



Your CO₂- Calculator

Pedagogical material to
complement the CO₂
Calculator: project ideas and
work suggestions

Foreword – Däin CO₂-Rechner

Today, climate change is no longer questioned by science, but how can global warming be stopped and, if necessary, reversed? It is a complex problem, although the goal is supposedly simple: reducing the CO₂ footprint.

All living things release carbon dioxide into the atmosphere. Plants need it to live. Everyday activities, from surfing the internet to a burger to a cup of coffee, similarly release greenhouse gases. However, these gases can store a lot more heat than the atmosphere normally does. The result is a greenhouse effect where the planet's temperature rises. This increase in the global temperature can lead to ecosystems failing, species dying out, and an increase in extreme weather events in the form of storms, floods and droughts.

However, the less CO₂ and other greenhouse gases that are released into the atmosphere, the easier it will be for the climate to stabilise itself. Thus it is possible to aspire to CO₂ neutrality and to avert climate change.

The stimuli and ideas for project work in lessons presented below are intended to enable learners to inform themselves about this subject, to research facts and to form an opinion about the extent to which they are affected and which actions are appropriate, in their opinion.

The booklet is intended as educational support material for the online tool.

The calculator was developed by the klimAktiv organisation and adapted to the Luxembourgish context in collaboration with the Nohaltegkeetsrot (High Council for Sustainable Development). Calculating a personal CO₂ footprint is based on questions which are answered in the following categories: lifestyle, travel, living and electricity. There are exercises in the booklet for each of the categories, which can be used to gain a deeper understanding of the subjects.

Däin CO₂-Rechner:



V. Waste avoidance and recycling

V.1. How rubbish is created

Research and group work

Over a given period (a day, a week, a month), students record how much rubbish is created at home/in the classroom/in school. Example: Where, when and how much rubbish is produced during a day (at home and in school).

Next, they research the following questions:

- How much household waste is created per capita in Luxembourg? (Useful sources include the STATEC site or online STATEC publications such as *Luxemburg in Zahlen*.)
- How has the amount of waste created changed over recent years?
- What happens to the waste in Luxembourg?

Lastly, the students create a list of programmes and initiatives in Luxembourg aimed at waste avoidance or reusing or repairing products.

V.2. How does waste avoidance/recycling work?

Research and creative activity

Phase 1: The class is divided into two groups: one researches the subject of waste avoidance, and the other recycling.

The students look for videos or texts on these subjects (it is important to pay attention to the credibility of the information: why are the videos or texts credible?)

- How does e.g. plastic or aluminium recycling work?
- How can waste be avoided?
- How does separating waste work? Where do uncertainties exist?

Phase 2: In small groups, the students create their own meme or a short video lasting a few seconds, addressing the subject of waste avoidance. These might explain e.g. “typical” mistakes when recycling, in a humorous or interesting way.

After this, as a class they consider how they could effectively circulate the best memes or videos.

Note: If student videos are created during a school project, the school management should be told about the project and included in it. The students who are filmed need to obtain a declaration of consent from a parent or guardian. If they are an adult, they can sign this consent themselves.

V.3. Fact-check – Does recycling make sense?

Brainstorming and fact-check

The class first brainstorms the following questions, and can then create a word-cloud using an online tool:

- What is the good of recycling?
- Which sectors of the economy benefit from it? Which might not benefit from it?

The following text is read out to the class, or the class watches the video.

Text: [Was bringt Recycling wirklich?](#) [What good is recycling really?] (last accessed on: 02.09.2024)



To finish, a comparison table is created to record which ideas from the word cloud are confirmed and which have proven to be a myth.

V.4. A question for the politicians?!

Positioning activity

The teacher puts up the following statements on opposite sides of the room. The students position themselves between the statements, on an imaginary line where how close they are to the statement reflects their opinion.

Statement 1

We can do more than sorting waste or riding a bike. We need to work for cycle paths and to prevent waste from being made in the first place. We can influence that.

Statement 2

Why should I, specifically, do something? Politicians should take the decisions. It doesn't affect me, and on your own you can't achieve anything anyway.

The students are asked to argue their position with regard to the two statements. The following questions could then be discussed:

- Was it hard to position yourself? Why?
- Statement 1 claims that we can influence things ourselves. Do you agree with that or not? What are your other thoughts and ideas on this?
- As a young person, how can I get involved politically in Luxembourg? What opportunities are there for influencing things for the under-18s? And for the over-18s? These results can be recorded in a table.

TIPS

Trips

- To tackle the subject on a practical level, it is possible to compare shopping in a weekly market with shopping in a supermarket. Where, and what, waste is created?
- Visits to Superdréckskëscht, SIDOR or Valorlux (recyclers) are also suitable for taking a more detailed look into the subject.

Worksheets (DE/FR) for a more in-depth look at the subject of participation/engagement at www.zpb.lu

- “Partizipation” in *duerchbléck Nr. 5, 100 Joer Demokratie zu Lëtzebuerg*, p. 26–27/46–47.
- “Demokratie online” in *duerchbléck Nr. 6, click & go!?*, p. 36/55.
- “Mitmachen erwünscht – aber wie?” in *duerchbléck Zusatzmaterial, Ee Bléck op d’Walen*,

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