

WithOnePlanet

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Introduce

Culture: Lesson 1

Teacher notes

How are we changing our planet?

Years **9 to 10**



WithOnePlanet

Climate change education
An xpanse Foundation initiative

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INQuIRY     

How are we changing our planet?

Lesson 1: Teacher notes

This document provides the teacher with the details of the lesson.

At a glance

Students look at what climate change is, what causes climate change, and how humans have influenced CO₂ emissions and climate change. Students are encouraged to think about how technology, which is a large part of their lives and culture, is having an effect on the environment and adding to climate change.

For an assessment guide, refer to the Unit outline.

INQuIRY focus: *Introduce*

The focus of the *Introduce* phase is to spark students' interest and engagement, stimulate their curiosity and elicit their existing beliefs about the topic. Students' existing ideas and questions can then be taken into account in future lessons.

Teacher background information

The science of climate change shows us that our earth is warming, and that human behaviour is having an effect on global warming. One way that we are contributing to global warming is through our technology use, because every time we send an email, sms, upload a photo or a video, use Facebook, etc, we are adding to the amount of data that is stored. This data is stored in large storage centres around the world. These centres use a large amount of energy. Technology use currently contributes around 2% of the world's total CO₂ emissions and this number is rising.

Equipment

Activity 1:

- > Video – What is climate change? *Australian Government Great Barrier Reef Marine Park Authority*
<<https://youtu.be/ko6GNA58YOA>>
- > Video – Is Earth Warming? *Climate Change, Lines of Evidence: Chapter 2*
<<https://youtu.be/-luVzcp39rs>>
- > Video – Greenhouse Gases: *Climate Change, Lines of Evidence: Chapter 3*
<<https://youtu.be/3JX-ioSmNW8>>
- > Video – Increased Emissions: *Climate Change, Lines of Evidence: Chapter 4*
<<https://youtu.be/nlu21CNd34Q>>
- > Video – How Much Warming? *Climate Change, Lines of Evidence: Chapter 5*
<<https://youtu.be/hVvzVs1AKGY>>
- > Video – Solar Influence: *Climate Change, Lines of Evidence: Chapter 6*
<<https://youtu.be/0V2HYZbFLn8>>
- > Video – Natural Cycles: *Climate Change, Lines of Evidence: Chapter 7*
<https://youtu.be/2_10jtPCjQw>

Activity 2:

- > Video – *Just what is WithOneSeed all about?* 0- 0:55
<<http://vimeo.com/46006917>>
- > Website – ATAG, *Facts and figures*
<www.atag.org/facts-and-figures>
- > Website – Greeniacs, *Internet carbon footprint*
<www.greeniacs.com/GreeniacsArticles/Environmental-News/Internet-Carbon-Footprint>

Lesson steps

1. Students watch videos on carbon and climate change and answer questions about the videos.
2. Students discuss what they think are the biggest polluters/carbon emitters, and discuss how their everyday lives might be having an effect on the environment.
3. Students watch the WithOnePlanet video on technology and climate change, and read the website articles on technology and climate change. Students then answer questions in the student worksheet, and discuss as a class.

Sources:

<http://www.gartner.com/newsroom/id/503867>
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 WithOneSeed, *Just what is WithOneSeed all about?* [Online Video] XXXXX, viewed 13 January 2016, <https://vimeo.com/46006917>
 Air Transport Action Group, 2014, *Facts and Figures* [Online Video] April 2014, viewed 13 January 2016, <<http://www.atag.org/facts-and-figures>>
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