

Name:

Grade:

School:

Date:

WithOnePlanet

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Carbon
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Investigate carbon

Lesson 6

Student worksheet

Tracking carbon's footprints

Years
3 to 4



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INQuIRY     

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Open education
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Tracking carbon's footprints

Lesson 6: Student worksheet



One of the best clues to finding carbon is to search for its footprints. Carbon itself can be very hard to see, but its footprints are very visible. Everywhere it goes, it leaves its footprints behind for clever detectives like you to find.

Activity: What is a carbon footprint?



Watch the **Carbon Footprint Animation** from the Australian Greenhouse Calculator website <http://www.epa.vic.gov.au/agc/animations.html> and answer the following questions.



Source:

Australian Greenhouse Calculator 2011, *Greenhouse Animations*, viewed 3 January 2014, <http://www.epa.vic.gov.au/agc/animations.html>.

Q1: What is a carbon footprint?

Q2: Specifically, what is a carbon footprint calculated from?

Q3: How does a carbon footprint relate to the amount of carbon dioxide a person produces?

Q4: Why does Ginger tell Fred off for eating so much meat?

Q5: What's wrong with Fred's shoes and Ginger's hair-care products?

Q6: What are two things that Fred says we should do once we have calculated our carbon footprint?

Q7: Why has carbon pollution caused some people to have to move away from their homes?

Q8: How is carbon pollution affecting the seas and oceans?

Q9: What two things does Fred say we should do first to reverse the effects of climate change?

Q10: What does Ginger say that we should do next to reverse the effects of climate change?

Q11: Why is reducing carbon pollution not just a job for governments?

Calculate your own carbon footprint

Activity:

Now it's your turn to calculate your carbon footprint*. To do this, go here:

http://www.wwf.org.au/our_work/people_and_the_environment/human_footprint/footprint_calculator/

*NOTE: It is important to know that a carbon footprint is the SAME as an ecological footprint or ecofootprint.

Try completing the calculator using the 'basic' information version first. Once you have completed it and answered the questions below, you may like to have a go at the 'detailed' version.

What is your personal ecofootprint?

In global hectares:	_____	ha
In Earths:	_____	Earths

What does my carbon footprint mean?

ha = the number of global hectares

A global hectare refers to one hectare (about the size of a soccer field) of land in good condition (for growing plants and grazing animals for example).

Earths = the number of planet Earths

Earths refers to the number of Earths that you would need if ALL the people on the planet lived like you. (See below.)

MY ECOLOGICAL FOOTPRINT If everyone on the planet lived my lifestyle, we would need:

The graphic illustrates the concept of an ecological footprint. It shows a white silhouette of a person on the left. To its right are three blue and white globe icons. An equals sign follows, and then the number '2.84' is displayed inside a red circle, followed by the word 'earths'.

Source:

WWF 2014, *Ecological Footprint Calculator*, viewed 30 December 2014, http://www.wwf.org.au/our_work/people_and_the_environment/human_footprint/footprint_calculator/.

Tracking carbon's footprints

Lesson 6: Student worksheet



Source:

US EPA 2013, *Switch to Clean Energy | A Student's Guide to Global Climate Change*, viewed 3 January 2014, <<http://www.epa.gov/climatestudents/solutions/actions/clean-energy.html>>.

How many planet Earths do people in other countries need?

In the picture below, you can see the average number of Earths that people in different countries require to live.



Why do people in Asia-Pacific countries, such as Timor Leste, have such small carbon footprints?

Add some of your own thoughts to the table below.

Things that I do or have in Australia that INCREASE my carbon footprint	Things that someone my age DOESN'T do or have in Timor Leste, that DECREASES their carbon footprint

Will reducing my own carbon footprint have any affect on the lives of people in poorer countries such as Timor Leste?

Activity:

Here is one way you can help... watch these two videos:



Postcards from the frontline:
<<http://vimeo.com/73387781>>



What does home mean to you?
<<http://vimeo.com/75290207>>



Go to the *Postcards from the Frontlines* website: <<http://www.ejfoundation.org/postcards>> and send a free postcard today to help climate refugees.

Source:
Environmental Justice Foundation 2013, *Postcards from the frontlines*, viewed 3 January 2014, <<http://www.ejfoundation.org/postcards>>.

Draft your postcard here ...

What does home mean to you?

Add a photo and a message.



Sources:

Environmental Justice Foundation 2013, *Postcards from the frontlines*, viewed 3 January 2014, <<http://www.ejfoundation.org/postcards>>.
Australian Greenhouse Calculator 2011, *Carbon Footprint Animation*, viewed 3 January 2014, <<http://www.epa.vic.gov.au/agc/animations.html>>.
EPA Victoria 2013, *Australia's and Victoria's Ecological Footprint*, viewed 19 December 2013, <<http://www.epa.vic.gov.au/ecologicalfootprint/ausfootprint/default.asp>>.
Environmental Justice Foundation 2013, *Postcards from the frontlines*, viewed 3 January 2014, <<http://www.ejfoundation.org/postcards>>.