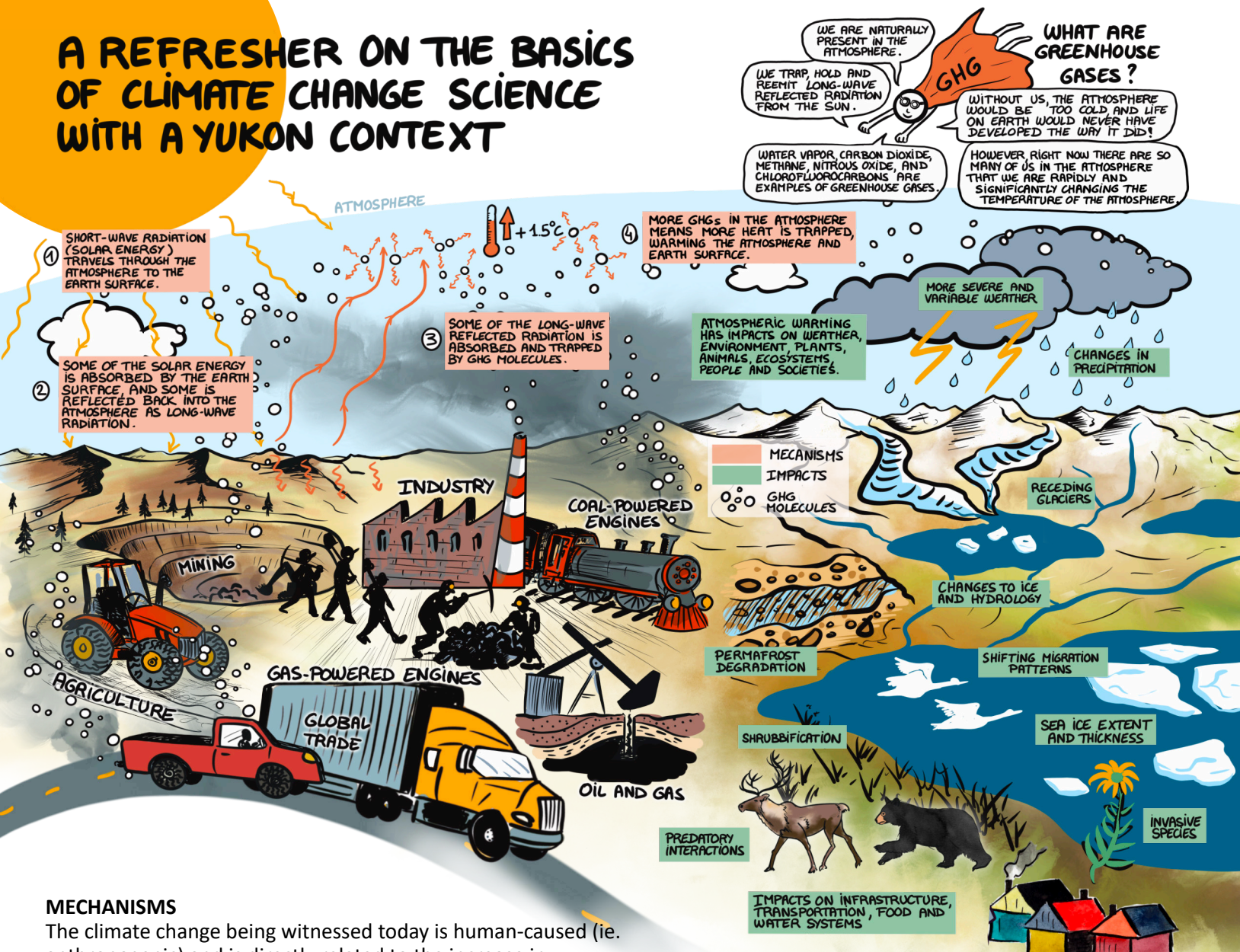


A REFRESHER ON THE BASICS OF CLIMATE CHANGE SCIENCE WITH A YUKON CONTEXT



MECHANISMS

The climate change being witnessed today is human-caused (ie. anthropogenic) and is directly related to the increase in combustion of fossil fuels and landscape changes that began during the Industrial Revolution. Since that time, so many GHGs have been added to the atmosphere that the earth's average surface temperature has increased by about 1.5°C. The current level of carbon dioxide in the atmosphere has never been higher in human history, nor have changes in climate happened this quickly.

IMPACTS

Climate change has many environmental impacts including changes in weather, precipitation, hydrology, cryosphere, ecosystems, plants and animals. Climate change also impacts humans, including changes in infrastructure, water and food systems, and transportation. It is always important to remember that not all humans are impacted equally and emphasize the need for climate justice.

YUKON CONTEXT

- Climate change is occurring more severely in northern areas due to latitude and feedback loops. Yukon's yearly average temperature has increased by over 2°C (and the winter average temperature has increased by 4°C) since the 1950s.
- All levels of government in Yukon engage in climate action (First Nations, municipal, territorial and federal) as do some non-profit organizations, academic institutions, youth, and citizens.
- The Umbrella Final Agreement provides a unique political and cultural landscape that impacts climate action.
- Yukon is both vulnerable and resilient to climate change. Considerations include remoteness and access to goods & services, wildfire and flood risk, and governance decisions.



TEACHING ABOUT CLIMATE CHANGE CAN BE HARD...

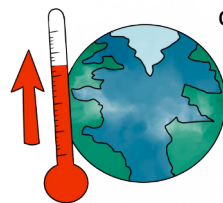


THIS RESOURCE CAN HELP YOU!

DEFINITION

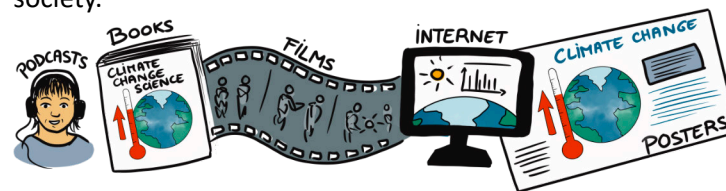
We refer to climate change as the human-caused phenomenon of earth's accelerated atmospheric warming due to increased greenhouse gases added through the combustion of fossil fuels for energy and industrial purposes, changes in agricultural practices, and land development since the mid 19th century.

Despite most Canadians acknowledging that climate change is happening and that not enough action is being taken, their knowledge of climate change causes, impacts and solutions is decreasing (Learn for a Sustainable Future, National Survey 2025). Mis- and dis-information are contributing to this trend.



In parallel, climate change is having an increasingly negative impact on the wellbeing and mental health of Canadians.

Accurate and engaging education about climate change directly addresses these problems and helps to create a more resilient society.



However, accurate and engaging climate change education can be hard: the mechanism is complex, the impacts are wide-ranging, and there is no single solution.

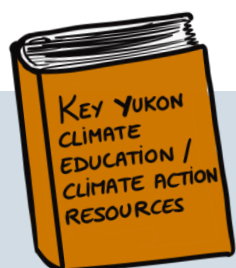
Compared to a decade ago, Canadian teachers are generally feeling more prepared to teach about climate change, though many still report feeling they lack the knowledge and support to confidently deliver good climate change education.

This resource aims to provide teachers with practical content to support classroom discussions of climate change (mechanism, impacts, solutions), managing difficult (and normal!) emotions and reactions, and equipping students with the knowledge, tools and skills needed to address climate change.

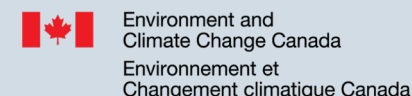


IN THIS RESOURCE, YOU'LL FIND:

- A REVIEW OF RESPONSES TO CLIMATE CHANGE AND TYPES OF CLIMATE ACTION THAT YOU CAN FOCUS ON WITH YOUR STUDENTS
- BEST PRACTICES FOR TEACHING ABOUT CLIMATE CHANGE
- A REFRESHER OF THE BASICS OF CLIMATE CHANGE SCIENCE WITH A YUKON CONTEXT



- Envirowild (Yukon Government) hosts a climate change educational resources list
- YukonU Climate Change Research for direct climate education support
- Reconnection vision
- Government action (currently Our Clean Future at territorial level, Climate Action Plan at municipal level)
- Our Future: Recommendations for government (Yukon Youth Panel on Climate Change)



SOLUTIONS TO CLIMATE CHANGE & KEY TAKE-AWAYS FOR YOUR STUDENTS

SO THERE ARE SOME SOLUTIONS!

BEST PRACTICES FOR TEACHING ABOUT CLIMATE CHANGE

GLOBAL COORDINATION

Climate change is a global issue therefore requiring a coordinated global response. There are international agreements and many action plans, policies and laws that cascade through other levels of government.

Know the key entities and laws/plans/policies that influence climate action in your community.

INTERNATIONAL PANEL ON CLIMATE CHANGE

CONFERENCE OF THE PARTIES



MITIGATION

Mitigation is the act of reducing the amount of greenhouse gases emitted into the atmosphere, such as transitioning to renewable energy, improving energy efficiency, conserving and restoring natural landscapes, adopting sustainable and low carbon technologies across industries, transportation and agriculture.

Examine different climate strategies, who creates and implements them, and how they work. Using local examples is really helpful.



CENTERING INDIGENOUS DECISION-MAKING

Uplift, support, and prioritize Indigenous peoples, governance, law, education, ways of knowing, being and doing.



Uplifting vulnerable populations creates resilience and enables people to take action.

COLLECTIVE ACTION

All climate action matters, but action undertaken as a group is less isolating (and often more productive) than action undertaken as an individual.



SYSTEM CHANGE

System change refers to shifts in the socio-political-cultural-economic systems that govern society. These shifts can be influenced by many factors including top down or bottom up action, wealth and power, cultural change, and worldview. While all climate action matters (including individual action), system change action is now more critical than ever.

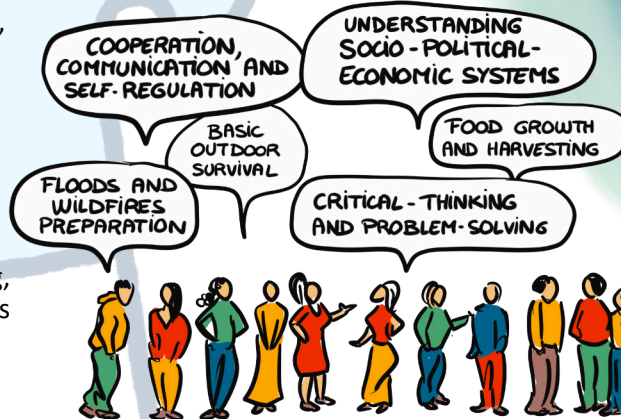
Teaching about systems is climate education! Ensure students understand how governing decisions are made and what influences them. How do actions interact? Does action in one area affect or impede inaction elsewhere?

RESILIENCY

Resiliency refers to mental, physical, emotional skills that contribute to a strong, healthy, adaptable self, community and society.

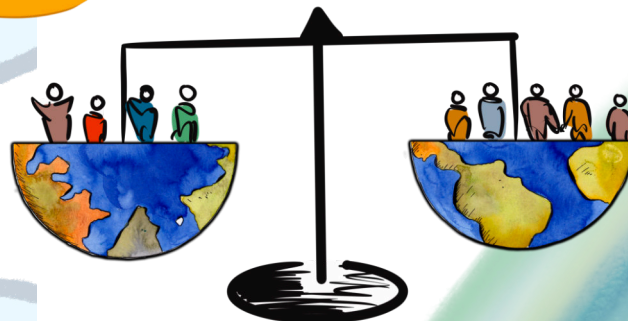
ADAPTATION

Adaptation is the act of responding to changes in ways that foster resiliency. Some changes will be inevitable, and strong, smart, equipped responses to those changes are essential to a resilient future.



CLIMATE JUSTICE

All humans are impacted by climate change, but they are all differently impacted based on things like their age, health, wealth, race, background, and where they live. The principles of climate justice are rooted in climate action that ensures all humans are included and cared for in the transition to a sustainable and resilient future, because climate justice puts equity and human rights at the core of decision-making.



EMPHASIZE CLIMATE ACTION THAT:
A) FOCUSES ON SYSTEM CHANGE
B) CAN BE DONE IN GROUPS

All climate action matters, but individual actions (like riding a bike instead of driving, installing solar panels at home, and buying local food at the grocery store) are not necessarily accessible to all students due to their socio-cultural-health-economic-geographic context. Instead, focus on teaching and emphasizing climate action that focuses on system-change, that is accessible to all students, and that is undertaken in groups/collectively.



TEACH ABOUT AND EMPHASIZE THE IMPORTANCE OF CLIMATE JUSTICE

Weave climate justice into as many learning opportunities as possible, especially when discussing climate impacts and solutions.



VALIDATE EMOTIONS
KNOW WHERE TO FIND MENTAL HEALTH AND EMOTIONAL SUPPORT

Emotions such as anxiety, distress, fear, grief, anger, and frustration are all normal responses to climate change. Validating these emotions is critical for student's wellbeing, as is knowing how to support students manage these emotions, which can include lessons, tools, professionals. Some critical resources for this include:

- [Climatepsychology.us/educators-guide-climate-emotions](https://climatepsychology.us/educators-guide-climate-emotions)
- [Unthinkable.earth/resources](https://unthinkable.earth/resources)
- <https://curiousclimate.org.au/schools/climate-feelings/>

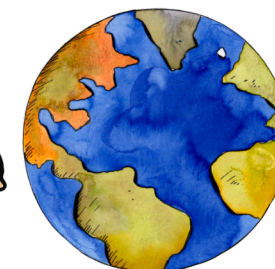
INTEGRATE DIFFERENT WORLDVIEWS INTO TEACHING

Different worldviews present different ways of understanding and interacting with the world, which is directly relevant to anthropogenic climate change. Teaching about other worldviews fosters reflection, critical thinking, and possibilities for the future.



FOCUS ON CLIMATE ACTION IN PEDAGOGY AND IN PRACTICE

While it is valuable to understand the mechanism and impacts of climate change, an emphasis on current and future climate action is critical. Doing climate action with students is helpful and effective for fostering resiliency and dealing with difficult emotions. Integrate climate action regularly into your teaching practice, whether small or large.



PRACTICE EFFECTIVE CLIMATE COMMUNICATION
ADVOCATE FOR SUSTAINABLE ENERGY SYSTEMS
EMPHASIZE FOOD SECURITY