

An expert is explaining what the Greenhouse effect is and the problems it can cause.

Comprehension activity

Before listening, match the following words to their definitions. The answers are below the audio script.

Word	Definition
1. Radiation	a) A large hole in the ground where waste is buried.
2. Carbon dioxide	b) The slow increase of the Earth's temperature
3. Landfill	c) The broken pieces left when something large has been destroyed.
4. Fossil fuels	d) A gas without colour or smell, produced when you breathe out.
5. Debris	e) Fuels produced from decayed animal or plant material.
6. Global warming	f) A form of energy produced during a nuclear reaction.

Interviewer Doctor Grant, could you explain in a few words what The Greenhouse Effect actually means?

Doctor Grant Well, in simple terms ... the sun heats the Earth's surface and the Earth radiates energy back out into Space. Some of the radiation gets trapped in the atmosphere by greenhouse gases. This trapped radiation warms the atmosphere and some of it goes back down to the Earth, making it hotter than normal. This is the greenhouse effect.

Interviewer So, is carbon dioxide the problem?

Doctor Grant Yes ... and other gases too. Methane ... being released from paddy fields... commercial oil and gas from landfills ... vegetation left to rot without oxygen ... These days there are more greenhouse gases than ever because of human activities and especially the burning of fossil fuels.

Interviewer What kind of problems do scientists foresee?

Doctor Grant Well, ice caps melting and sea levels rising mean that eventually cities like London, New York, Sydney and Tokyo will be submerged. This is difficult to imagine of course.

Interviewer It seems incredible ... no wonder scientists are worried.

Doctor Grant Well, some scientists are optimistic. They believe that positive feedbacks from ice clouds and their water vapour could have an impact on global warming. Other scientists are more sceptical. They suspect that we have been wrong in our initial analyses of the situation and might need to go back to the drawing board!

Interviewer So are you saying that some scientists don't believe in the Greenhouse Effect?

Doctor Grant No, I wouldn't go that far. In fact, without the Greenhouse Effect the planet would be frozen and no life forms would exist.

Interviewer Is there anything that could protect us from global warming?

Doctor Grant I'm glad you asked me that. Yes! Volcanoes! When a volcano erupts it throws debris up into the stratosphere. This protects the Earth from solar energy by scattering the sunlight. Of course the best thing that we can do is to address the problem seriously on a world level. That's where the Kyoto Treaty enters the

picture. If all of the governments in the world would commit themselves to making a real effort to work together on this issue, we might be able to slow down the process and work out a solution.

Interviewer So ...how worried do we need to be?

Doctor Grant That depends. First of all global warming isn't going to affect all areas of the planet to the same degree. Things like the collapse of glaciers take hundreds of years so we are talking about a slow process here.

Interviewer Slow enough for us to do something to prevent a catastrophe?

Doctor Grant Well ... let's hope so!

Answers:

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1. Radiation	A form of energy produced during a nuclear reaction.
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3. Landfill	A large hole in the ground where waste is buried.
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6. Global warming	The slow increase of the Earth's temperature