

Address of school or CEGEP

Subject: Urgent need to strengthen the coverage of the basic facts about climate change in the Quebec school curriculum

Montréal, April 22, 2019

Dear Ms./Mr./Dr. ...,

It is with utmost concern that we are writing to you today, regarding the climate change crisis that is upon us. The most recent report released by the International Panel on Climate Change (IPCC) states that an increase in the average global temperature by more than 1.5 °C above pre-industrial levels will have devastating effects on plants, animals, and humans that will threaten their very existence.

We have reached a critical crossroads – we still have the opportunity to change the ways in which we handle this issue and avoid surpassing the critical, irreversible point of no return (1.5 °C). This window is closing quickly and we only have a few years left to act in order to avoid these highly dangerous changes.

We have been breaking records regarding heat waves, droughts, and extreme weather events, but we have observed that the majority of people in Quebec are not aware of the urgency and severity of the situation that we are in.

For this reason, we are writing to you today: It is imperative that all students of Quebec be properly educated about climate change. Our concern regards the insufficient material available to the students in respect to learning the basic facts of climate change in the school curriculum. Students are the future generation and need to be made aware of the full truth about climate change. It is essential to empower today's students by providing them with an education that addresses how the climate can be stabilized and how their actions will affect their futures.

As students and faculty in the Department of Geography, Planning, and Environment of Concordia University, we too are responsible for the consequences of our behaviour towards the planet, and therefore need to be part of the solution.

We would like to offer help in developing a foundation for the curriculum (related to climate change). This would include a package that covers a list of topics that need to be addressed. We would also be happy to have graduate students and/or professors visit your school and give interactive in-class presentations.

Department of Geography, Planning & Environment

We are also asking you for your help to support us in motivating school boards in Quebec to adopt a new curriculum that would include the basic facts about climate change that are listed below. We have sent a letter to them as well.

Climate change touches every facet of human life. We will only be able to transition to a stable climate if we work together effectively. Please let us know if we can provide any additional information.

Sincerely,

Dr. Pascale Biron, Professor, Chair of the Department of Geography, Planning and Environment

Dr. Damon Matthews, Professor and Concordia Research Chair in Climate Science and Sustainability

Claire O'Sullivan, representative of the Geography Undergrad Student Society (GUSS)

Alex Karczewski, representative of the Urban Planning Association (UPA)

Alexandre Pace, representative of the Geography, Planning and Environment Graduate Students Association (GEOGRADS)

James Mourani, representative member of the departmental Climate Emergency Committee

Dr. Jochen Jaeger, Associate Professor, member of the departmental Climate Emergency Committee



Basic facts of climate change to be included in the curriculum:

- Greenhouse gas (GHG) emissions (CO₂, methane, etc.)
- Sources of GHG emissions
- Keeling curve (CO₂ concentrations measured since 1958)
- Difference between weather and climate
- Rising temperatures
- Caused by human activities (anthropogenic)
- Consensus among scientists
- Climate change deniers and their false arguments (funded by fossil fuel industries)

Important consequences of climate change:

- Loss of biodiversity
- Changes in the jet stream
- Albedo effect
- Melting of polar ice caps and glaciers
- Rising sea levels
- Ocean acidification, dying of coral reefs
- Changes in the ocean currents
- El Niño effect
- Vulnerability of people who live in coastal areas
- Desertification
- Run-away effects (positive feedback loops)
- Effects on water supply
- Effects on agriculture
- Increase in extreme weather events
- Changes in the distribution and frequency of disease outbreaks (see malaria and lyme disease)

The interaction of climate change and other social issues:

- Poverty
- Food security
- Immigration (refugee crises)
- Political unrest

What needs to be done:

- IPCC and the Paris Agreement
- Solutions proposed by the IPCC
- Methods for CO₂ sequestration and the importance of soils
- Climate justice
- Renewable energy sources
- Circular economies
- The truth about recycling (greater focus on reducing instead of recycling)
- Limitations of adaptation and limitations of geoengineering
- Impacts of transportation methods and the importance of reducing flying