



# The Regenerators

## Teacher resource - Science

These classroom resources are suitable for use in Science lessons with secondary school children at Key Stage 3 in England, Wales and Northern Ireland, and at 3rd and 4th level in Scotland.

# What is the activity?

**Green Themes Explained** is a series of short, clear, informative and accessible films, suitable for use by Key Stage 3 and Key Stage 4 students within both the science curriculum and PCSHE.

You can view the videos online at The Regenerators Green Classroom 11-14s page or by searching **Green Themes Explained**.

They could also be used equally as effectively in themed assemblies. They are stand-alone but related films that could be shown individually or in any sequence.

These films help answer ten important scientific questions that can help increase knowledge of climate change:

- What is global warming?
- What are greenhouse gases?
- What is net zero?
- What are carbon footprints?
- What is renewable energy?
- What is air pollution?
- What is fast fashion?
- What is deforestation?
- What is habitat loss?
- What is palm oil?

# Before watching the films

These film clips are all around three minutes long. They all begin with the question in their title. A concise, student-friendly answer follows, often in the form of a definition. An example is "Fast fashion is the mass production of cheaply made clothing, to cater to changing fashion trends" (for 'What is fast fashion?').

Before watching you may wish to ask your students what they believe the answer to the title question is. They could write their own definition, before discussing it with other students and finally sharing with the class to agree a definition (so think, pair and share). Differences in opinion here could be explored.

Alternatively, or as well as this, they could write a list of questions that they have about the topic, perhaps on sticky notes that they could attach to the board. This might help address any misconceptions later on. The films are full of interesting factual detail and so many of their questions will be answered when they watch them.

Additionally, you could ask students to write down one key fact from the film that they didn't know beforehand.



You may wish to watch the film yourself before showing it to your class.

If so, you may choose to write a couple of questions for your students to answer to highlight some of the key points such as:

- When does the UK plan to balance emissions?
- How many tonnes of carbon dioxide are emitted per person per year in the UK and how does this compare with other countries?
- How long does it take for a wind turbine to be carbon neutral?

Usually a selection of open, closed factual and opinion-based questions will be suitable for a range of abilities.



## During the films

You may wish to stop at relevant points during the film to pose questions, emphasise key points, and check understanding.

Alternatively, this could happen at the end.


Stopping after the initial definition and checking understanding is likely to ensure that all students are able to access more of the scientific detail that follows.

Questions applicable to more than one film are:

- What are examples of greenhouse gases?
- What can you do to make a difference?
- What is the greenhouse effect?

Again a selection of open, closed factual and opinion-based questions will meet diverse needs.

Finally, replaying sections of the film or it in its entirety to allow students to watch for a second or third time is likely to enrich their understanding.



# Following the films

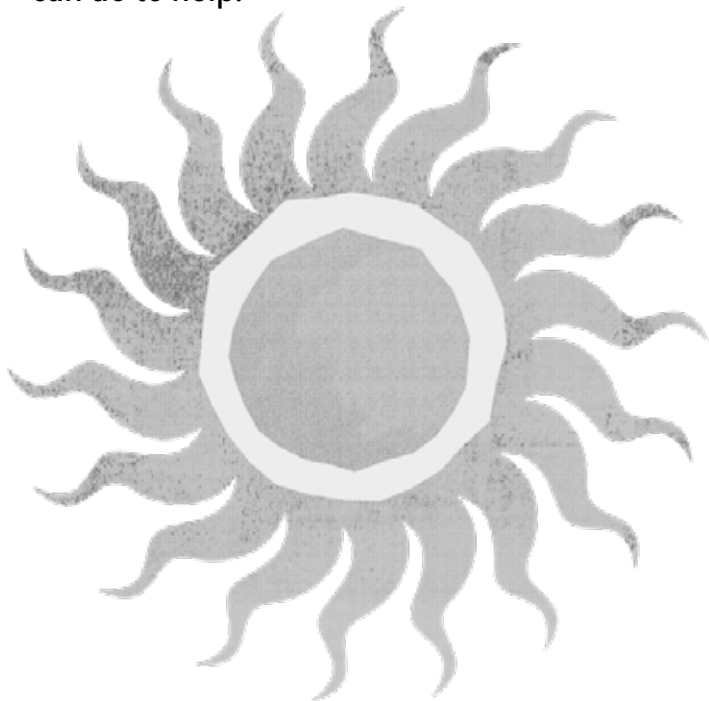
It is likely that your students will have questions after watching the film so you may wish to answer these immediately afterwards.

Then might be a sensible time to review the answers to the title of the film that students might have written at the beginning. It will be interesting to see if their definition matches the one in the film. How can they improve their initial offering?

You may then want to ask your class if anyone knows the answers to questions that students might have written on sticky notes at the beginning.

It might be interesting to then review the key facts your class noted down during the film.

All films have a section at the end that explain what wider society and individuals can do to affect a change. You may wish to finish by checking that your students understand what it is specifically that they can do to help.



## Curriculum links

- This series is suitable for teaching KS3 students.
- These films can be shown individually in any order or as a full series.
- They centre on a topical and relevant global environmental issues. Each film finishes with what wider society and individuals can do to help, so they are all informative, solution-focused and empowering.
- Each film supports the KS3 Science curriculum by asking and answering a key environmental question.
- Individual films within the series are relevant for biology (e.g. deforestation, and habitat loss), chemistry (e.g. global warming, and greenhouse gases) and physics (renewable energy).