

## Ecological footprint

### Introduction

Every day we use natural resources to secure our standard of living. Whether it is living in a house, eating, travelling, or leisure activities, almost all of our activities are linked to the consumption of natural resources. Some are non-renewable (such as fossil fuels) and after exhausting them we will have to find an alternative. Other resources are renewable (e.g. biomass or wood) and can be restored after a certain time. And there are resources whose amounts do not change on the planet, but their quality does (e.g. water). Increasing population and living standards are causing an increasingly rapid depletion of resources and affecting the natural balance and ecological resilience. However, this cannot work forever because our planet also has limits, therefore it is necessary to meet the needs of all people and participate actively to reverse current situation to be more sustainable. A good example of how to find out our consumption of resources is by calculating the Ecological Footprint. Do you think that if everyone lives like you, the planet will have enough resources for everyone?

### Learn about the problem

Use internet, (scientific / popular) literature, or in collaboration with experts find available information on ecological footprint and sustainable development. Focus on the following questions:

- What information is needed to calculate the ecological footprint?
- What is the size of the national ecological footprint?
- Do you know what Earth Overshoot Day is?
- What does sustainable development mean? What are its principles? Are you implementing these principles in your daily life?

### Recommended resources

#### [Source 1:](#)

Ecological footprint



#### [Source 2:](#)

Ecological Footprint of Countries: Deficit or Reserve?



#### [Source 3:](#)

World Overshoot Day



#### [Source 4:](#)

Ecological footprint



#### [Source 5:](#)

Energy in Europe: State of play



#### [Source 6:](#)

Climate change and investments



### Verify the occurrence of a problem in your area with your own research

#### Goal

Students using the selected online calculator can calculate the size of their ecological footprint representing the demand of land / sea / lakes for a certain human community in a year, or the amount of CO<sub>2</sub> produced per year according to their lifestyle. Based on the calculated value, students are aware of the impact of their

behaviour on the planet. Students can identify their strengths and weaknesses in the area of natural resource consumption and can change their behaviour towards a more sustainable life-style by focusing on energy consumption, water usage, consumption patterns and waste production.

## • Tools & Materials

- online ecological footprint calculator:

[Henkel](#)



[Carbonfootprint](#)



[WWF](#)



- a board / flipchart / tablet or similar
- recording card
- calculator
- camera / mobile to record activity

## Implementation

Before starting an ecological footprint calculator, discuss questions that occur in the selected area or topic (food, home, travel, leisure, etc.). If students are unable to answer all the questions, look for missing information on the internet or give them a time to prepare answers with their parents. Then answer the questions in the selected online calculator. Write down your results in the record card. Then calculate the average footprint of the whole class.

## Analysis of results and proposal of solution

What results have you achieved? Together, discuss the size of the ecological footprint of each student and class. Is your footprint larger or smaller than the world / national average? Is your consumption sustainable? What are the strengths and weaknesses of how you live from a sustainable point of view? How could you reduce your environmental footprint? Write your ideas on the board or flipchart. Pick some solutions as individuals or make a commitment as a team.

## Implementation of the solution and evaluation

Did you implement some solutions? Have you respected the commitments you made? If so, how has your ecological footprint changed? How did your friend or family react? Are there other ways how to reduce your environmental footprint? Would you be able to calculate the environmental footprint of your school and propose solutions to reduce it? After some time, you can repeat the ecological footprint calculation.

**How did you feel after implementing the selected solution?**

**Frustrated**

**Disappointed**

**Rather  
Negative**

**Neutral**

**Rather  
Positive**

**Satisfied**

**Enthusiastic**



## Publicity

Record and share photos on social networks with [#mybioprofile](#) during the activity. Help others to join us.

## Example

Recording card					
<b>Class</b>	9				
<b>School</b>	Elisabeth's Elementary school				
<b>City</b>	London				
<b>Name and surname</b>	<b>Amount of CO<sub>2</sub> [t/year]</b>	<b>Number of trees needed to store CO<sub>2</sub> [trees/year]</b>	<b>Strengths of my life-style</b>	<b>Weaknesses of my life-style</b>	<b>My commitments</b>
John Doe	3,6	288	Housing (economical appliances )	Nutrition (meat), Travelling (diesel car, flights)	Restrict meat consumption, use public transport more often
Lucia Smith	2,0	160	Nutrition (vegan)	Housing (electricity consumption)	Save electricity and restrict playing video games
Carol Bright	2,8	224	Holiday (local trips)	Travelling (diesel car)	Use public transport more often
Anthony Bridge	3,9	312	Housing (eco-friendly)	Holiday (flights, hotels)	Restrict luxury holidays
Alan W. Bean	2,9	232	Eating in restaurants (occasionally)	Housing (water consumption)	Reduce water consumption
Samantha Fox	3,1	248	Travelling (no car)	Nutrition (exotic food)	Buy local food
<b>Total</b>	<b>18,3</b>	<b>1464</b>			
<b>Average</b>	<b>3,05</b>	<b>244</b>			

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