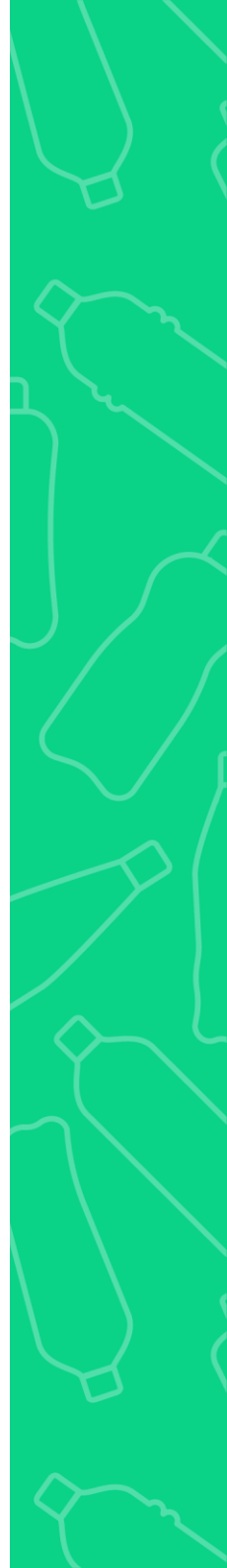


The Butterfly Effect

Plastic

Age	Activity Summary	Resources
5-6	Sorting items based on material.	Sorting Activity Sheet.
6-7	Finding hidden plastics.	Plastic or No Plastic Power Point.
7-8	Reducing single use plastics.	Single Use Plastic Power Point.
8-9	Writing a story about a toothbrush that lived forever.	Pens/pencils and recycled paper or computers.
9-10	Exploring ways to reduce our plastic waste.	Ideas to Reduce Your Plastic Waste.
10-11	Bioaccumulation of plastic game.	Recycled paper, a small plastic item and a pen.
11-12	The Great Pacific Garbage Patch.	Great Pacific Garbage Patch Facts sheet.

Teachers Notes:



Plastic

5-6

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11-12

We are learning...

to identify items made of plastic.

We can now...

identify items made of plastic and describe what they look and feel like.



Activity

Discuss plastic with the pupils. Plastic is all around us and so many things are made of plastic. Can the pupils name any things? Does all plastic feel and look the same? Use the Sorting Activity Sheet.

Digital / At Home Version

Complete the activity in the same way with household items.

Additional Challenge

Include questions around shape/3D shape into discussions with pupils.

Additional Support

Appropriate peer support.

Resources

Sorting Activity Sheet. (Can be displayed on the board)



Suggested Follow-On Activities

Go on a 'Plastic Walk' around the school, a shop or your home. Try to spot items made of plastic. What do they have in common? What is different about them?

UN Sustainable Development Goals

[Goal 12: Responsible consumption and production](#)

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[Goal 14: Conserve and sustainably use the oceans, seas and marine resources](#)

[Goal 15: Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss](#)

Plastic

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11-12

We are learning...

that sometimes items contain hidden plastic.

.....

We can now...

identify some items that people might not realise contain plastic.



Activity

Sometimes it's obvious when something contains plastic, whereas other times plastic can be hidden in things that we might not expect. Use the PowerPoint to play the game 'Plastic or No Plastic!' and discuss the hidden plastics that can be found in everyday items. List the items that contain hidden plastic and see if you can think of alternatives for each one.

Digital / At Home Version

Complete the activity in the same way.

.....

Additional Challenge

Can you find any other items that also contain hidden plastic?

Additional Support

Appropriate peer support.

Resources

Plastic or No Plastic PowerPoint



Suggested Follow-On Activities

Design a sticker that could be put on products that contain hidden plastic to show people it's there before they buy it.

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Plastic

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We are learning...

about single use plastic.

We can now...

explain what single use plastic is, why it is a problem and suggest some alternatives to common products that contain single use plastic.



Activity

Explain that sometimes things can be used just once, then thrown away. Ask the children to think of some examples: tissues, paper, lollypop sticks, plastic wrap etc. Explain that, because plastic is hard to produce and takes a long time to go away, we want to make sure that, if we do use it, we use it a lot rather than throwing it away after one use. Show the class the images on the PowerPoint. Discuss each one and ask them to suggest alternatives that would either be a. plastic-free, or b. used multiple times. Discuss ways to encourage people to change their behaviour and use the alternatives rather than the single-use plastic. For example, could you make the single use items expensive, or could you have a prize/award for people making the better choice?

Digital / At Home Version

Complete the activity in the same way.

Additional Challenge

Investigate some of the reasons people choose single use plastic. (cost, convenience etc)

Additional Support

Complete the activity in pairs or groups and focus on one slide per group, reporting back to the class with your findings.

Resources

Single Use Plastic PowerPoint



Suggested Follow-On Activities

Create a poster encouraging people to swap their single use plastic items for alternatives. Share online using the hashtag #STEAMatJacobs.

UN Sustainable Development Goals

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Plastic

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11-12

We are learning

that plastic takes millions of years to decompose.

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We can now...

consider some of the problems that might be caused by a product designed to last for such a long time.



The Butterfly Effect

Activity

Did you know that every single piece of plastic you've ever used in your whole life, still exists today. You may have thrown away millions of items like toothbrushes, plastic bottles, crisp packets... the list goes on! What might it feel like to be a toothbrush that has been thrown away and ends up 'outliving' all the other things that were made at the same time as you? Where would you end up and what would you see? Write a short story called 'The Toothbrush that Lived Forever!'. Share your stories online using the hashtag #STEAMatJacobs.

Digital / At Home Version

Complete the activity in the same way, writing using a computer.

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Additional Challenge

Research where plastic like the toothbrush might end up and why this can cause problems.

Additional Support

Rather than a story, illustrate a drawing of a toothbrush with words to describe how it might feel as it lives forever.

Resources

Pens/pencils and recycled paper or computers.

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Suggested Follow-On Activities

Pick your favourite story as a class and perform it as a play in front of your school.

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Plastic

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11-12

We are learning...

how to avoid excess plastic waste.

.....

We can now...

discuss and commit to some specific ways to reduce our plastic waste.



Activity

Discuss some of the ways that we use plastic in our lives. Are there any ways we could reduce the amount of plastic we use? Draw around the pupil's hand and on each finger ask them to write what they can do/will do to use less plastic and help keep oceans free of plastic pollution. You could create a display in the classroom with all the handprints. Share online using the hashtag #STEAMatJacobs.

Digital / At Home Version

Complete the activity on a computer.

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Additional Challenge

Come up with a list of ways to reduce plastic waste as a class.

Additional Support

Use the Ideas Reduce Your Plastic Waste Sheet.

Resources

Ideas to Reduce Your Plastic Waste



Suggested Follow-On Activities

Create Eco Bricks by filling old plastic bottles with plastic waste like crisp packets, wrappers etc then build a greenhouse using the bricks.

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Plastic

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11-12

We are learning

how plastics are passed up the food chain.

We can now...

explain how plastic affects the whole food chain through bioaccumulation.



Activity

Don't tell the pupils what they are learning about today; the goal is to have them guessing throughout and then reveal it at the end! Play a game of 'Pass the Parcel'. In the centre of the parcel place a small plastic item such as a bead or sweet wrapper. Wrap the piece of plastic in layers of recycled paper labelled in the following way:

- Layer 1 - Sea Worm,
- Layer 2 - Crab,
- Layer 3 - Halibut,
- Layer 4 - Human.

The children sit in a circle and pass the parcel around while music plays. When the music stops a layer is removed. Discuss what the meaning of each layer could be as each one is removed. Explain that this process of plastic passing up the food chain is called 'bioaccumulation'.

Digital / At Home Version

Teacher completes the activity over a call.

Additional Challenge

Ask the pupils what would happen if each living thing in the chain ate 5 of the living thing below it. How much plastic would they consume by doing so?

Additional Support

Appropriate peer support.

Resources

Recycled paper, a small plastic item, a pen. .

Suggested Follow-On Activities

Research microplastics and discuss. Can you think of any potential solutions to the problems caused by microplastics.

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Plastic

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We are learning...

some of the problems caused by plastic pollution.

We can now...

identify some of the problems caused by plastic pollution in our oceans. Consider some potential ways to help.



Activity

Read the Great Pacific Garbage Patch Facts sheet, either as a class or in groups. Discuss the problems associated with it. As a class, based on what you have learned, and on any additional research, what do you think you could do to help? Can you start a campaign to reduce plastic use? Could you petition for certain types of single use plastic to be banned or taxed? Could you experiment to see if you can create something that could collect and sort microplastics? Could you design posters and an online campaign making people aware of the dangers of plastic to sea life? Think of one thing that you can do today to help.

Digital / At Home Version

Complete the activity in the same way using a computer for further research and working online to discuss solutions.

Additional Challenge

Pupils can continue their own research into the topic and report their findings.

Additional Support

Specific tasks tailored to the ability level of the pupils.

Resources

Great Pacific Garbage Patch Fact Sheet,

Suggested Follow-On Activities

Link to the Plastics theme through exploring the sort of pollutants collected in the sea. Watch this video for further information on how the plastic is being cleaned out of the ocean.

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