

# Can a broken windscreen be recycled?



[www.science.org.au/curious/technology-future/can-broken-windscreen-be-recycled](http://www.science.org.au/curious/technology-future/can-broken-windscreen-be-recycled)

## Thinking routine

1. Read the article above.
2. Consider the content to inform your responses to the three questions in the green circles below.
3. Use the United Nations Sustainable Development Goals (UN SDG's) to guide your thinking (images of 6 relevant goals are hyperlinked).



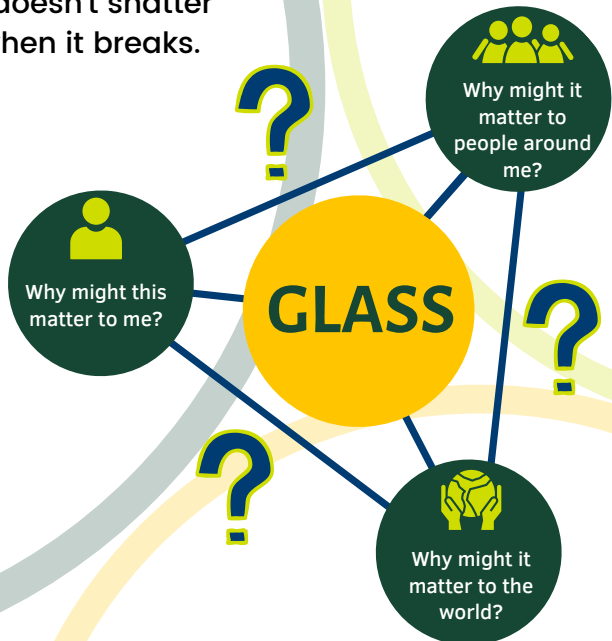
[Project Zero's Thinking Routine Toolbox](#)

Last revised: August 2022

# Student notes



**UN SDG 3:**  
Tempered glass is used for windows and is safe because it doesn't shatter when it breaks.





# Teacher explainer

## Connecting to real world science

### Article and thinking tool

**Audience:** Years 7-10

### Why this resource?



*Can a broken window be recycled?* is a resource intended to support student discussions about glass and recycling. It provides students opportunities to consider how science and scientific thinking impact our everyday lives.

It encourages students to:

- Be curious
- Collaborate
- Develop and use critical thinking skills
- Practise communication skills
- Develop science agency

Science agency is the capacity to critically use science and other forms of expertise to personal and social benefit [OECD \(2020\)](#).

**Links to Australian Curriculum: Science (Version 8.4)** Science as a Human Endeavour (ACSHE223/226 Nature and development of science, ACSHE120/135, ACSHE160/194, ACSHE228/230 Use and influence of science)

### Australian Academy of Science videos and articles

The article *Can a broken window be recycled?* is produced by the Australian Academy of Science as part of a collection of [videos and topic summaries](#) relating to current science issues.

### Why use thinking routines?

To facilitate student discussion, this resource uses a specific thinking routine. A thinking routine is a set of questions or steps used to scaffold and support students to organise their ideas, reason carefully, and reflect on their thinking. The routines can be used in a range of contexts. If you are new to thinking routines or would like to explore further, check out Project Zero's [Thinking Routine Toolbox](#).



## Why this thinking routine?

The 3 Whys\*

This thinking routine invites learners to move step by step across personal, local and global spheres. It encourages students to develop intrinsic motivation to investigate a topic by uncovering the significance of the topic in multiple contexts. The routine also helps students make local-global connections and situate themselves in local and global spheres.

## How might you use this resource?

*Can a broken window be recycled?* can be used by students individually or in groups. Recording group responses can be collated and used to stimulate deeper discussion or re-visited later.

Having discussed the content and engaged with the routine and the United Nations Sustainable Development Goals, you may invite students to consider how science and technology are used to find solutions to contemporary problems and how advances in scientific knowledge can affect people's lives. **For example, you might use the United Nations Sustainable Development Goal number 3 Good Health and Wellbeing, to frame a response about the importance of tempered glass for their personal safety using transport.**

## Your context, your judgement

We suggest you read the article in advance and consider your students' experience so that you can anticipate questions or concerns they may have.

**\*The 3 Whys thinking routine was developed by Project Zero, a research centre at the Harvard Graduate School of Education.**