these.

#### KS2 Mathematics:

- Pupils interpret and present data using appropriate graphical methods.
- Pupils solve problems using information presented in tables and graphs.

#### KS2 PSHE:

- Pupils know that they have different kinds of responsibilities and duties in the community and towards the environment and understand the consequences of human action and making good choices.

### 3. Plastic in our Oceans – 30mins

The PowerPoint presentation provides an overview of the impact of plastic on the ocean and how it gets there. The presentation ends with a hands-on activity to encourage empathy and understanding involving rubber bands.

**Activity:** Cut and stick activity of litter’s journey to the sea.

### National Curriculum links

#### KS1 Science:

- Pupils identify that living things live in habitats to which they are suited and understand how they depend on each other.

#### KS1 PSHE:

- Pupils understand what improves and harms their local, natural and built environments and develop strategies and skills needed to care for these.

#### KS2 Science:

- Pupils recognise that environments can change and that this can sometimes pose dangers to living things.

#### KS2 Geography:

- Pupils describe and understand key aspects of the water cycle.



## Activity overview continued .....

### 4. The Fight Against Litter - 30mins to 1hr

This week, students are encouraged to see how we can be proactive and reactive in the fight against litter. The PowerPoint presentation gives a definition of these terms.

**Activity:** Design a machine to collect litter in the canal/river or ocean then make models of their machine from waste materials.

#### National Curriculum links

##### KS1 Art and Design:

- Pupils design purposeful, functional, appealing products based on design criteria.

##### KS1 PSHE:

- Pupils understand what improves and harms their local, natural and built environments and develop strategies and skills needed to care for these.

##### KS2 Art and Design:

- Pupils use criteria to inform the design of innovative and functional products that are fit for purpose.

##### KS2 PSHE:

- Pupils know that they have different kinds of responsibilities and duties in the community and towards the environment and understand the consequences of human action and making good choices.

### 5. Plastic Wrap - 30mins to 1hr

With a good foundation of language and understanding, this week’s lesson will focus on writing a litter themed rap, song or poem.

**Activity:** Write a poem, song or rap. The English focussed session leads to a creative design activity where students will make musical instruments from waste materials.

#### National Curriculum links

##### KS1 English:

- Pupils develop poetry writing skills.
- Pupils read aloud their own writing, using appropriate intonation, tone and volume.

##### KS1 Art and Design:

- Pupils use a range of materials creatively to design and make products.

##### KS2 English:

- Pupils perform their own compositions, using appropriate intonation, volume, and movement.

##### KS2 Art and Design:

- Pupils develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design.

## Activity overview continued

### 6. A SUPA Party - 30mins to 1hr+

After all their learning and hard work, it’s time to plan a celebration. This is a great way to raise environmental awareness and to shout about your fabulous work to a wider audience. First, use the presentation to identify problems with a fictional party scene, this helps to generate ideas and set up for the activity.

**Activity:** Plan a **single-use plastic avoidance** party and show off your plastic/recycled creations. This is a great conclusion to the work unit and it’s also a perfect opportunity to get students to perform their plastic ‘wrap’ to a larger crowd.

#### National Curriculum links

##### KS1 PSHE:

- Pupils understand what improves and harms their local, natural and built environments and develop strategies and skills needed to care for these.

##### KS2 PSHE:

- Pupils know that they have different kinds of responsibilities and duties in the community and towards the environment and understand the consequences of human action and making good choices.

# Lesson 1 Teacher’s Guide

## A Plastic Problem - 30 minutes - KS1/2 .....

<p><b>Learning Objective</b></p>	<p><b>Resources</b></p>
<ul style="list-style-type: none"> <li>To understand the material qualities of plastic and that it takes a long time to decompose.</li> <li>To recognise the impact of litter on the environment.</li> <li>To plan a science experiment; make predictions, observations and record results.</li> </ul>	<ul style="list-style-type: none"> <li>‘A Plastic Problem’ PowerPoint presentation</li> <li>Three containers (per group).</li> <li>Man-made materials (Cardboard/paper).</li> <li>Natural materials (Apple core/strawberry).</li> <li>Plastic items (Plastic bag/bottle cap).</li> <li>‘A Plastic Problem’ task sheets x 2.</li> </ul>
<p><b>Success Criteria</b></p>	
<ul style="list-style-type: none"> <li>I understand that litter will decompose but some materials will break-down quicker than others.</li> <li>I understand the effect of plastic pollution on the environment.</li> </ul>	
<p><b>Teaching Input</b></p>	
<p>Begin by asking students how humans can affect the environment positively and negatively – planting trees; recycling; littering etc.                  Show ‘A Plastic Problem’ PowerPoint presentation to students. Discuss how nature has its own way of recycling organic matter. Autumn leaves or dead animals will rot and be absorbed back into the ground, returning nutrients. Discuss why plastic pollution is a problem. Emphasise that plastic litter is a particular problem as it does not break down for hundreds of years and can present long term problems, making areas unsightly and harming wildlife.</p>	
<p><b>Main Activity</b> - Use the two ‘Plastic Problem’ task sheets provided.</p>	
<p><b>Decomposition Activity</b> – Students will work in groups to set up a simple experiment to observe how different items of litter decompose in water. Students will predict what will happen to each material and then observe and record the changes over time.                  Allow students to choose the materials they are going to investigate (One man-made, one natural and one plastic item works well).</p>	
<p><b>Ideas for KS2 Students</b></p> <ul style="list-style-type: none"> <li>Students could choose a variable to change in their experiment and compare their results with another group. (i.e. Stir their jar/not stir, store in warm and cold).</li> <li>Ask students to explain how they will make this a fair test, include details of this in a methodology.</li> <li>Students could investigate the decomposition of different types of plastic bags (Bag-for-life, compostable, normal, plastic bag).</li> </ul>	
<p><b>Suggestions</b></p>	
<ul style="list-style-type: none"> <li>Encourage students to research the length of time it takes for other materials to decompose.</li> <li>Students create and design a ‘compostable’ logo/sticker choosing appropriate symbols, colour and text.</li> </ul>	
<p><b>Plenary</b></p>	<p><b>Key Words</b></p>
<p>After the experiment compare discuss: Were the students predictions correct? What would happen to these items of litter in the canal?</p>	<p>Decompose, pollution, litter, biodegradable, environmentally friendly, environment, positive, negative.</p>
<p><b>Useful Websites/External Resources</b></p>	<p><b>‘Get Outside’ Ideas</b></p>
<p>Resources for learning more about plastic:  <a href="http://www.plasticeducation.com">www.plasticeducation.com</a></p>	<p>Make this experiment ‘more realistic’ by conducting in an outside environment where the materials will be exposed to more natural elements.</p>

## A Plastic Problem

### Decomposition Experiment

We're going to investigate how long different materials take to **decompose** in water.

What materials are you going to investigate? Write them in the box below:

Material 1:	Material 2:	Material 3:
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Put each piece of material in a jar or container and cover with water. Draw a diagram of your experiment below. Add labels to describe each part.



You are going to check your test subjects each week and record your **observations**. What do you **predict** you will see?

I predict that: .....

.....

.....

.....

.....



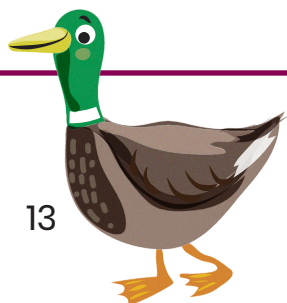
# A Plastic Problem .....

## Decomposition Experiment Continued...

Use a table like the one below to describe your observations. You could take a photo of your test subjects at each observation stage.

	Material 1:	Material 2:	Material 3:
Observation 1 Date:			
Observation 2 Date:			
Observation 3 Date:			
Observation 4 Date:			
Observation 5 Date:			

What are your **conclusions**?



# Lesson 2 Teacher’s Guide

## Sorting out Litter- 30 minutes - KS1/2 .....

<p><b>Learning Objective</b></p>	<p><b>Resources</b></p>
<ul style="list-style-type: none"> <li>To organise and interpret data.</li> <li>To compare and analyse results.</li> </ul>	<ul style="list-style-type: none"> <li>‘Sorting out Litter’ PowerPoint presentation</li> <li>Litter pickers, gloves and rubbish bags.</li> <li>Chalk.</li> <li>Camera.</li> </ul>
<p><b>Success Criteria</b></p>	
<ul style="list-style-type: none"> <li>I can collect data about litter.</li> <li>I can interpret and present data on a graph.</li> </ul>	
<p><b>Teaching Input</b></p>	
<p>Before the session, complete an organised litter pick in your local area, preferably along a canal or river. Show the ‘Sorting out Litter’ PowerPoint presentation to students. Discuss the results of the demonstration pictogram or pie chart in the PowerPoint presentation. Ask: How can we organise and present our own data? Take feedback from the class. Students decide which categories to sort the litter in to (i.e. plastics, cardboard etc.). Model organising the data and interpreting the data with the class. Encourage students to compare their data with the example school from the PowerPoint presentation. <b>N.B.</b> If a waterside litter pick isn’t possible, use litter collected from the school packed lunches.</p>	
<p><b>Main Activity</b></p>	
<p><b>Big Outdoor Graph Activity</b> – Students will display their litter pick results in an ‘unusual way’ outside. Students could use the clean waste collected to construct a graph of the different types of material. If the collected waste is not suitable, students could use their bodies and chalk to create the graph. KS1 students could present the data in a tally chart or pictogram. Take a photo of your ‘big outdoor graph’ and share it on your school newsletter. Students could write a news report to go with their photo. <b>Ideas for KS2 Students</b> Students could create a Venn diagram, block graph or line graph to represent the data.</p>	
<p><b>Suggestions</b></p>	
<ul style="list-style-type: none"> <li>Using items collected during the litter pick or waste from packed lunches create a large mural at school to raise awareness of plastics. For ideas see <a href="http://www.eco-schools.org.uk">www.eco-schools.org.uk</a></li> </ul>	
<p><b>Plenary</b></p>	<p><b>Key Words</b></p>
<p>Litter Relay Race: Put a pile of mixed ‘waste’ material at one end of the playground or field. Split the class into groups. Assign each group a material (KS1 – Plastic, metal, fabric, food waste. KS2 – Recyclable, biodegradable, non-recyclable). One member of the team races to collect their material from the pile and bring it back to their team. The winner is the team with the most correct items.</p>	<p>Pollution, litter, recyclable, biodegradable, non-recyclable.</p>
<p><b>Useful Websites/External Resources</b></p>	<p><b>‘Get Outside’ Ideas</b></p>
<p>Canal &amp; River Trust: <a href="#">Creating plastic free canals</a></p>	<p>Conduct a litter pick at a canal or riverside. The graph activity is perfect for the school playground and the ‘Litter Relay’ could be done on the school field.</p>

# Lesson 3 Teacher’s Guide

## Plastic in our Oceans - 30 minutes - KS1/2 .....


<b>Learning Objective</b>	<b>Resources</b>
<ul style="list-style-type: none"> <li>To understand that litter dropped inland can end up in the ocean.</li> <li>To recognise the impact of litter on the environment.</li> </ul>	<ul style="list-style-type: none"> <li>‘Plastic in our Oceans’ PowerPoint presentation.</li> <li>Elastic bands.</li> <li>‘Plastic in our Oceans’ task sheet.</li> <li>Journey to the sea diagram (page 19).</li> <li>Sand.</li> <li>Large box.</li> <li>Old plastic bag cut up to line water channels.</li> </ul>
<b>Success Criteria</b>	
<ul style="list-style-type: none"> <li>I understand how litter can travel to the sea.</li> <li>I understand how a piece of plastic litter can cause an animal harm.</li> </ul>	
<b>Teaching Input</b>	
<p>Show the ‘Plastic in our Oceans’ PowerPoint presentation to students and conduct the rubber band activity in pairs. Students will pretend their hand is a bird or a fish that lives in your local waterway and their partner will tangle a rubber band around their fingers.</p> <p>Ask: How did it feel to try to get your hand free? Was it difficult or easy?</p> <p>Explain we were using the rubber band to represent all kinds of plastic litter that animals can get tangled in. Show the image of the <a href="#">Great Pacific Garbage Patch</a> and take feedback from the class.</p>	
<b>Main Activity</b> - Use the ‘Plastic in our Oceans’ task sheet provided.	
<p>Students complete the cut and stick activity with the ‘Plastic in our Oceans’ task sheet to order the journey of a fictional plastic bottle to the sea – Use cut out labels on the ‘Journey to the sea’ diagram on page 17.</p> <p><b>Ideas for KS2 Students</b></p> <p>Students draw and label their own journey of a piece litter to the sea using the ‘Plastic in our Oceans’ PowerPoint presentation slide 8 as a prompt. Students can write a narrative piece or story describing the journey of a plastic bag to an animal’s stomach.</p>	
<b>Suggestions</b>	
<p>Use a large box (a shallow under-bed storage box works well) filled with sand. Dig out channels for canals and rivers, use tubes for drains, and model the journey litter can take to the sea. You could line water channels with plastic to help hold the water.</p>	
<b>Plenary</b>	<b>Key Words</b>
<p>Find out what you can do in your local area to help fight plastic pollution.</p> <p>Register to <a href="#">become an Eco-School</a> – talk to your class about what this will mean and how you will work together to achieve it.</p>	<p>Microplastics, food chain, drains.</p>
<b>Useful Websites/External Resources</b>	<b>‘Get Outside’ Ideas</b>
<ul style="list-style-type: none"> <li>How much plastic is in our oceans? – Earth Unplugged <a href="#">5 minute informative video</a></li> <li>Mircoplastics found in mussels <a href="#">short video</a> by University of Hull</li> <li>Albatrosses ingesting plastic – Blue Planet II: <a href="#">2 minutes of Episode 7</a> (CONTAINS IMAGE OF DEAD BIRD)</li> </ul>	<p>The sand box and water activity (see suggestions) is great for outdoor learning. Let students investigate how light pieces of litter travel by wind and water. Don’t forget to gather up the litter after.</p>

## Plastic in our Oceans .....

### A journey to the sea

How does a piece of litter dropped on land manage to travel far out to sea?

Cut out the following mixed-up labels and add them to the 'Journey to the sea' diagram in the correct order.

<p><b>Fish eat</b> the small bits of plastic by mistake.</p>	<p>Bashed by waves, the plastic bottle gets <b>broken and sinks</b> to the sea floor.</p>	<p>The wind <b>blows</b> the plastic bottle into a nearby canal.</p>	<p>The bottle <b>floats into a lock</b> that leads out to a river. </p>
<p>The plastic bottle <b>floats along the river.</b></p>	<p>Someone <b>drops</b> a plastic bottle onto a towpath.</p>	<p>After many years the plastic starts to <b>break up</b> into smaller pieces.</p>	<p>The <b>river meets the sea</b> and the bottle floats away.</p>

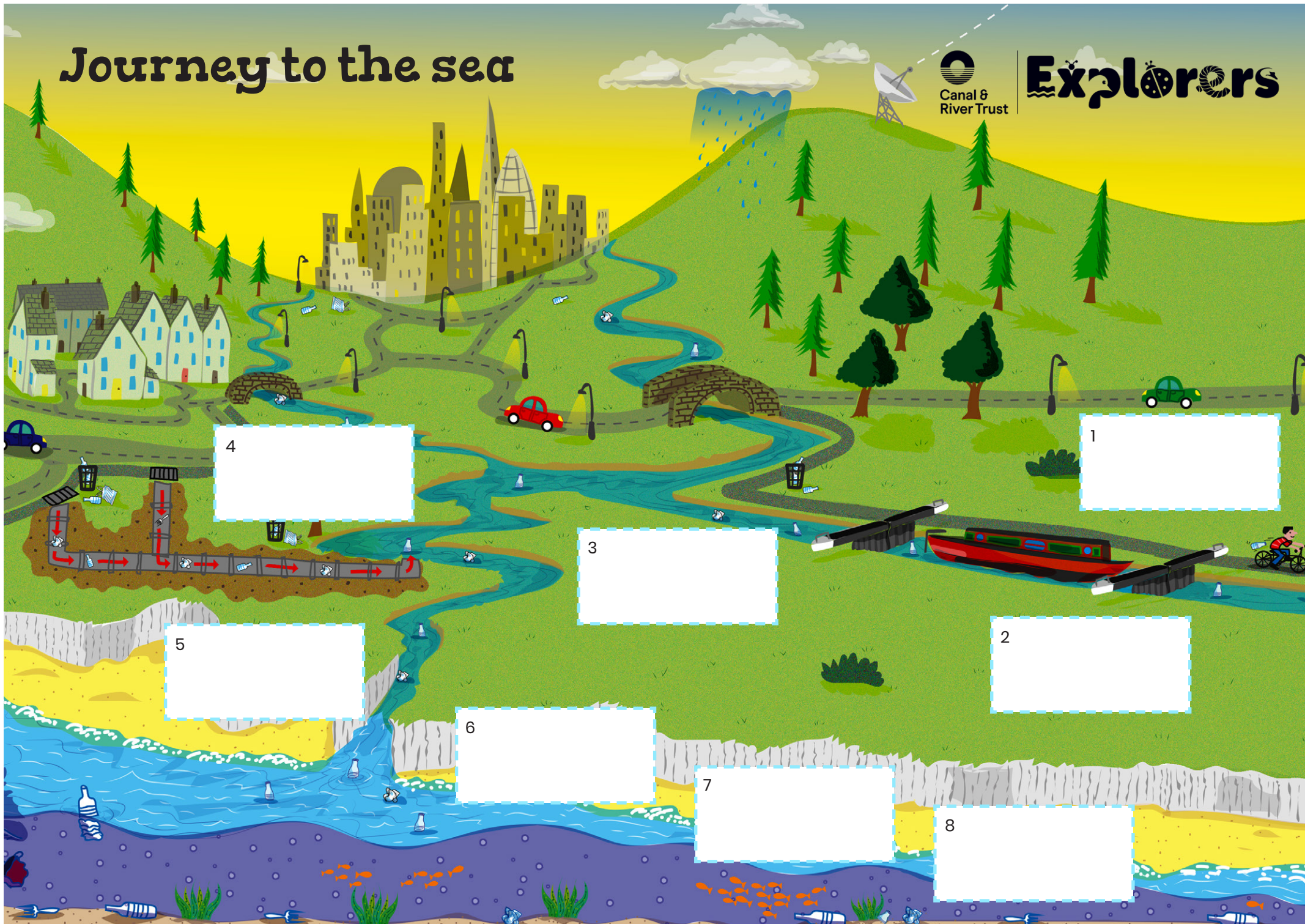
Use the space below to describe or draw a **different** journey for another piece of litter.

Maybe a dropped crisp packet gets washed down a drain or maybe a child lets go of a helium balloon in the park. What happens to the litter in the end?





# Journey to the sea



4

1

3

5

2

6

7

8

# Lesson 4 Teacher’s Guide

## The Fight Against Litter - 30 minutes - KS1/2 .....

<p><b>Learning Objective</b></p>	<p><b>Resources</b></p>
<ul style="list-style-type: none"> <li>To understand that we are <b>all</b> able to take action against litter and waste.</li> <li>To think creatively about innovative methods to reduce litter in their local environment.</li> </ul>	<ul style="list-style-type: none"> <li>‘The Fight Against Litter’ PowerPoint presentation.</li> <li>‘The Fight Against Litter’ task sheet.</li> <li>Various waste items (Yogurt pot, cardboard tubes).</li> </ul>
<p><b>Success Criteria</b></p>	
<ul style="list-style-type: none"> <li>I can think of practical ways to reduce, reuse and recycle items that I no longer need.</li> <li>I can make responsible choices to reduce waste.</li> </ul>	
<p><b>Teaching Input</b></p>	
<p>Ask: Do you think we should be picking up litter that other people have dropped? Take feedback from the class. Remind students that even though cleaning up is not an answer to the whole problem, it has immediate results. Show the ‘The Fight Against Litter’ PowerPoint presentation to students.</p>	
<p><b>Main Activity</b> - Use the ‘The Fight Against Litter’ task sheet provided.</p>	
<p>Students will design their own litter collecting machine to clean up their local waterway or nearby sea. Students will draw their machine, labelling the key features. Ask: What criteria must your litter machine have? (i.e. does it need to move/float? If so, how? What will it be made from?). Encourage students to be as creative as possible. Students will then make a ‘prototype’ of their litter collecting machine using waste items. <b>Ideas for KS2 Students</b> Ask students to define more detailed qualities about their machine like how will it be powered? How much litter will it be able to store on board? How often will it need to be emptied?</p>	
<p><b>Suggestions</b></p>	
<p>Students could present their model to the rest of the class in a ‘dragons den’ style sales pitch. Encourage peer to peer questions and feedback.</p>	
<p><b>Plenary</b></p>	<p><b>Key Words</b></p>
<p>Research other people’s litter collecting inventions as a class. Make a class pledge to help tackle litter in your area. It could be: ‘Everyone picks up one piece of litter a day.’</p>	<p>Wasteful, proactive, reactive, inventive, prototype.</p>
<p><b>Useful Websites/External Resources</b></p>	<p><b>Get Outside’ Ideas</b></p>
<p>The <a href="#">Seabin Project</a> is a good example of a litter collecting machine design for the sea.</p>	<p>Tubs of water could be used outside so that students could demonstrate how their machine might work in the canal, river or ocean.</p>

## The Fight Against Litter .....

### Design a litter collecting machine

Design a machine to collect litter from canals and rivers.  
Things to think about: Will someone need to control it? Will it float? How will it operate? What will it be made from?

	What tools will it have?	
	How will it work?	



Create a prototype of your machine by making a model with recycled items.



You could present your model to the rest of the class and explain how it will work.



# Lesson 5 Teacher’s Guide

## A Plastic ‘Wrap’ - 30 minutes - KS1/2

<p><b>Learning Objective</b></p>	<p><b>Resources</b></p>
<ul style="list-style-type: none"> <li>• To think emotively about littering.</li> <li>• To write a poem, song or rap about litter.</li> <li>• To use interesting and inventive language.</li> </ul>	<ul style="list-style-type: none"> <li>• ‘A Plastic Wrap’ PowerPoint presentation.</li> <li>• ‘A Plastic Wrap’ task sheet (4 options).</li> <li>• Various used items e.g. cardboard, plastic packaging, elastics and string.</li> </ul>
<p><b>Success Criteria</b></p>	
<ul style="list-style-type: none"> <li>• I can identify key words relating to plastics and litter.</li> <li>• I understand the vocabulary associated with plastics and litter.</li> </ul>	
<p><b>Teaching Input</b></p>	
<p>Show the ‘A Plastic Wrap’ PowerPoint presentation to students. Discuss the sample poems with the class. Are they good? What do they mean? Could they add another verse? Make a note on the board of any key vocabulary. Refresh relevant literacy techniques if required e.g. similes or metaphors. Explain that they are going to write their own song/poem/rap about the impact of litter and to raise awareness of what can be done to reduce litter.</p>	
<p><b>Main Activity</b> - Use the ‘A Plastic Wrap’ task sheet provided.</p>	
<p>In groups or individually, students write a song/poem/rap about litter. Use the ‘plastic wrap’ task sheet to help students to generate ideas. Shapes and borders have been provided in extra task sheets for use if required. Students could write various poems to link with their year group’s poetry focus e.g. an acrostic, haiku or shape poem. Plastic shapes and a plastic themed border have been provided to give options for writing up the poems.</p> <p><b>Ideas for KS2 Students</b></p> <p>Students could make the poems longer by adding more verses according to the year group’s poetry focus.</p>	
<p><b>Suggestions</b></p>	
<p>Students could design and make musical instruments by reusing items that would be thrown away. For example; coffee tubs, cans, boxes, old pieces of piping, gift wrapping tubes, plastic packaging, elastics and string. Remember to recycle the items where possible at a later date.</p>	
<p><b>Plenary</b></p>	<p><b>Key Words</b></p>
<ul style="list-style-type: none"> <li>• Students to perform their song/poem to the class using their instruments (if made).</li> <li>• Students could write up their poems to create a wall display.</li> </ul>	<p>Inspire, emotions, simile, adjectives, alliteration</p>
<p><b>Useful Websites/External Resources</b></p>	
<ul style="list-style-type: none"> <li>• <a href="#">A Plastic Poem</a> for World Ocean Day (8th June).</li> <li>• Selection of <a href="#">environment themed poems</a>.</li> <li>• A competition winning <a href="#">litter poem</a>.</li> </ul>	<p><b>‘Get Outside’ Ideas</b></p> <p>Do an outdoor performance of the rap/song or poem along with musical instruments.</p>

# Plastic 'Wrap'

Use this sheet to plan writing ideas for your poem, song or rap.

## Adjectives

How does litter make you feel? List some **adjectives** to describe your feelings about litter.  
Example: Angry, cross.

## Alliteration

Create some litter **alliteration** (two words with the same letter or sound at the beginning).  
Example: Polluting Plastic.

## Rhyming Words

Use this space to write some litter and plastic themed **rhyming** words (words with the same sound at the end).  
Example: Strangle, tangle.

## Similes

Use this space to write some plastic themed **similes**. Use the words 'like' or 'as' to make comparisons between two things.  
Example: Litter scattered like tears.

Use this space for any other thoughts, words or ideas for your writing.



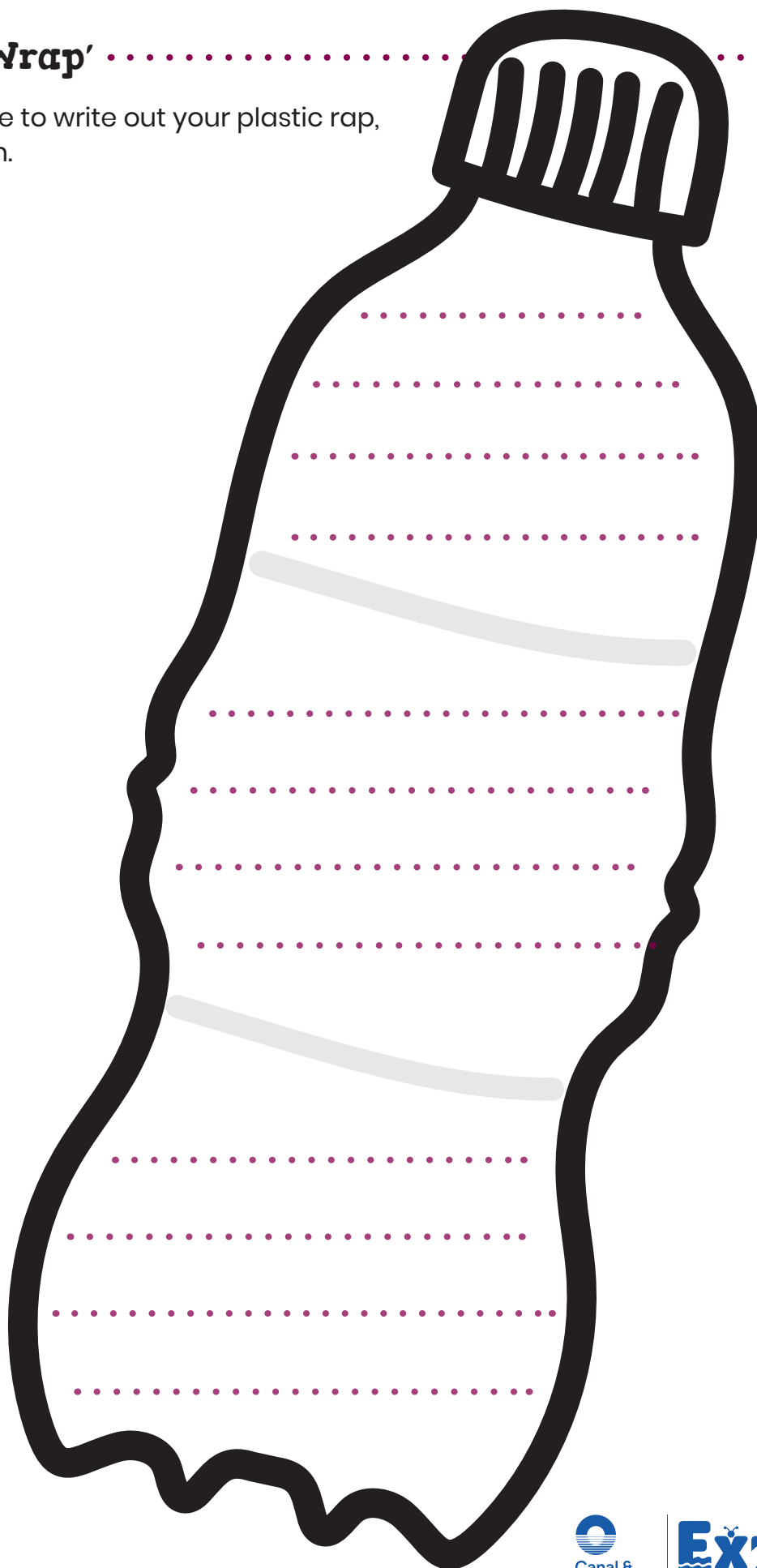
## Plastic 'Wrap'

Use this shape to write out your plastic rap, song or poem.



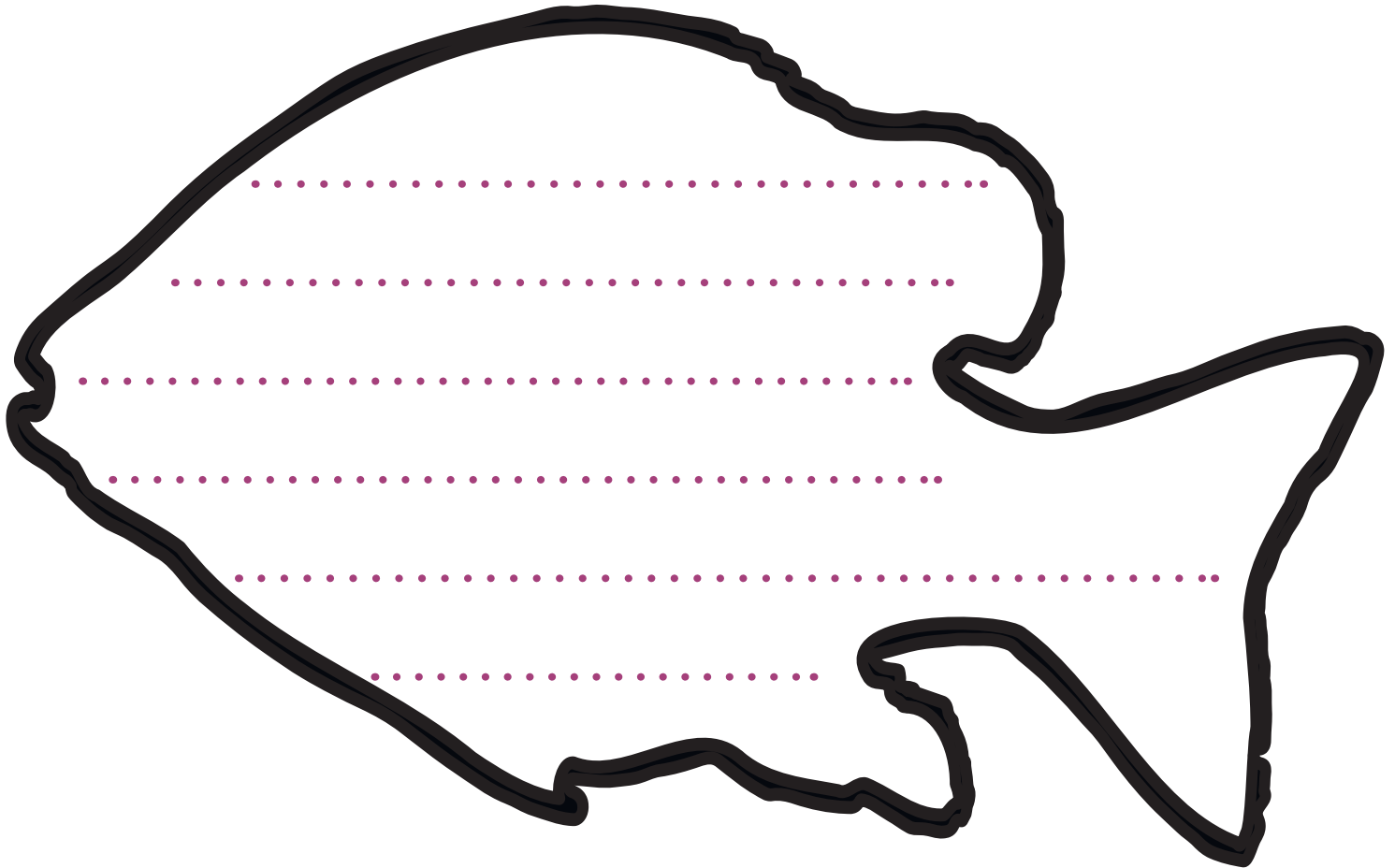
## Plastic 'Wrap'

Use this shape to write out your plastic rap, song or poem.



# Plastic 'Wrap'

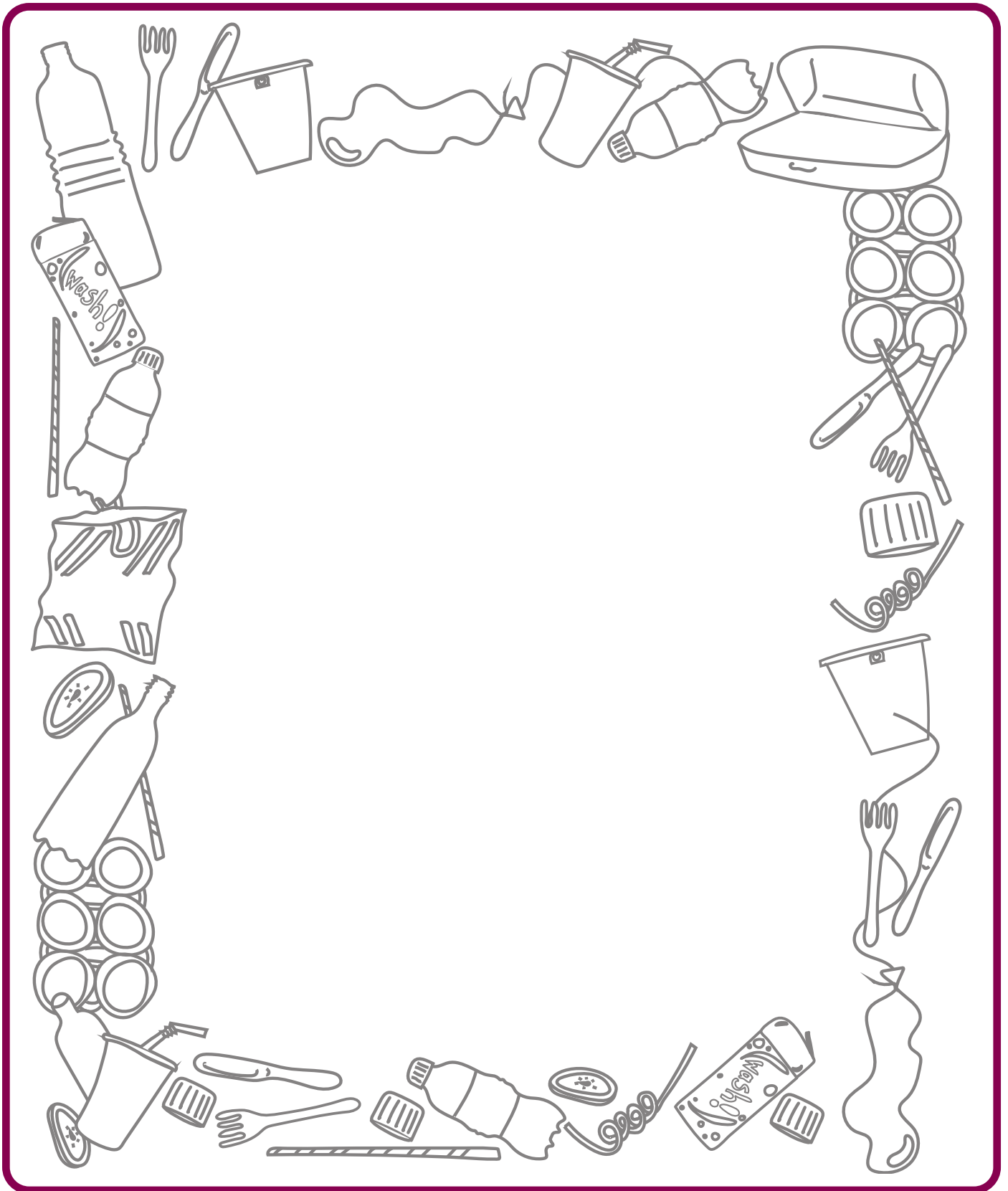
Use this shape to write out your plastic rap, song or poem.





## Plastic 'Wrap'

Use this space to write out your plastic rap, song or poem and colour in the plastic litter.



# Lesson 6 Teacher’s Guide

## Party Time - 30 minutes - KS1/2 .....

<b>Learning Objective</b>	<b>Resources</b>
<ul style="list-style-type: none"> <li>To be aware of single-use plastics in everyday life.</li> <li>To think creatively about ways to avoid single use plastics.</li> </ul>	<ul style="list-style-type: none"> <li>'Party time' PowerPoint presentation.</li> <li>'Party time' task sheet.</li> </ul>
<b>Success Criteria</b>	
<ul style="list-style-type: none"> <li>I know why single-use plastics are bad for the environment.</li> <li>I can choose sensible alternatives to single-use plastics.</li> </ul>	
<b>Teaching Input</b>	
<p>Discuss the positive and negative aspects of using plastic. (i.e. come in many colours, durable, washable, does not biodegrade). Emphasise plastic is very useful but single-use plastics (items used once and then thrown away) are harming the environment and wildlife.</p> <p>Show the 'Party Time' PowerPoint presentation and discuss different plastic items (e.g. cling film v's plastic lunchbox).</p>	
<b>Main Activity</b> - Use the 'Party Time' task sheet provided.	
<p>Explain to the students that they are going to plan a party to celebrate their hard work learning about plastics and litter. This is going to be a party with a difference: a <b>Single-Use Plastic Avoidance (SUPA)</b> party.</p> <p>Students could use the task sheet provided to plan ideas or draw a picture of their party scene, labelling all the alternatives to single-use plastics (for example metal cutlery and paper chains instead of balloons).</p> <p>Students could invite parents/carers in to school for their party, where they could also share the results of the litter pick, display their litter collecting machine models and perform their plastic 'wrap'.</p> <p><b>Ideas for KS2 Students</b></p> <p>Students could plan a short presentation to be given at the party to share knowledge and understanding of plastic pollution.</p>	
<b>Suggestions</b>	
<p>Students could design and write party invitations to invite their parents/carers to the celebration. Discuss how the invitations will be distributed. Would designing a digital invitation be better? What would be the advantages and disadvantages of this?</p>	
<b>Plenary</b>	<b>Key Words</b>
<ul style="list-style-type: none"> <li>Reflect on daily use of plastic. Ask: How can we reduce the amount of single-use plastics that we use everyday?</li> <li>Students could keep a diary to record the amount of single-use plastic they use at home.</li> </ul>	Single-use plastics, wasteful.
<b>Useful Websites/External Resources</b>	
<b>'Get Outside' Ideas</b>	
<ul style="list-style-type: none"> <li><a href="#">Zero waste party ideas</a> along with other guides to go plastic free.</li> <li><a href="#">Friendsoftheearth.uk</a> have lots of plastic free tips.</li> <li>Move your project further by becoming a <a href="#">Plastic Free School</a></li> </ul>	Why not host your 'SUPA' party outside in the fresh air?

# SUPA Party

## Party preparations

Use this sheet to plan your 'SUPA' party.  
(**S**ingle-**U**se **P**lastic **A**voidance party)



<p>Who will you invite and how will you invite them?</p>	<p>What food will you bring and how will you bring it?</p>	<p>What games could you play?</p>
<p>How will you decorate your party room?</p>	<p>What will you use for cutlery, cups and plates?</p>	<p>Other thoughts and ideas...</p>