message in a bottle top

Delivery Notes

Composite Prime is in the business of reducing plastic waste and creating beautiful high quality products in the process.
Its garden decking is made using recycled plastic and FSC® wood flour which ensures that the product is sustainable, ethical and environmentally friendly. Each square metre contains the equivalent of more than 3,000 plastic bottle caps or 280 plastic bottles. In the seven years of operation the brand has saved the equivalent of 176 million plastic milk bottles from landfill and over 1.8 billion bottle top caps.

The Message in a Bottle Top art project is back for its second year and shares an inspiring and important message for pupils aged 5 to 11 about turning trash into treasure. They learn about the wastefulness happening right under their noses and learn to see and create beauty out of the things they have around them. Over 750 schools took part in this campaign in 2021, inspiring roughly 36,000 Children to learn how to make a real difference in the world using creative and imaginative vision.

Following Composite Prime's example, pupils discover how to see the treasure in the waste we produce by creating an art mural or sculpture, inspired by and showcasing the creatures they'd love to protect, using the very waste that harms them.

And if that wasn't exciting enough, exploring environmental issues through this art & design project supports step 4 (including environmental issues in your school's curriculum) of the Ecoschools' seven step programme.

Learning objectives

Session 1 & home challenge

We are learning about:

- The properties and uses of plastic.
- What happens to plastic waste and the problems it can cause.
- Recycling and how plastic is recycled.

Session 2

We are learning about:

- Ways in which plastics can be recycled into new and beautiful items and materials.
- Waste artists, the materials they use and the art they create.
- How to create waste art from plastic bottle tops.
- Recycling and how plastic is recycled.

Associated resources:

- PowerPoint Presentation
- Activity Sheet 1: Message in a Bottle Top Home Challenge
- Artists Top Tips sheet
- Activity Sheet 2: Message in a Bottle Top Design Sheet
- Competition Leaflet

Composite Prime®
NATURAL EVOLUTION

Learning Outcomes

Session 1 & home challenge

- I can identify and find out about animals that can be harmed by plastic waste.
- I can explain the problems that plastic waste creates and why recycling is useful.
- I can imagine exciting and creative ways to reuse and recycle plastic bottle tops into beautiful works of art.

Session 2

- I can explore and discuss waste artists and art.
- I know that plastic can be imaginatively recycled into new materials and exciting pieces of art.
- I can design and create my own piece of beautiful waste art using plastic bottle tops.

Suggested timings and setting

Message in a Bottle Top is broken down into three key sections:

1. In-school citizenship session on plastics and recycling (recommended 30 mins with an optional 20 mins activity)
2. At-home exploration of plastics and animals affected by plastic waste (recommended time to complete: 1-2 weeks)
3. In-school art & design session (recommended 60+ mins)

What you'll need

As part of the project you will need to ask children to collect plastic bottle tops and other plastic waste and bring them into school. These will need to be collected according to any in-school Covid guidelines (e.g. left in quarantine for 72hrs).

Session 1

- Lesson guidance notes
- Lesson PowerPoint
- Activity sheet 1: Message in a Bottle Top Home Challenge

Session 2

- Lesson guidance notes
- Lesson PowerPoint
- Plastic bottle tops (collected by children), collected according to any in-school Covid guidelines (e.g. left in quarantine for 72hrs).
- Other plastic waste materials (collected by children), collected according to any in-school Covid guidelines (e.g. left in quarantine for 72hrs).
- Joining materials and tools (e.g. tape, glue, glue guns, staplers, nails, grout, wire etc).
- Artists Top Tips sheet
- Activity Sheet 2: Message in a Bottle Top Design Sheet
- Competition Leaflet

Lesson Plan

SESSION 1

Starter (5 mins)

Slide 2: Reveal each animal one at a time (challenging children to name them) and ask what they think all these animals have in common. Children work in pairs to come up with as many suggestions as they can. Share ideas then reveal that all these creatures are harmed by plastic waste (show **Slide 3**). Note that these are just some of the animals that can be harmed – there are many more in reality.

Main teaching (15 mins)

Slide 4: Ask children if they think plastic is a friend or foe.

Slide 5: Play Plastic Truth. Children look at the two incredible facts and in pairs decide which is the 'plastic truth'.

Elaborate on each answer reveal:

> Truth 1: All of these are true! Plastic helps save thousands of lives in the form of medical equipment and as a safety product in cars and crash helmets, however it also kills over a million birds every year and is seeping into our diets through the fish that eat plastics in the ocean.
>
> Truth 2: We recycle less than 10% of plastics waste and almost 80% still goes into landfills or the environment.
>
> Truth 3: Unfortunately, plastics don't decompose (break down) very fast - they can hang around for hundreds of years, polluting soils, rivers and oceans and harming living creatures. Plastic bottles are estimated to take 450 years to break down, while some plastics may take 1,000 years.

Slide 6: OPTIONAL: Watch the first video in the Newsround link. You may like to explore other aspects of the link at a later point in time – KS2 children could explore the page in pairs during a computing session.

Slide 7: Play Way/No way! Children shout out 'way' or 'no way' for each wildlife plastic claim.

Elaborate on the answers:

Animals choose to eat plastic – Way – they sometimes mistake it for food and eat it.

Plastics cause more female turtles to be born – Way – 'Micro-plastics' get mixed in with sand and cause it to become warmer in the sun than it normally would be. Turtles making nests using this sand will have far more female babies as the temperature affects the sex of turtle eggs. There are then too many females and not enough males.

Animals use plastics to build nests – Way – they often include plastics in their general collection of nest building materials.

Animals think plastic is pretty – Way – they can be attracted to plastics and investigate them, often getting caught as a result, or eating them, thinking they are food.

Plastic waste is useful to animals – No way – the potential dangers of plastic waste to animals is huge.

Animals eat plastic without knowing – Way – plastic gets broken down into tiny 'micro-plastics' and animals eat it accidentally.

Slide 8: Children consider the amazingness of plastic through 3 challenges:

1. Can you describe what plastic is to your partner?
2. How many things can you and your partner think of that are made from plastic? The more unusual the better. You have 1 minute!
3. Can you suggest 3 things about plastics that make them a really useful material? Think about their properties!

Discuss pupils' suggestions and agree that plastic is a truly incredible material.

Slide 9: Think about the things children have learnt about the dangers of plastic for wildlife **(Slides 6&7)** and all of the wonderful things about plastic as a material **(Slides 6&8)**. In groups of 4, children debate that plastic is really useful BUT it harms our wildlife. They work in two teams of two: 'team plastic' and 'team wildlife'.

Slide 10: Agree that while plastics can be harmful they are also an amazing material that we need! What might the solution be to minimise plastics waste (to protect wildlife) but still be able to use plastic as a material. What can we do? Take ideas and explain that there is no reason plastic has to end up in a landfill. There are amazing ways that we can reduce, recycle and reuse plastic waste. The amazing thing about science is that we keep finding fantastic and creative new ways to reuse and recycle plastic.

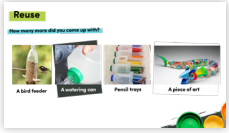
Slide 11: Challenge children to think about the plastics they have used so far today and what alternatives they could have used to reduce the use of plastics.

Slide 12: Explain that recycling plastic is far better for the environment than throwing it away. Look at the examples of companies that use recycled plastics to create beautiful new products. Ask children which items are made from recycled plastic then reveal the story behind each one – they are all made from plastic! Note that some of these products are even better than the traditional materials that they would have been used. For example, the recycled plastic content in Composite Prime's decking makes it last longer than comparable timber products.

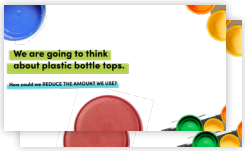
Slide 13: Play Plastic Match. In pairs children decide what each plastic item can be recycled into:

- Bottles and containers used for milk, shampoo, laundry detergent and household cleaners become playground equipment. They also become new bottles and containers, plastic lumber, picnic tables, lawn furniture, recycling bin.
- Plastic bags and wraps become park benches. They also become garden decks and fences and new plastic bags.
- Plastic bottles become T-shirts. They also become sweaters, fleece jackets, insulation for jackets and sleeping bags, carpeting and more bottles.
- Plastic bottle caps become decking. They also become batteries for your car, garden rakes, storage containers, reusable shopping bags, yarn, ropes, brushes and more bottle tops.

Slide 14: Challenge children to think of creative uses for a used bottle. Explain that they can cut it and decorate it, but it needs to be used for a different purpose than holding milk!



Slide 15: Share ideas for creative ways we can reuse plastics and highlight the use of bottle tops in the piece of art.



Slides 16-18: Recap ways we can reduce, recycle and reuse plastic bottle tops. Note that bottle tops are recycled in different ways in different areas. They can be a bit tricky to sort for recycling!

Slides 19&20: Why do children think reusing and recycling is a good idea? UKS2 children may like to explore the idea of the circular economy further by watching this video: **https://www.youtube.com/watch?v=zCRKvDyyHml**

Slide 21: Discuss the idea behind Message in a Bottle Top: that children are reusing this plastic waste product to create a mural or sculpture of an animal affected by plastics waste and send a message out that we can use these things to create something beautiful.

Slide 22: Children decide which animal they would like to focus on for their art and discuss with a partner.

Plenary & setting up the home challenge (10 mins)

Slide 23: Explain the home challenge using the Message in a Bottle Top Home Challenge Activity Sheet.

Remind children to collect plastic bottle tops (and any other plastics waste they need) for their art. You will need to have these all brought into school in advance of when want to use them if they need to be quarantined.

SESSION 2

Starter (5 mins)

Slide 24: Challenge children to count up the number of bottle tops they have collected. You can organise this in several ways depending on the age of your children:

- How many does each child have and how many altogether for the class?
- How many of each colour does each child have?
- How many of each colour do you have as a class?
- Based on the figures your class has, how many do they estimate the whole school may have collected?

Use a tally chart and create a pictogram (KS1), bar chart (KS1/LKS2) or pie chart (Year 6).

Main teaching (15 mins)

Slide 25: Explain that today children are going to meet a couple of artists who create amazing pieces of art out of waste plastics.

Slides 26-29: Explore Sarah Turner's artwork. Look at each piece first and ask children:

- What do you think this is?
- What is it made from?
- How has it been created?
- What might its message be?

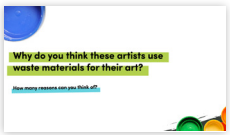
Explore the materials she uses and the message she wants to send with her artwork. Her website is here for reference:
https://www.sarahturner.co.uk/

Slides 30-33: Explore Michelle Reader's artwork. Look at each piece first and ask children:

- What do you think this is?
- What is it made from?
- How has it been created?
- What might its message be?

Explore the materials she uses and the message she wants to send with her artwork. Her website is here for reference:
https://www.michelle-reader.co.uk/

Look back through the four pieces of art. Which is the class favourite?



Slide 34: Challenge children to decide why waste products can make great art materials.

Slide 35: Take suggestions and share ideas. Ask children why plastic bottle tops in particular would make a good material to create art with. Note that creating murals with them is like painting with dots, while they are a great size to build individual parts of a sculpture.

Slides 36-38: Look at the bottle top art examples and some of last year's entries for inspiration. Remind children of the Message in a Bottle Top project options (or you may have your own ideas, if preferred).

Slide 39: Remind pupils that Composite Prime is one of the innovative companies that uses waste bottle tops to make new materials – they make decking for gardens! Introduce them to Composite Prime's Message in a Bottle Top competition (see the Competition Leaflet), where they too can create something beautiful out of waste materials. Excite children about the prospect of winning a **playground makeover for their school worth up to £5,000 and having a photograph of their finished art exhibited for lots of people to see.**

Explain that children will write a message that will accompany the artwork and decide if you are going to create your sculpture or mural as a class, in teams or individually.

Slide 40: Discuss pupils' chosen animal as a class or with a partner, what do they want to create (a mural or a sculpture) and how do they think they will use the bottle tops. Encourage pupils to share some interesting facts with their partner or class about the animal they discovered in the home challenge.

Slide 41: Discuss the Artists Top Tips (see Artists Top Tips Sheet). Encourage children to think carefully about the way they will join their materials (e.g. wire, glue, glue guns, glue dots, tape, staples, grout etc). Whatever you decide to have available, remember to do a risk assessment beforehand.

Main activity (30 mins)

Slide 42: Give pupils a copy of the Message in a Bottle Top Design Sheet and write the animal they are creating in the space at the top. Pupils then develop ideas further at home and design their bottle top mural or sculpture - remind them to be as creative as they can and to think about the Artists Top Tips and message they want to convey.

Pupils use their collected bottle tops to create their sculpture or bottle top mural. They can work individually, in groups or as a whole class. Keep count of how many bottle tops pupils have found at home, you will need this for the Competition Leaflet!

Plenary (5 mins)

Compose a statement to accompany your art that shares your message and rationale, entitled Our Message in a Bottle Top. Alternatively, you may wish to compose a Message in a Bottle Top poem to accompany the art.

Enter the Message in a Bottle Top competition and explain that you will be photographing the artwork and submitting it along with their message statement (see the Competition Leaflet). The winner of the competition will receive a playground makeover for their school worth up to £5,000 and the ten regional finalists will have their artwork on display in an online exhibition!

Competition deadline is Friday 20th May 2022

We would love you to share photos of your class enjoying the Message in a Bottle Top programme on social media. Use the hashtag **#messageinabottletop** and tag **@compositeprime** on Facebook and Instagram or **@Composite_Prime** on Twitter and you could be selected to win a £10 Amazon voucher!

The winners of last year's competition, Christ the King RC Primary School

Remote Learning contingency

Children working remotely can still join in the fun. They use plastic waste from their home to create a picture or sculpture that can be brought into school after any period away.

Additional activities for children to complete at home:

- Make a piece of art from other waste materials.
- Explore the options for recycling in your area.
- Go on a litter pick.
- Explore more about plastic waste from Newsround.
- Research other materials and objects that recycled plastics can be made into.
- Go on a local plastics hunt to see how many different things are made from plastic.
- Make a list of things you can do at home and in school to reduce plastics use and waste.

England

Art & design

KS1

- To use a range of materials creatively to design and make products.
- To use sculpture to develop and share their ideas, experiences and imagination.

KS2

- To develop an increasing awareness of different kinds of art, craft and design.
- To improve their mastery of art and design techniques, including sculpture with a range of materials.

Science

KS1

- To identify and name a variety of everyday materials, including plastic (Y1).

KS2

- To compare and group together everyday materials on the basis of their properties (Y5).

Maths

KS1

- To interpret and construct simple pictograms, tally charts, block diagrams and simple tables (Y2).

KS2

- To interpret and present data using bar charts, pictograms and tables (Y3/4).
- To interpret and construct pie charts (Y6).

Citizenship

KS1

- To explore what improves and harms their local, natural and built environments and about some of the ways people look after them.
- To consider social and moral dilemmas that they come across in everyday life.

KS2

- To know that resources can be allocated in different ways and that these economic choices affect individuals, communities and the sustainability of the environment.
- To consider social and moral dilemmas that they come across in life.

https://www.gov.uk/government/collections/national-curriculum#programmes-of-study-by-subject
https://www.gov.uk/government/publications/citizenship-programmes-of-study-for-key-stages-1-and-2

Northern Ireland

Art & design

KS1

- To look at and talk about resource material to stimulate their own ideas.
- To experiment with a range of media, materials, tools and processes such as: three dimensional construction.

KS2

- To collect, examine and select resource materials to use in the development of ideas.
- To use a range of media, materials, tools and processes such as: three dimensional construction, selecting which is appropriate in order to realise personal ideas and intentions.

Science

KS1

- To explore the range of materials used in my area.

KS2

- To know why materials are chosen for their use.

Maths

KS1

- To collect data, record and present it using tables and simple graphs.

KS2

- To collect, classify, record and present data drawn from a range of meaningful situations, using graphs and tables.

Personal development and mutual understanding

KS1

- To understand how their environment could be made better or worse to live in and what contribution they can make.

KS2

- To play an active and meaningful part in the life of the community and being concerned about the wider environment.

https://education.gov.scot/Documents/All-experiencesoutcomes18.pdf

Wales

Art & design

Foundation

- To explore and experiment with a variety of techniques and materials.
- To communicate and express their ideas, feelings and memories creatively.

KS2

- To investigate the natural environment, the made environment and the world of imagination using a variety of materials.
- To investigate the properties of materials and processes and made objects.
- To design and make three-dimensional objects using a range of various materials.

Science

Foundation

- To make comparisons and identify similarities and differences.

KS2

- To investigate materials around them and considering the importance of recycling.
- To learn how some materials are formed or produced.
- To consider what waste is and what happens to local waste that can be recycled and that which cannot be recycled.

Maths

Foundation

- To interpret information presented in charts and diagrams and draw appropriate conclusions.

KS2

- To represent data using tally charts, tables, bar charts, pictograms where one symbol represents more than one unit using a key.

Education for Sustainable Development and Global Citizenship

Foundation

- To be given opportunities to use resources carefully.
- To be given opportunities to dispose of used resources responsibly
- To understand that some things can be recycled and others reused.
- To understand that people produce unnecessary waste.

KS2

- To be given opportunities to take personal action and influence others to save energy and reduce consumption.
- To understand where the things people consume come from and go to.
- To understand ways to reduce their energy use and the energy use of others.
- To understand that waste can cause pollution.

https://hwb.gov.wales/api/storage/eaf467e6-30fe-45c9-93ef-cb30f31f1c90/common-understanding-for-school.pdf
https://hwb.gov.wales/api/storage/d5d8e39c-b534-40cb-a3f5-7e2e126d8077/foundation-phase-framework.pdf
https://hwb.gov.wales/curriculum-for-wales-2008/key-stages-2-to-4/?_ga=2.246261060.1388374317.1617611653-1641056090.1617611653