I travel by car or I fly

**CO₂**

**Greenhouse Effect**

- Insolation
- Reflection
- Infrared radiation

**EN-GB**

All the cards are in your hands!
Human activities (making things, heating or cooling homes and buildings, driving cars, flying...) use a lot of energy and this has led to an increase in the concentration of CO$_2$ in the air.

For the last 100 years, the greenhouse effect has been increasing due to CO$_2$ and methane. As a result, the earth is warming up.

Cars and planes need oil to move. Burning oil emits CO$_2$. 

How to play

You need one deck of cards per team (6 to 8 pp), a paper roll or tablecloth of 1*2 meters, pencils, rubbers, colour felt pens and some tape.

The aim is for each team to place the cards in order on the table, find all the cause and effect relationships and draw arrows between the cards to illustrate what climate change is about.

Deal the cards set by set and wait until all cards are down on the table before dealing the next set.

Time indications: ~1 hour to place the cards, ~1 hour to decorate the Fresk and ~1 hour to sit down together for a heart-to-heart discussion.

Tip: sort the cards quicker using the blocks on the side!
Melting of Sea Ice

Photo: NASA

Temperature Increases

°C

I use heating or air conditioning

Melting of Glaciers

°C

°C
Air conditioning and heating system use energy. Therefore, using them emits CO₂.

Glaciers are found in mountains like the Alps, or the Himalaya, but also in Greenland and in Antarctica. They are currently melting because of higher temperatures in the air. This means more water in the sea, and therefore the sea level is rising.

The melting of sea ice is not responsible for the sea level rise. Think of an ice cube that melts in a glass of water: it doesn't make the drink overflow the glass.

Because of the greenhouse effect, the temperature on earth has increased by +1°C and will keep rising, which can have serious consequences for our planet.
Warming of Oceans

1) Evaporation
2) Clouds
3) Rains
4) Streams

Perturbation of the Water Cycle

1) Evaporation
2) Clouds
3) Rains
4) Streams

River Flooding

Heat Waves
Disruption in the water cycle can cause more intense rainfall. These rains can cause river floods.

As the global temperature increases, heatwaves are becoming more frequent.

The ocean (and all the seas) absorb most of the heat due to the additional greenhouse effect. Therefore, the water in the ocean and the sea is becoming warmer. When water is warmer, it expands.

The water cycle describes the chain between water evaporation, the formation of clouds, rain and rivers, etc. If the ground and the ocean become warmer, there is more evaporation and the cycle is disturbed.
I buy things

I eat meat

Sea Level Rise

Biodiversity
Sea level is rising due to melting glaciers.

Animals and plants are affected by changes in temperature and the water cycle. Some species are already disappearing.

Everything we buy comes from the industry that emits a lot of Carbon Dioxide (CO₂). CO₂ is a greenhouse gas (GHG).

Cows are ruminants. They release methane when they wind and burp. Methane is a greenhouse gas (GHG), just like CO₂. But it is even more powerful. Raising chicken emits less CO₂ than raising cows.
A submersion is a flood caused by rising sea water levels. The rise of the sea level means seaside villages and cities and small islands may disappear in the near future.

Cyclones draw energy from the warm waters at the surface of the ocean. Therefore when the air and water get warmer, the cyclones get stronger and stronger. Their power has increased because of climate change.

Disruption in the water cycle can cause droughts.

Food production can be affected by temperature, droughts, cyclones, floods.
Climate Fresk was developed by Cédric Ringenbach. Its distribution is managed by the non-profit association "La Fresque du Climat".

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If we produce less food, starvation can happen.

Starvation, floods and droughts are forcing more and more people to leave their country to live elsewhere.