



British Glass

Glass Guardians



Parent Guide

Friends
of Glass

in partnership with



Glass Guardians in partnership with Friends of Glass

Introduction

Glass Guardians is a fun, exciting education project for 5-11-year olds, allowing them to explore the value of glass as a material, while encouraging them to see the importance of recycling glass for maintaining the world they live in. Learners will learn that glass is one of the most sustainable and eco-friendly materials and create their own Glass Guardian Superhero!

Activity ideas

Introducing Glass Guardians

1. Raise your hand

Using [Slide 2-5](#), start by asking learners to raise their hand if...

- they know what recycling means ([Slide 2](#))
- they know at least one material that can be recycled ([Slide 3](#))
- they know where their recycling bin is at home ([Slide 4](#))
- they think we should recycle more ([Slide 5](#))

In this KS2 pack:

- Introducing Glass Guardians
- PSHE/Citizenship activity
- English activity
- Maths activity
- Science activity
- Competition/homework leaflet

2. Which materials can be recycled? ([Slide 6](#))

Ask learners if they can name some materials that can be recycled, and if they know what goes in their recycling bin at home. Alternatively, you can tell them some examples of materials that get recycled using the images on [Slide 7](#).

Ask learners what the materials (cardboard, plastic, aluminium, steel, and glass) have in common. The answer is that they're all used for packaging. ([Slide 8](#))

Using [Slides 9-10](#) ask them if they can think of reasons why we use packaging.

(As an extension you could ask them whether all packaging is completely necessary. For example, peanut butter, oil or eggs would be difficult to transport without packaging, but could other things use less or no packaging?)



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What is packaging made from?

Using [Slide 11](#), explain to learners that packaging is made using natural resources:

- Cardboard is made from trees.
- Aluminium is made from a mineral that is mined out of the ground called bauxite, which contains aluminium oxide.
- Steel is made from iron and carbon.
- Plastic is made from oil.
- Glass is made from silica sand, limestone and soda ash.

4. What is the impact on the environment?

Inform learners, using the information on [Slides 12 and 13](#), that there is an impact on the environment through the production of packaging materials as well as the disposal of them.

5. Introduction of Glass Guardians

Read the information to learners about how they can become Glass Guardians by completing four missions. ([Slide 14](#)) They will then have the chance to enter a national competition!

Ask learners what they think we could do to minimise the impact on the environment. They can recycle! ([Slide 15](#))

6. How is glass recycled?

Using the video on [Slide 16](#), show learners how glass is recycled.

7. Enter the Glass Guardian Competition!

[Slide 17](#) introduces the national competition.



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MISSION 1: The Power of People (PHSE/Citizenship)

Starter: Ask learners to think about all the ways their community encourages people to recycle. This could be through advertising, providing recycling bins, holding events etc. They could write each idea on a 'post-it-note' and stick it to the board.

Task 1: Use the table to discuss the three statements with learners:

1. It saves money for the local authority/ community
2. It saves energy and reduces CO₂ emissions
3. It preserves natural resources

Learners should make notes on their **Glass Guardians Mission 1 Activity Sheet** about why they think their statement is the most important reason for recycling. They could carry out further research online.

Task 2: Ask learners individually to come up with a mission statement for their superhero. What is the problem that they will need to solve? They can complete the task on their **Mission 1 Activity Sheet**.

Inform learners that this will be useful if they choose to enter the **Glass Guardian Superhero competition**.

Stretch: Ask learners to think of a mnemonic for the word recycle as a way of highlighting the benefits of this social action movement. For example:

Rreally

Enthusiastic

Clever

Young

Crusaders

Love

Earth

Plenary: Despite everything discussed during mission 1, only 67% of glass was recycled in 2017. Ask learners why they think this might be, then ask them how their Glass Guardians Superhero could change things.



MISSION 2: Power of the Natural world (Science)

Starter: Ask learners to match the keywords with the correct definitions on the **Glass Guardians Mission 2 Activity Sheet**.

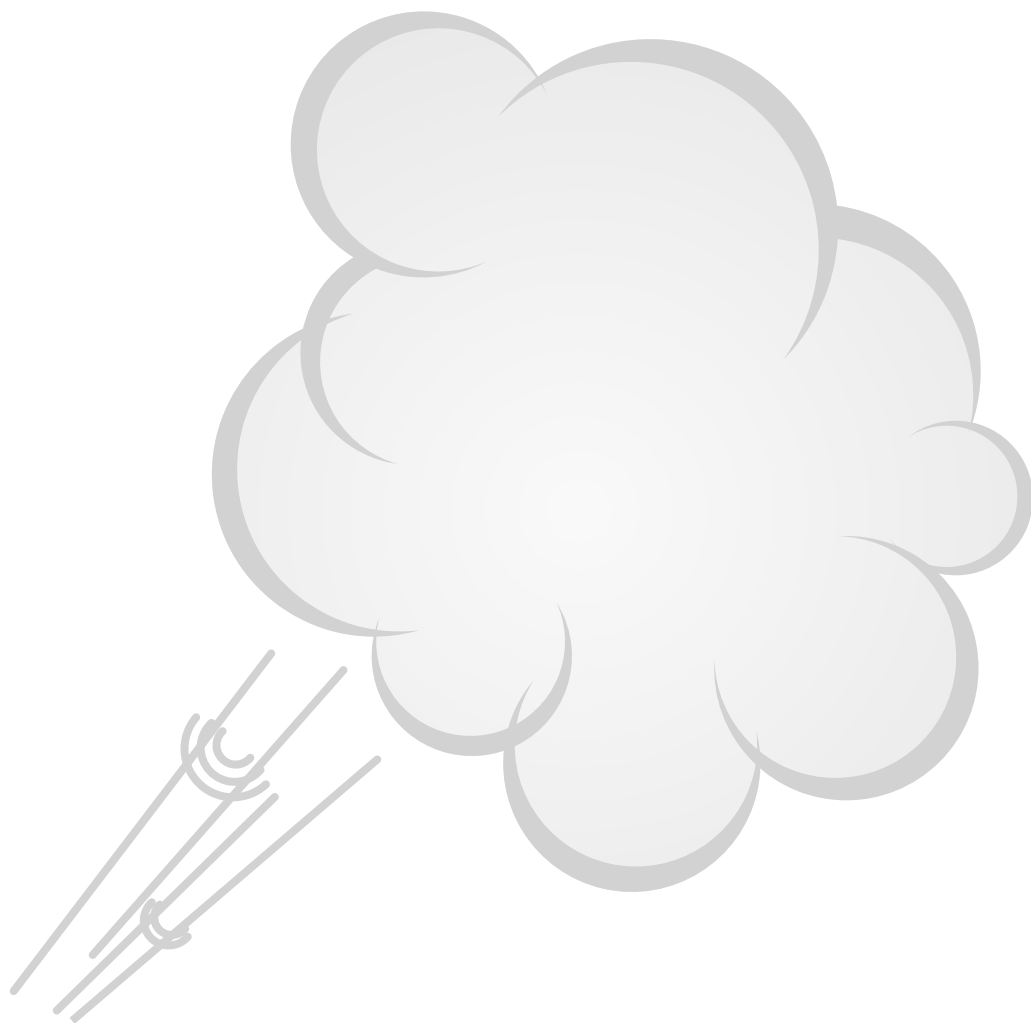
Task 1: Ask learners to label each packaging material with the properties they have using the keyword bank. They could also be asked to label each packaging material with its purpose e.g. Glass is strong and transparent which makes it ideal to carry food and drink.

Task 2: Watch the video on **Slide 16** and ask learners to complete the questions. They will be able to use this information to help them develop a superpower for their superhero.

Task 3: What Science Super Power could your Glass Guardians Superhero have to be successful? How would they use their power to recycle glass and transform it into something new? Write or draw it in the box below.

Stretch: Ask learners to come up with an additional question about what they have learned in the video.

Plenary: Learners can feedback about their Glass Guardian Superhero's Science Super Power and how they would use it.



MISSION 3: Power of Numbers (Maths)

Starter: Ask learners to guess how many tonnes of glass were recycled in 2017. They could write their answers on mini-whiteboards or a post-it note. *The answer is 1,715,000 tonnes.*

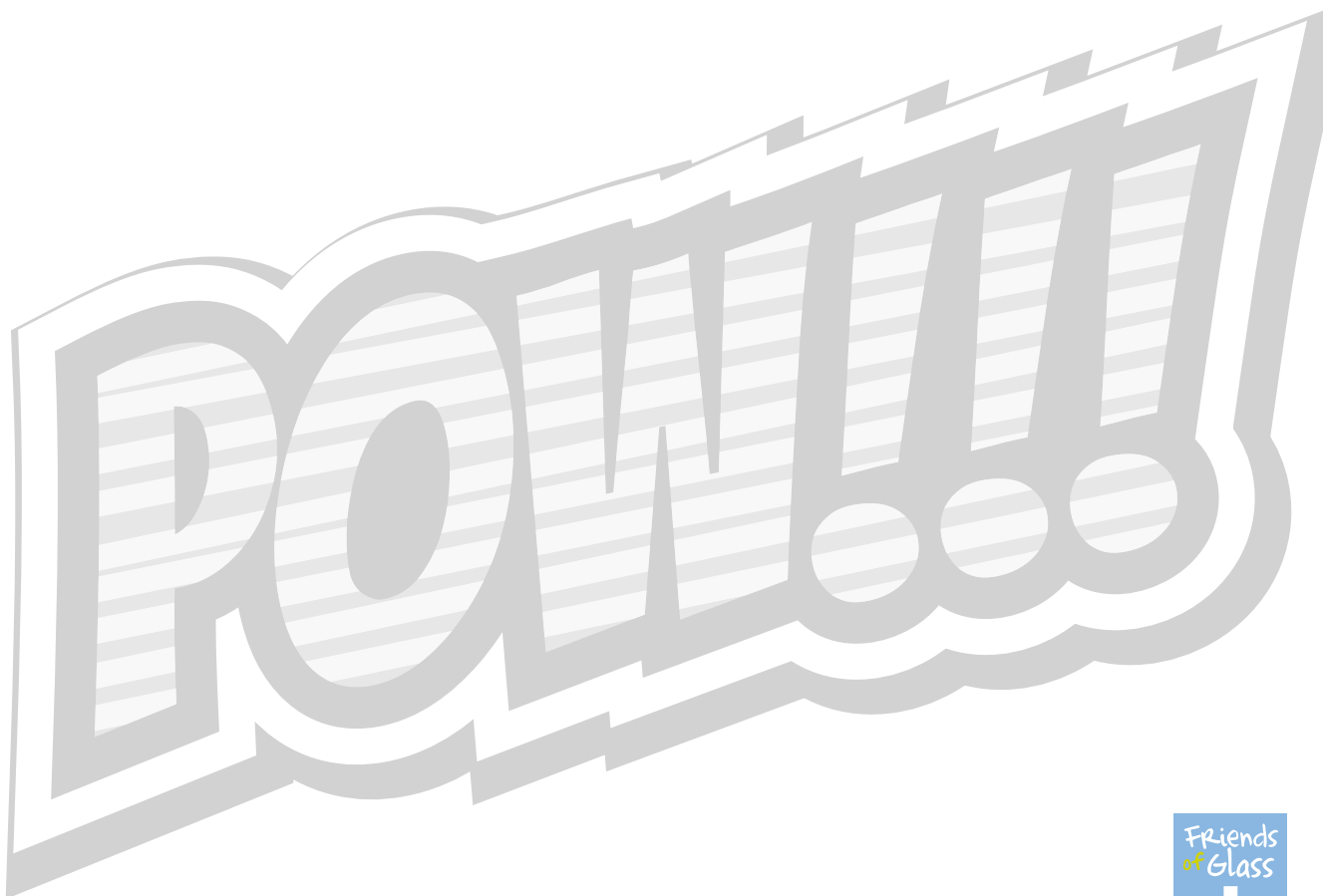
Task 1: Using the **Glass Guardians Mission 3 Activity Sheet**, ask learners to work out approximately what percentage of each material was recycled in the UK in 2017.
(Please note: all figures have been rounded to the nearest five per cent).

*Answers: glass = 65%; plastic = 45%;
paper/card = 80%;
aluminium/steel = 70%.*

Task 2: Ask learners to create a 5-question survey about recycling for family and friends.
Each question should have the answer options, Yes/No/Unsure. They will need to each write down the questions and create a results table to collect data.

Stretch: Ask young people to convert the amount of glass wasted in the UK (0.8 million tonnes in 2016), to any of the following: the number of grand pianos, the number of elephants, the number of Titanic's. Alternatively, you could challenge them to work out the average amount of glass wasted per person in the UK.

Plenary: Ask learners to write down one Super Shocking Statistic they have learned that their Glass Guardians Superhero will use to encourage others to recycle.



MISSION 4: Power of Words (English)

Starter: Ask learners to think of as many items as possible around their home that come in glass bottles or jars.

Task 1: Learners should read the 8 facts from the **Glass Guardians Mission 4 Activity Sheet** about glass recycling then order the facts from the most to the least important by writing numbers next to them.

Task 2: Create a short comic strip starring your superhero in a recycling mission! Learners can introduce them with their Mission Statement from Activity 1 and include how they use their Super Shocking Statistic from Activity 3 and their Science Superpower from Activity 2.

Stretch: Ask learners who have finished their work to use a coloured pen or highlighter to underline any points in their letters where they have talked about the advantages of recycling. In pairs decide if you can each adapt or change any of your language in your letter, in order to be more persuasive to the reader.

Plenary: Give your Glass Guardians Superhero a name.

Competition including homework activity

Slide 17 of the **Glass Guardians PowerPoint Presentation**.

We're challenging learners aged 7 to 11, across the UK, to create their own Glass Guardian Superhero who will use their powers to save the planet by recycling even more.

Just print off the **Glass Guardians competition leaflet** for more details on how they can enter.

