

Smarter recycling of complex materials

www.youtube.com/watch?v=9k001ZJFZ0E



1 How do the ideas and information connect to what you already know?

2 What new ideas broaden and extend your thinking in different directions?



3 What challenges your current view and makes you think differently?

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Teacher explainer

Connecting to real world science

Video and thinking tool

Audience: Years 7-10



Why this resource?

Smarter recycling of complex materials is a resource intended to support student discussions about science and technology. 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

Links to Australian Curriculum: Science (Version 8.4) Science as a Human Endeavour (ACSHE223/226 Nature and development of science, ACSHE120/135, ACSHE121/136, ACSHE160/194, ACSHE228/230 Use and influence of science)

Australian Academy of Science videos

The video *Smarter recycling of complex materials* 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?

Connect, Extend, Challenge*

This thinking routine helps students connect new ideas raised in the video to existing and familiar ideas. It encourages students to reflect on how the video content extends and challenges their thinking.

How might you use this resource?

Smarter recycling of complex materials can be used by students individually or in groups. Responses can be collated and used to stimulate deeper discussion or re-visited later.

Having discussed the content and engaged with the routine, 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.

Your context, your judgement

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

***The Connect, Extend, Challenge thinking routine was developed by Project Zero, a research centre at the Harvard Graduate School of Education.**

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