

Carbon footprint

Topic/language idea: carbon and ecological footprint, ecology, healthy choices, food

Class: Middle school/high school

Level: upper-intermediate/advanced

Time: 2 x 45 minutes

Aims: Identify and evaluate a range of possible solutions to earth and environmental issues at the local, national, and global level.

Analyze the sources and impacts of society's use of energy. Teach the students about global warming and how their energy uses / shopping habits are linked to global warming.

Know that burning fossil fuels is linked to global warming

Know the term *carbon footprint* and *ecological footprint*.

Understand ways that a carbon footprint and ecological footprint can be reduced

Language items to be taught: vocabulary connected with global warming, fossil fuel, carbon dioxide emission, carbon and ecological footprint.

CLIL: Ecology, Physics, Mathematics

Materials: included photocopies, access to the internet and personal computer, speakers, overhead projector

STAGE	AIMS	PROCEDURE	CLASSROOM LANGUAGE	TIME	MATERIALS
Introduction	To start the lesson	Check the register /check homework		1-6 min	
Warm – up activity	To provide students with introduction to the topic	<ul style="list-style-type: none"> ask the students what they know about ecology and global warming what changes are caused by global warming do they think about their impact on the environment ask the students to look at the quotations and talk about them 	<ul style="list-style-type: none"> global warming/greenhouse effect carbon dioxide ice melt 	5 min 5 min	Worksheet 1
Reading comprehension	To introduce terms <i>carbon footprint</i> and <i>ecological footprint</i>	<ul style="list-style-type: none"> ask the student to read the definitions, ask them about the difference ask the student to read the text again and complete the sentences with words from the box 	<ul style="list-style-type: none"> What is carbon footprint? What is ecological footprint? How do they differ? 	5 min 5 min	Worksheet 1

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Individual work	To calculate students' carbon and ecological footprint	<ul style="list-style-type: none"> ask the students to go on-line and calculate their carbon and ecological footprint discuss the results with the class 	<ul style="list-style-type: none"> Have you ever calculated your carbon or ecological footprint? How big was it? How big do you think it will be? How do your results compare to your classmates'? Are you surprised? http://www.cooltheworld.com/kidscarboncalculator.php http://footprint.wwf.org.uk/ 	10 min	Worksheet 1 The Internet
Group work	To come up with ideas to reduce our carbon and ecological footprint	<ul style="list-style-type: none"> put the students in groups of 3-4 and ask them to come up with ideas to reduce their footprint discuss their ideas distribute Worksheet 2 and ask the students to decide in pairs which action has bigger impact on reducing carbon footprint discuss students' answers and give them the correct answers 	<ul style="list-style-type: none"> What changes can you implement in your life? What changes can you adopt as a family? What changes can you pledge to introduce in our school? In pairs discuss which change is more beneficial to our planet and mark your answers with symbols < and > on the sheet. I will tell you the answers after you have finished. Are you surprised? 	10 min 7 min 7 min	Worksheet 2
Listening comprehension	To learn how our everyday choices impact the environment	<ul style="list-style-type: none"> tell the student they will watch a fragment of an educational talk ask them to write down the answers to the questions 	<ul style="list-style-type: none"> Now you will watch a fragment of a talk by Mark Bittman who is a bestselling cookbook author, journalist and television personality. While watching answer the questions. 	20 min 10 min	Worksheet 1
Wrap-up	To summarise main points of the lesson	<ul style="list-style-type: none"> discuss the talk, ask the student if they are surprised, shocked by anything, maybe they do not agree with something 	<ul style="list-style-type: none"> Discuss as a class: do you agree with the main points of the talk? Are any of the numbers shocking or surprising to you? 	5 min	Worksheet 1 The Internet

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Sources:

<http://www.cooltheworld.com/kidscarboncalculator.php>

<http://footprint.wwf.org.uk/>

http://www.ted.com/talks/mark_bittman_on_what_s_wrong_with_what_we_eat