



Quantifying Impact

Material Footprint Analysis



Co-funded by
the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.
Project number: 2022-1-DE02-KA220-YOU 000085086

Duration

45 minutes

Materials:

- Internet access for research
- Calculator
- Worksheets for recording data (provided as printouts or digital files)
- Pens or pencils

Goals:

- To understand the environmental impact of different materials used in everyday products.
- To develop skills in researching and quantifying material usage and its ecological implications.

Why Do This Exercise:

This exercise will help participants to connect theoretical knowledge with real-world applications, enhancing their understanding of the environmental footprints of materials they encounter daily. It also promotes critical thinking and analytical skills by requiring them to quantify impacts and make assessments based on real data.

Instructions Step by Step:

- Introduction to Material Footprint: Explain the concept of a material footprint and its importance in environmental sustainability.
- Choose a Product: Participants select a common product (e.g., a smartphone, a t-shirt, or a notebook) to analyze.
- Research Material Composition: Participants research the main materials used in their chosen product and document these on their worksheets.
- Quantify Material Use: Using available data, participants estimate the quantity of each material used in the product.
- Assess Environmental Impact: Participants research the environmental impact of each material's production, use, and disposal stages.



- Calculate Total Footprint: Participants use a simple formula to estimate the total environmental footprint of the product.
- Discussion and Reflection: Participants share their findings in groups, discussing variations between products and potential ways to reduce the environmental impact.
- Wrap-Up: Summarize the key learnings and encourage reflection on how this knowledge can be applied in their future careers.

This work is licensed under a Creative Commons Attribution 4.0 International License.



**Co-funded by
the European Union**

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.
Project number: 2022-1-DE02-KA220-YOU 000085086