



Teacher notes

Mr Pritt's Waste Warriors

Thank you for accessing our toolkit – a FREE curriculum-linked resource designed to support primary schools in delivering the recycling message through a series of inspiring Key Stage 1 and 2 lessons. There is a lot of conflicting information on the subject of recycling and sustainability. This resource aims to provide unbiased, clear content to help children understand what happens to our household waste once it is placed in the bin. They will also learn why it is important to consider our behaviour as consumers to help minimise the waste we produce and dispose of it in a responsible way.



What's included?

We have worked with a panel of teachers to develop a range of resources that we feel will help you deliver this subject in a sensitive and thought-provoking way, covering some of the more challenging content areas in a manner children will respond to. Materials included within this toolkit include:

- Lesson plans for both Key Stage 1 and Key Stage 2
- Colourful PowerPoint presentations
- Pupil Worksheets
- Animated infographics to help bring key elements of the recycling process to life



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Curriculum links

The materials have been designed to support the curriculum in the following areas:

Lesson 1

Years: 1 and 2

Title: Packaging problems

Topic: Recycling

Maths (Yr 2)

Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward

Science (Yr 1)

Everyday materials

- Distinguish between an object and the material from which it is made
- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock

Writing (Yr 2)

Writing for different purposes

Lesson 1

Years: 4 and 5

Title: Drastic plastic

Topic: Plastic

Science (Yr 4)

Living things and their habitats

- Recognise that environments can change and that this can sometimes pose dangers to living things
- Electricity
- Recognise some common conductors and insulators

English

Spoken language

- Participate in discussions, presentations, performances, role play, improvisations and debates

Science (Yr 5)

Properties and changes of materials

- Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets

Lesson 2

Years: 4 and 5

Title: Waste world

Topic: Recycling

Design Technology (KS2)

- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

English

Spoken language

- Participate in discussions, presentations, performances, role play, improvisations and debates

Cross-curricular links

All lesson plans have been designed to provide cross-curricular opportunities and extension tasks for teachers to expand on the areas covered



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1969:

The Pritt brand and the first ever glue stick in the world was born. Its inspiration was a lipstick and the way it allowed for quick, clean and precise application.

For over 50 years we have created magical moments of bonding between children and parents, teachers and pupils, classmates and friends!

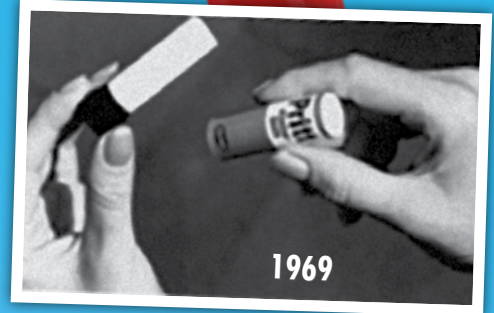
Our original Pritt Sticks are

-  **Natural:** Made up of 90% natural ingredients including water
-  **Recyclable:** 100% recyclable with the cap on
-  **Reliable:** Glues double the amount of paper than the next best-selling branded glue stick*
-  **Safe:** Washable at 20 degrees, solvent free and non-toxic

Our passion for making crafting even more fun fuels our innovation!

To celebrate our 50th birthday in 2019 we launched two limited edition Glow In The Dark Pritt Sticks. Bringing the magic of Pritt to life!

Pritt allows the magic of childhood to live on for everyone.



AFTER USE, PLEASE
Recycle Me!

HIGH QUALITY & SAFE

EFFICIENT
Glues 2x paper
than the next best
selling brand*



SUSTAINABLE



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*GfK 2019. Tested by an independent laboratory in 2015 **Including water

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Glossary

The following terms are used throughout our resources. Children can be encouraged to write these in their workbooks so they can refer to them in their work.

Biodegradable	Something that breaks down or decays naturally without any special scientific treatment, during an indefinite amount of time	Landfill site	A place where rubbish is buried in a large deep hole
Biomass	Plant or animal material used for energy production (electricity or heat), or in industrial processes as raw material	Microplastic	Very small particles of plastic persisting as waste material in the environment following the breakdown of rubbish
Compostable	Something that breaks down into non-toxic, plant-based components. Compostable goods are also biodegradable	Pollution	The process of polluting water, air, or land, especially with poisonous chemicals
Decompose	When things such as dead plants or animals decompose, or when something decomposes them, they change chemically and begin to decay	Recycle	If you recycle things that have already been used, such as glass bottles or sheets of paper, you process them so that they can be used again
Food chain	A series of living things which are linked to each other because each thing feeds on the one next to it in the series	Reuse	When you reuse something, you use it again instead of throwing it away
Ingested	When animals or plants ingest a substance, they take it into themselves, for example by eating or absorbing it	Toxic	A toxic substance that is poisonous
		Upcycling	To repair, decorate, or change something so that it can be used again as something else
		Waste	A material which has been used and is no longer wanted, for example because the valuable or useful part of it has been removed

Source: collinsdictionary.com

Additional resources

There are many excellent information sources available to support this subject. Here are a few of our favourites:

David Attenborough, Blue Planet II — A documentary series, presented by David Attenborough, exploring the planet's oceans

Michael Recycle by Ellie Bethel — Michael Recycle tells the adventures of a young superhero whose power allows him to teach people about recycling

keepbritaintidy.org — Keep Britain Tidy is an independent charity with three goals — to eliminate litter, end waste and improve places

eco-schools.org.uk — Eco-Schools is a global programme engaging 19.5 million children across 67 countries, making it the largest educational programme on the planet

ypte.org.uk — Young People's Trust for the Environment



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Lesson 1: Packaging problems (years 1 and 2)

Lesson preparation: You might want to bring in some food items or suggest children bring a packed lunch the day this lesson is being delivered

Starter activity

- Ask the children how many of them go shopping with their parents or guardians (show of hands)
- Slide 2 shows images of some familiar items they eat, drink or use at home. Ask children what packaging each of these items is stored in when it's bought from the supermarket. They will suggest crisp packets, plastic containers, plastic punnets, etc.
- Slide 3 shows this packaging. Discuss how many of the items we purchase every day are stored in packaging that is unwanted after we have used the product
- Expand on this by asking children to think about the number of pupils in their class. Calculate that if each child ate a packet of crisps on every school day, how many empty packets there would be by the end of the week. You can also expand this to calculate the sum on a school level
- Once you feel like they have understood the scale of packaging waste, ask what they think happens to the packaging once it is recycled at home using slides 4-5
- Slide 6 explains what recycling is. After you have worked through the explanation with your class, run through the True or False quiz on slides 13-18

Main activity

- Slides 19-24 discuss how items are recycled and explain the packaging labels used to identify recycling status
- Slides 25-27 explain the meaning of organic waste as anything which is biodegradable. Children can be asked to think about the lunch they are having today and discuss whether they think any of it is biodegradable or recyclable. They should now complete Pupil Worksheets 1-5 which challenges them to sort items based on how they are recycled. They will need colouring pens or pencils and scissors
- Next, (as a class), run through the Rot or Not quiz on slides 28-37 to help reinforce their understanding of organic waste, allowing children to guess whether each item will rot or not. They can either do this with a thumbs up / thumbs down poll or as a mini test in their workbooks
- Finally, working in small groups, children should design a poster to communicate the importance of recycling using the information they have gathered during the lesson. They can focus on a particular area of recycling if they wish and decide as a group who their target audience will be

Plenary

- To help strengthen their learning from the lesson, ask pupils to write three questions for the person next to them to answer
- They should then swap questions and see if they can answer them

Extension activities

Set up an Eco Team with your class and audit your school to explore its current recycling efforts. Investigate how much waste your school produces every week and how much of this is being recycled. You can check the school policy on some of the following:

- Composting: does your school compost food waste?
- Does your school use recycled paper?
- Does your school have a battery recycling point?

Once you have identified areas for improvement, implement a class-led initiative to lobby the headteacher and school governors to do more. Children can write letters based on their recommendations

Curriculum links

Maths (Yr 2)

Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward

Support materials

Slides 2-18

Extension activities

Why not set up your own experiment to study how long various items of organic matter take to decompose? Children can photograph the decomposition daily and note down changes to the form and condition of the item

Curriculum links

Science (Yr 1)

Everyday materials

- Distinguish between an object and the material from which it is made
- Identify and name a variety of everyday materials, including wood, plastic, glass, etc.

Writing (Yr 2) - Writing for different purposes

Support materials

Slides 19-37 Pupil Worksheets 1-5
scissors, colouring pens or pencils

Key learning outcomes – by the end of the lesson pupils will be able to:

- Understand that most of the goods we purchase are stored and protected in packaging
- Identify and sort materials into their respective types in order to recycle
- Recognise the difference between biodegradable and non-biodegradable materials
- Understand the importance of recycling to the health of the planet



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Key vocabulary:

Organic, waste, recycling, process, rot, packaging, compost, biodegradable, decompose, facility, material, treatment plant

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Lesson 1: Drastic plastic (years 4 and 5)

Starter activity

- Show children the image on slide 2 which shows a turtle in the ocean with a plastic carrier bag in its mouth and ask the class to explain what they can see
- Now show slides 3 and 4 which contain statistics concerning the amount of plastic waste in the world's oceans. Explain that plastic can be accidentally eaten by turtles mistaking plastic bags for jellyfish and by seabirds (whose stomachs end up full of plastic, rendering them unable to receive the nutrients they need from their food)
- Slides 5 and 6 explain how plastics end up in the food chain with microplastics ingested by small sea creatures, which in turn are eaten by larger predators. Explain how this could make its way onto our plate when we eat fish
- With this information understood, show your class the image on slide 7 and ask children to work in small groups to brainstorm how the image makes them feel
- They can be encouraged to create a word shower to describe their feelings towards the image

Main activity

- Using slide 8 and their workbooks, ask children to list five items that are made from plastic and write these down. These can be items they see in the classroom or things they have at home. The aim is to demonstrate the prevalence of plastic in our world, which is further supported by slides 9-10 which show some surprising items that are made from or contain plastic
- Next show slides 11-12 which highlight some of the benefits of plastic and the industries that use it. Using slide 12, ask if children can suggest some of the uses of plastic within these industries. Slide 13 gives some suggestions you can discuss with the class
- Slides 14-19 explain how plastic is made and some of the main problems our planet faces as a result of our reliance on this material
- Now split the class into three groups and allocate each group a type of material – either wood, plastic or metal with which they need to research the construction of a boat. Each group should spend some time researching the pros and cons of their material in the construction using the library and the internet as resources. Once they have been afforded time to complete their research, children should discuss the pros of their material and explain why it is a good choice of material to use. They can also collectively look at the cons for each, before deciding which material they think is best suited for the build. Slides 20-22 contrasts these materials, listing the pros and cons of each. Pupils can see how many pros and cons they managed to cover from this checklist
- Using slides 23-24 explain some of the problems with our reliance on plastic, such as the time taken to decompose (unlike organic waste) and the fact that plastic pollution is harmful to wildlife. Slides 25-28 detail some of the ways we can help by reducing, reusing and recycling our waste where possible, in turn relying less on landfill
- Children should now work in pairs to tackle the challenge on slide 29. They should use the internet and other resources available to them to research a plastic or recycling issue of their choice. Using Pupil Worksheet 1, they should scope out a campaign to draw attention to their issue which should include a catchy slogan and a logo. They can communicate their campaign however they wish given the time afforded to them. They could create an animation, a poster, a promotional leaflet, a song or a short drama piece. Their work should include their understanding of the issue, plus a proposed solution

Plenary

- Test your pupils' knowledge with the Quick-fire quiz on slides 30-38

Extension activities

Set pupils a research task. Ask them to select an item of their choice (even something that is not evidently made from plastic). They should research the manufacture of this product and write down any of the component parts that are made from plastic

Curriculum links

Science - Living things and their habitats (Yr 4)

- Recognise that environments can change and that this can sometimes pose dangers to living things

English

- Spoken language
- Participate in discussions, presentations, performances, role play, improvisations and debates

Support materials

Slides 2-7

Curriculum links

Science - Properties and changes of materials (Yr 5)

- Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets

Science - Electricity (Yr 4)

- Recognise some common conductors and insulators

English

- Spoken language
- Participate in discussions, presentations, performances, role play, improvisations and debates

Support materials

Slides 8-29

Pupil Worksheet 1

Support materials

Slides 30-38

Key learning outcomes – by the end of the lesson pupils will be able to:

- Understand the extent of the use of plastics in our world
- Identify the manufacturing benefits of using plastic
- Understand the downsides of plastic waste and how it can harm the environment
- Apply their understanding of these problems to a positive solution

Key vocabulary:

Organic, waste, recycling, process, rot, packaging, compost, biodegradable, decompose, facility, material, treatment plant



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Lesson 2: Waste world (years 4 and 5)

Lesson preparation: Before the lesson, pupils should be instructed to bring in an item of (cleaned) rubbish from home. A selection of these items should be placed on each table, along with glue, pens, pencils (or paints) and scissors

Starter activity

- Use slide 2 to explain that the average person in the UK produces 411kg of waste every year. The same weight as a small horse!
- Slides 3-8 clarify how some of this waste can be recycled –preventing it from ending up in landfill sites. Slides 4 and 5 cover the processes of recycling both glass and plastic
- Using the list of items on Pupil Worksheet 1, pupils should indicate which item of waste belongs in which bin. They should then think of three of their own items to place in each
- Remind children that in addition to recycling, unwanted items can also be upcycled into something else

Support materials

Slides 2-8

Pupil Worksheet 1

Main activity

- Slide 9 demonstrates some of the ways people have upcycled used glue sticks to create new items, such as pencil sharpeners, torches and lip balms
- Using their chosen rubbish item from home and Pupil Worksheet 2 children should create an idea for upcycling their item into something else using the resources you have placed on their table. They should sketch out their idea, labelling any features and additions
- Once they are happy with their design on paper, children should model their idea

Extension activities

Share the following facts with children:

1. The UK recycling rate for waste from households was 45.7% in 2017 where in Sweden, less than 1% of household waste was sent to landfill any year since 2011
2. In Sweden, any rubbish that is not able to be recycled is burnt to make energy
3. You can return some empty packaging items to the shop in Germany and receive money back. Typically this is paid on glass bottles and cans - provided the label has the 'Pfand' symbol. Where it does not, it is your responsibility to recycle that item in the appropriate bin. This money back offer is possible because you pay a deposit for the item at the point of purchase. This scheme helps Germany be one of the world's best countries at recycling waste

Children should select a country of their choice and research how their chosen country deals with household recycling - addressing the following points; the recycling policy, the percentage of household waste that is / is not recycled and how the country encourages people to recycle. Pupil Worksheets 3a and 3b can be used to document their findings

Curriculum links

Design Technology (KS2)

- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Support materials

Slide 9, Pupil Worksheet 2 and Pupil Worksheets 3a and 3b

Plenary

- Organise a debate to address the statement 'Should people be fined for not recycling their waste?' Using slides 11-12
- Divide the class into two sides - one side should be designated 'in favour' of the statement and the other side 'against' the statement
- Each team should spend some time researching their side of the debate before being asked to expand on their argument and share the information they have collected to support their viewpoint
- This should continue until all children have had a chance to speak
- Once all speakers have been heard, the audience (teacher / TA) should decide which side has presented the strongest argument

Debate rules to explain to the class

1. Respect each other's opinion and do not belittle classmates with put-downs
2. No talking / whispering when another person is speaking
3. You must raise your hand if it is not your time to speak and you wish to say something
4. Do not interrupt. You can question another classmate's comments by raising your hand

Curriculum links

English

- Spoken language
- Participate in discussions, presentations, performances, role play, improvisations and debates

Support materials

Slides 11-12

Key learning outcomes – by the end of the lesson pupils will be able to:

- Understand the scale of waste produced by the UK
- Identify and sort materials into their respective types to recycle
- Recognise the basic recycling process for plastic and glass
- Understand how unwanted items can be upcycled and made into something new



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Key vocabulary:

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