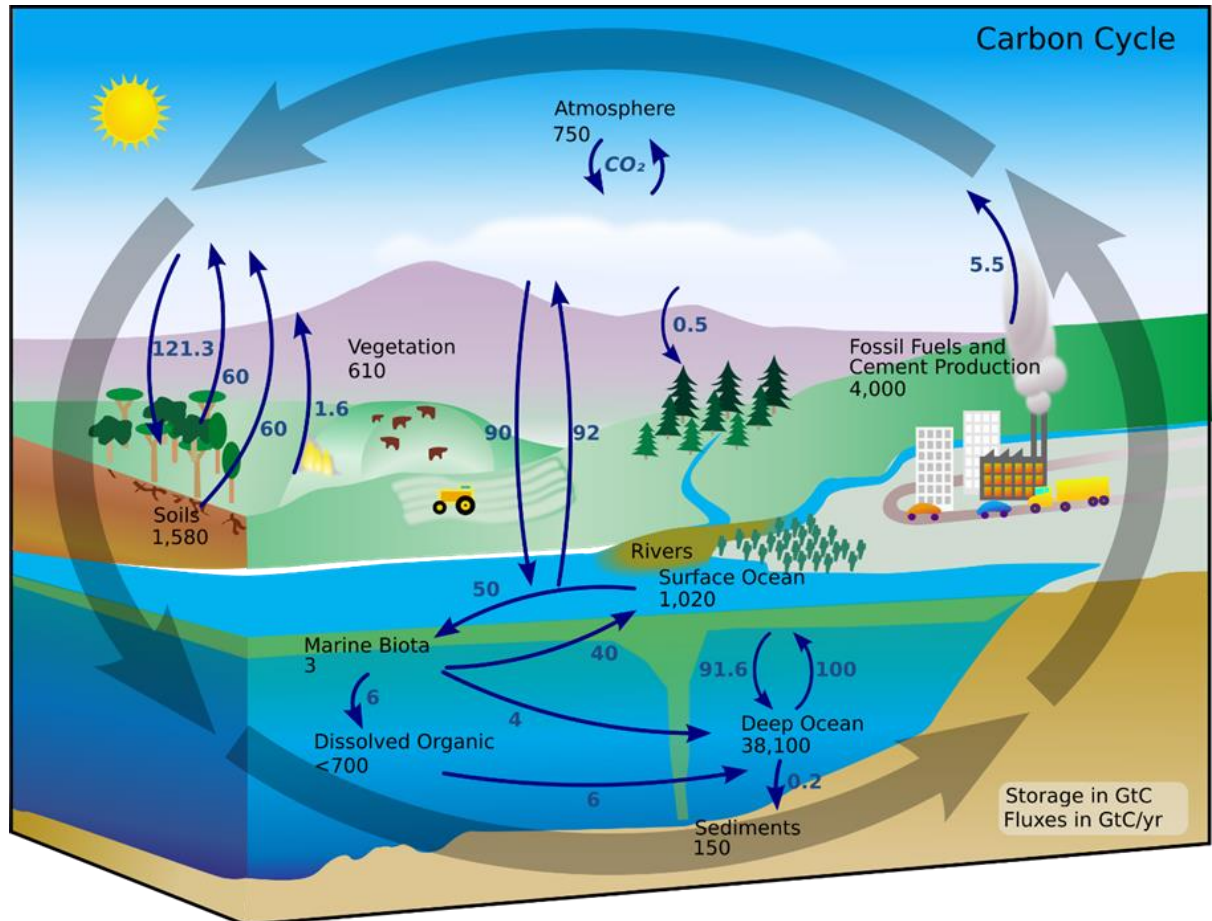


The Carboncycle

<https://www.youtube.com/watch?v=A4cPmHGegKI>



Carbon footprint



1. Explain the concept of carbon footprint in your own words
2. Use this website to find out more about your carbon footprint - [Openfootprint.ducky.eco](https://openfootprint.ducky.eco)
3. What surprised you the most about your carbon footprint?
4. Which daily habits do you think contribute the most to your carbon footprint?
5. What are some simple changes you can make to reduce your carbon footprint?
6. What can you and your family do together to live more sustainably?
7. How do your transportation choices (such as walking, cycling, using public transport) affect your carbon footprint?
8. What did you learn about the connection between eating habits and carbon footprint?
9. How can your school help reduce the students' carbon footprint?
10. What do you think is the biggest challenge in reducing your carbon footprint?
11. How can you inspire your friends to think more about their carbon footprint?

Goosechase – Green Steps in Bergen

For this task, you must complete the assignments below in your groups. You have two hours to complete the tasks. When you have completed all of the tasks, the Norwegian member of your team will send your contributions to a member of the Norwegian team. All groups must bring a bag of bottles with them (this will be provided by the Norwegian team). At 15.00, you must all meet at the blue rock (den blå steinen) - The Norwegian team member will guide you there.

Historical postcard at Bryggen: Take a picture at Bryggen where you pose as if you are people from the middle ages shopping or working at Bryggen.	Living statue at Torgallmenningen: Take a picture of at least one member of your group pretending to be a statue at Torgallmenningen	Den Blå Steinen: Take a picture of the whole group by the blue rock in downtown Bergen. This is our final destination, so you should take this picture at the end	Green transport in action: Take a picture of at least two members of your group by the city tram (Bybanen).
Recycling bottles: Take a picture of at least one member of your group recycling the bottles you were given. Use the money to buy a snack for your group.	Waste sorting and recycling: Take a picture of at least two members of your group by a waste disposal system (Boss-sug).	Defence at Bergenhus fortress: Take a picture of at least two members of your group posing as knights defending the fortress by the entrance to Bergenhus Fortress.	Urban Green Spaces: Take a picture of all of your group members in the flower pavilion (Blomster-paviljongen).
A work of art: Find an appropriate place in town where you take a picture imitating a famous piece of art (for example Munch's Scream at Bryggen).	The stairs to the Johannes' Church: Take a picture at the bottom of the stairs toward the Johannes' church where you look exhausted just thinking about climbing all of the steps.	Eco-friendly urban planning: Take a picture showing either a bike or pedestrian road, where cars are not allowed.	Wildlife and biodiversity: Capture a picture of birds or other animals in Bergen's city centre
Sustainable fashion & Ethical consumption: Take a picture of a thrift store, clothing repair shop or ethical fashion brand. If you cannot find one, identify a store which uses "fast fashion" and take a picture of the store while showing a thumbs down.	Sustainable living: Find a building which features some form of sustainability (such as solar panels) and take a picture of that.	Sustainable travel: Find someone riding a bike and ask to take a picture with them and their sustainable way of travelling.	Group picture: Take a group picture of all members of your group having a good time together.

Sustainable travel

For this task, you will do some research as a group and then create a poster which you will use to present your findings to the other Erasmus students and teachers. You will be doing the first part of the task on your walk from Rothaugen to Strømgaten (you should be at Strømgaten no later than 13.30). The second part will be done at Strømgaten from approximately 13.30-14.00. You will present your findings to the students and teachers at 14.00.

Part 1

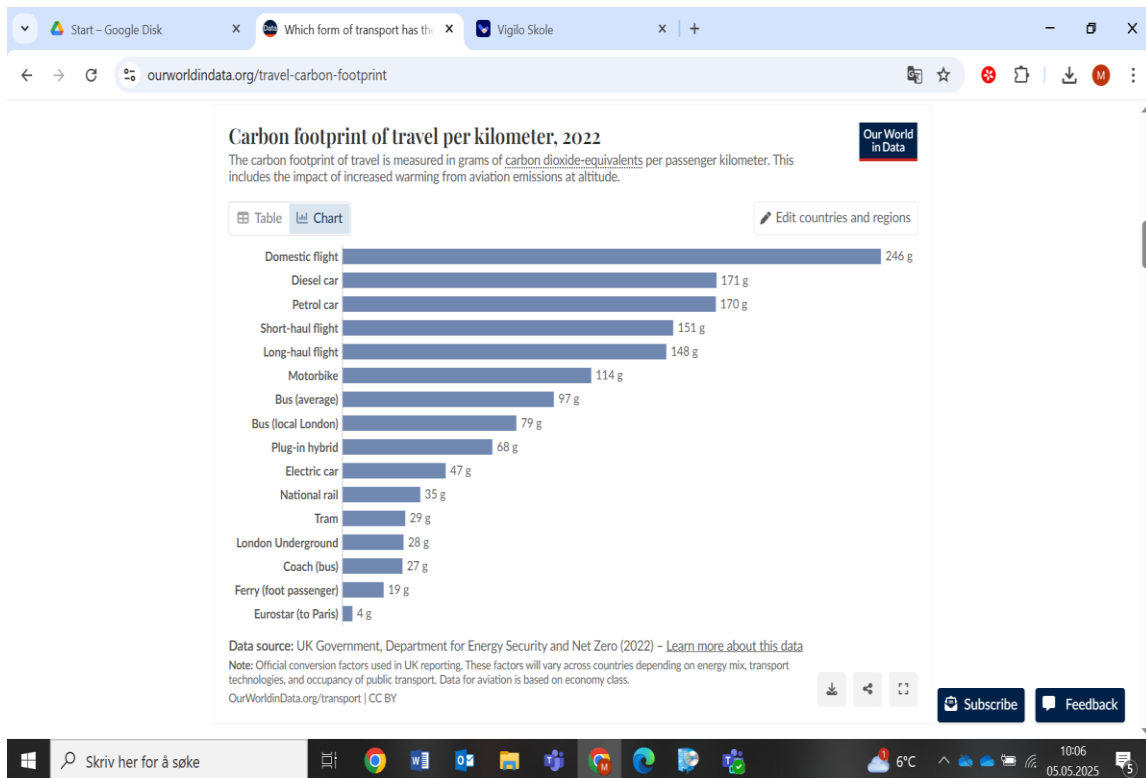
On your walk from Rothaugen to Strømgaten you must find people to ask the questions below. Try to find at least 5-6 different people to ask. Remember to write down the answers the people give you. Make sure to introduce yourselves by saying where you are from and that you are part of an Erasmus project called Green Steps.

- 1) How old are you?
- 2) Do you live in the city center of Bergen or outside of town? If you are asking a tourist, ask if they live in a city or in the countryside.
- 3) How often do you travel by car? If you travel by car, what is the most common reason for doing so?
- 4) How often do you travel by bus? If you travel by bus, what is the most common reason for doing so?
- 5) How often do you travel by train? If you travel by train, what is the most common reason for doing so?
- 6) How often do you travel by plane? If you travel by plane, what is the most common reason for doing so?
- 7) How often do you travel by bicycle? If you travel by bicycle, what is the most common reason for doing so?

Part 2

Your task is to create a poster (A3) where you present your findings from the interviews and your thoughts on sustainable travel. When presenting your findings, you could for example illustrate the types of transport that were most common for the people you asked, some statistics regarding the answers you received or if there were any commonalities between people (for example – did the people who live outside of town use the bus more?).

Before creating your poster, look at the information on the next page from <https://ourworldindata.org/travel-carbon-footprint>. Is there anything there you could include to present how we can travel sustainably?



ourworldindata.org/travel-carbon-footprint

Some general takeaways on how you can reduce the carbon footprint of travel:

- Walk, cycle, or run when possible – this comes with many other benefits, such as lower local [air pollution](#) and better health;
- Trains are nearly always the winning option over moderate-to-long distances;
- If travelling internationally, going by train or boat is lower-carbon than flying;
- Electric vehicles are nearly always lower-carbon than petrol or diesel cars. The reductions are greatest for countries with a cleaner electricity mix;
- If traveling domestically, driving – even if it's alone – is usually better than flying;
- Car-sharing will massively reduce your footprint – it also helps to reduce local [air pollution](#) and congestion.

Subscribe Feedback

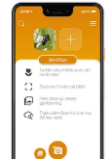
You must include the names of the participants in your group on the poster.

Part 3

Your group will present your poster to the other participants (students and teachers).

Lesson Plan: How Can We Preserve Nature in Skomakerdiket?

At least one member of your group must download the App “Artsorakelet” before the trip.



Description of the Area in Skomakerdiket

Skomakerdiket is an idyllic lake surrounded by forest, just a short walk from the upper station of the Fløibanen funicular in Bergen. The area has a nice walking path around the lake with seating areas and picnic huts, where visitors can enjoy their packed meals or use the barbecue area.

Task: Describe the area in Skomakerdiket

Abiotic and Biotic Factors

Abiotic Factors:

- Temperature: Affects which plants and animals can survive in the area.
- Light Conditions: Sunlight is important for photosynthesis in plants.
- Water Quality: The pH value and oxygen level in the water affect life in and around the lake.

Biotic Factors:

- Plants: Trees and shrubs that provide shelter and food for wildlife.
- Animals: Birds, insects, and small mammals that live in the area.

Task: Can you add other abiotic and biotic factors in this area?

Measures to Preserve Wildlife

- Preservation of Vegetation: Allow plants and trees to grow naturally around the lake to provide shelter and food for wildlife.
- Establishment of Protected Areas: Protect specific areas where wildlife can thrive without disturbance.

Task: How can we preserve wildlife in this area?

Measures to Prevent Littering

- Placement of Trash Bins: Place trash bins around the area to encourage proper waste disposal.
- Cleanup Campaigns: Organize regular cleanup campaigns to keep the area clean.

Task: How can we prevent littering in this area?

Sustainable Measures for Visitors

- Information Signs: Set up signs that inform about the importance of taking care of nature and how to contribute.
- Facilities for Sustainable Use: Provide facilities that make it easy for visitors to behave sustainably, such as recycling stations.

Task: How can we get people to use this area in a more sustainable way?

Rules for Conduct

1. Take Your Trash Home: Do not leave trash in nature.
2. Respect Wildlife: Do not disturb the animals, especially during nesting and breeding seasons.
3. Use Marked Trails: Stay on marked trails to protect the vegetation.

Task: Make three rules to protect nature in this area.

Climate Change and Biodiversity

Climate change has significant effects on biodiversity. Increased temperatures, altered precipitation patterns, and ocean acidification are some of the main factors affecting ecosystems and species. Species must either adapt, move to new areas, or risk extinction.

Examples of Effects:

- Ocean Acidification: Increased CO₂ in the atmosphere leads to more acidic oceans, which can harm coral reefs and marine ecosystems.
- Changed Growing Season: Higher temperatures can extend the growing season for plants but also cause some species to struggle to adapt quickly enough.
- Species Migration: Many species are forced to migrate towards the poles or higher up in the mountains to find suitable habitats.

Tasks on Climate Change

Task 1: Investigate the Effects of Climate Change on a Local Species

Choose a species that lives in Skomakerdike. Use the Artsorakelet app to find information about the species. Investigate how climate change might affect this species. Consider factors such as temperature, precipitation, and water acidification.

Write a short report on your findings.

Task 2: Create an Action Plan to Protect Biodiversity from Climate Change

Identify the biggest threats climate change poses to biodiversity in Skomakerdike. Propose concrete measures to reduce these threats. This can include habitat preservation, reduction of greenhouse gas emissions, and increased research and monitoring.

Present your action plan to the class and discuss how these measures can be implemented.

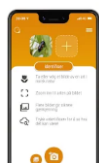
Use of Artsorakelet

Use the Artsorakelet app to identify two species in the area. For example:

- The bird *Cyanistes caeruleus* (Blue Tit)
- The tree *Betula pubescens* (Downy Birch)

Lesson Plan: How Can We Preserve Nature in Skomakerdiket?

At least one member of your group must download the App “**Artsorakelet**” before the



trip.

Description of the area in Skomakerdiket

Skomakerdiket is an idyllic lake surrounded by forest, just a short walk from the upper station of the Fløibanen funicular in Bergen. The area has a nice walking path around the lake with seating areas and picnic huts, where visitors can enjoy their packed meals or use the barbecue area.

Task 1: Describe the area in Skomakerdiket. What do you see?

Task 2: Take a group picture and send it to Linn (the number you sent to yesterday)

Things that affect the ecosystem:

- Temperature: Affects which plants and animals can survive in the area.
- Light Conditions: Sunlight is important for photosynthesis in plants.
- Water Quality: The pH value and oxygen level in the water affect life in and around the lake.
- Plants: Trees and shrubs that provide shelter and food for wildlife.
- Animals: Birds, insects, and small mammals that live in the area.

Task 1: Describe what you can see when it comes to these points. Do you see any animals or plants for example? Which ones? Use the app “artsorakelet” to find names.

Task 2: Take a picture of at least three animals or insects and three plants that you find. Use the app Artsorakelet to find the name of the animal/insect/plant that you found. Send the picture to Linn.

Why it is important to preserve our ecosystems:

Climate change causes the temperature to rise. When it gets warmer this affects the forest/trees, which again affects the animals, insects and other plant life, and also us humans.

Task: Create a short video where you explain why we should live more sustainably to protect the ecosystems and biodiversity. Send it to Linn. You can for example make a slogan, a poem or simply explain in your own words.