

Carbon Footprint



FILM

 **Dandelion: The Ecological Footprint**

KEY OBJECTIVES

- 1 **To define 'carbon footprint'**
- 2 **To explain the effects of carbon footprints and ways to improve them**
- 3 **Identify individual carbon footprints and identify ways to lessen them**

INTRODUCTION

Some of our lifestyle choices and day-to-day activities emit excess carbon dioxide and other greenhouse gases into the atmosphere. The amount of greenhouse gases (e.g. carbon) we produce/release in the production of stuff that we use is referred to as our carbon footprint. Too much carbon dioxide and other greenhouse gases in our atmosphere can lead to unnatural climate change, which can have a harmful effect on our planet. Take this survey to get a sense of the size of your family's carbon footprint. Here is a good example: The more we use commercially made products, we have demand and the more the products need to be produced. To generate most of these products, more resources like fuel are burned for transport, for energy, for running plants that produce these things. Trees are cut down to make space for the factories, to use as fuel or raw material and to clear lands in order to mine metals. Since trees also absorb carbon dioxide safely, the reduced number of trees and forests results in higher carbon dioxide in the air that has nowhere else to go causing the greenhouse effect/global warming.

GUIDING QUESTIONS

- What can you and your family do to reduce the size of your carbon footprint?
- Why do you need to reduce your carbon footprint?

TOPICS

Ecological footprint
 sustainable development fossil fuel
 biomass greenhouse gas pollution

KEYWORDS

Ecological footprint
 carbon footprint carbon IV oxide
 climate change

LEVEL

Primary School Secondary School

RESOURCE TYPE

Project

INTENDED AUDIENCE SIZE

Small group

MODE OF DELIVERY

Live

TIME FOR ACTIVITY

45-60 min.

Carbon Footprint



Knowledge
Through
Entertainment

MATERIALS/PREPARATION

- White Manila paper
- pencil/pen
- Highlighters/colors, colored markers (Red, Green, Brown, Blue)

TASKS/PROCEDURE

- 1 Draw your footprint on the manila paper
- 2 Around your footprint, sketch 14 complete circular rings almost resembling your footprint
- 3 Based on the Carbon Footprint Survey, color the rings around the footprint (start from the center) to estimate the relative size of your family's carbon footprint.

CARBON FOOTPRINT SURVEY

Housing and Home Energy

- 1 If you live in a single-family home, color 4 rings **Red**; if you live in an apartment or other type of home, color 2 rings **Red**.
- 2 If you don't use energy-efficient light bulbs such as CFLs (compact fluorescent), color 1 more ring **Red**.
- 3 If your home doesn't have a programmable thermostat, color 1 more ring **Red**.
- 4 If you are not familiar with the Energy Star appliance rating system, color 1 more ring **Red**.

Transportation

- 1 For every small car in your family, color 1 ring **Blue**.
- 2 For every medium or large car in your family, color 2 rings **Blue**.
- 3 If you don't regularly change the air filter on your car and check the tire pressure, color 1 more ring **Blue**.
- 4 For every airplane trip you've taken in the past year, color 1 more ring **Blue**.

Personal Habits

- 1 If you are a vegetarian, color 1 ring **Green**; if you are not a vegetarian, color 2 rings **Green**.
- 2 If you never eat organic food, color 1 more ring **Green**.
- 3 If you take baths, run the faucet while brushing your teeth or washing dishes, or water your lawn several times a week, color 1 ring **Green**.

Recycling and Waste

- 1 If you usually recycle your household trash, color 1 ring **Brown**; if you never recycle, color 2 rings **Brown**.
- 2 If you never compost your yard and kitchen waste, color 1 more ring **Brown**.

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FOSTERING DISCUSSIONS

To understand what your carbon footprint is, you need to look at several key areas of your lifestyle.

This includes:

- 1 **Your home energy use and waste production**
Factors like how much electricity, natural gas, and other fuels you use and where they're sourced from, as well as whether you recycle or send your waste to landfill/incineration.
- 2 **Travel**
Your footprint will vary depending on whether or not you have a car/motorbike, as well as how often you use it. Also, your use of public transport contributes. Any flights you take also need accounting for, as these contribute significantly.
- 3 **Your diet**
The types of food you eat and where you source it from can play a central role in your overall carbon footprint. The more energy-intensive it is to produce and ship your food, the worse for the environment it generally is. Your shopping habits - How often you purchase new products such as electronics, household goods and clothing, is another factor contributing to your carbon footprint. The lifespan of these items, as well as where and how they're produced, can play a role in your carbon emissions.

By lowering your carbon footprint, you can help contribute to the overall reduction of greenhouse gas emissions. In the fight against climate change, everyone making small adjustment to the environment can lead to enormous results. Lowering your carbon footprint can help you save money and also live a healthier lifestyle as well. This means you're doing your bit to curb climate change be it by getting cleaner air, having a healthier diet, or reduced energy bills(benefits).

POSSIBLE EXTENSIONS

This lesson can be extended to study more about pollution and its effects on the environment.

AUTHORS AND SOURCES

Submitted by Discovery Centre Kenya