

# EVIDENCES FOR CLIMATE CHANGE

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## SNC2P: Climate Change

### Topic: Evidence of Climate Change

#### Tree Ring Case Study Activity

Prior knowledge:

- Students will have an understanding of what climate change is, and the various effects of climate change on the environment

Activity:

Day 1

- Students will complete two guided case studies that investigate tree rings as a source of evidence for climate change. The activities are provided.
- Throughout the case study, students will learn how to read and interpret tree rings, and analyze why tree rings are a reliable source of evidence to support climate change
- The teacher will guide students throughout the case study to ensure their understanding

Consolidation:

- Class will share findings of case studies with each other
- Teacher will lead discussion on the limitations of tree rings as proof of climate change
- Students will brainstorm other potential sources of evidence for climate change
- Preparation for next day: discuss reliable sources of data

## Researching Alternate Sources of Evidence

Prior Knowledge:

- Students are able to conduct online research using reliable sources and databases
- Understanding of tree rings as a source of evidence for climate change
- Ability to read, interpret, and create graphs

Day 2-3

Activity :

- Students will work in small groups to brainstorm an alternative source of evidence for climate change (ex. ice cores, ocean acidification, animal migration patterns, etc.), and conduct an investigation on their chosen topic
- Once a topic is chosen, students will perform individual research on their topic from a variety of reliable sources
- They must include both explanations, as well as numerical data as supporting evidence for climate change (ex. precipitation or temperature records, etc.)
- Teacher will provide guiding questions to assist in student research, as well as a list of websites/databases to start from (ex. government of Canada website, EBSCO, etc.)

Ex. How does your data serve as evidence for climate change? Does your data present significant or minor changes in the climate of the area? What are the strengths and limitations of your chosen source of evidence?

- Students can choose the timeline of data appropriate to their particular source of evidence.
- Students will direct their own learning using yesterday's activity as a guide


Consolidation



- Students will collaborate together in their groups to finalize their research
- Each group will display the data they obtained in a graph (may choose to use graphing technology)
- Group members will combine their research into a single presentation

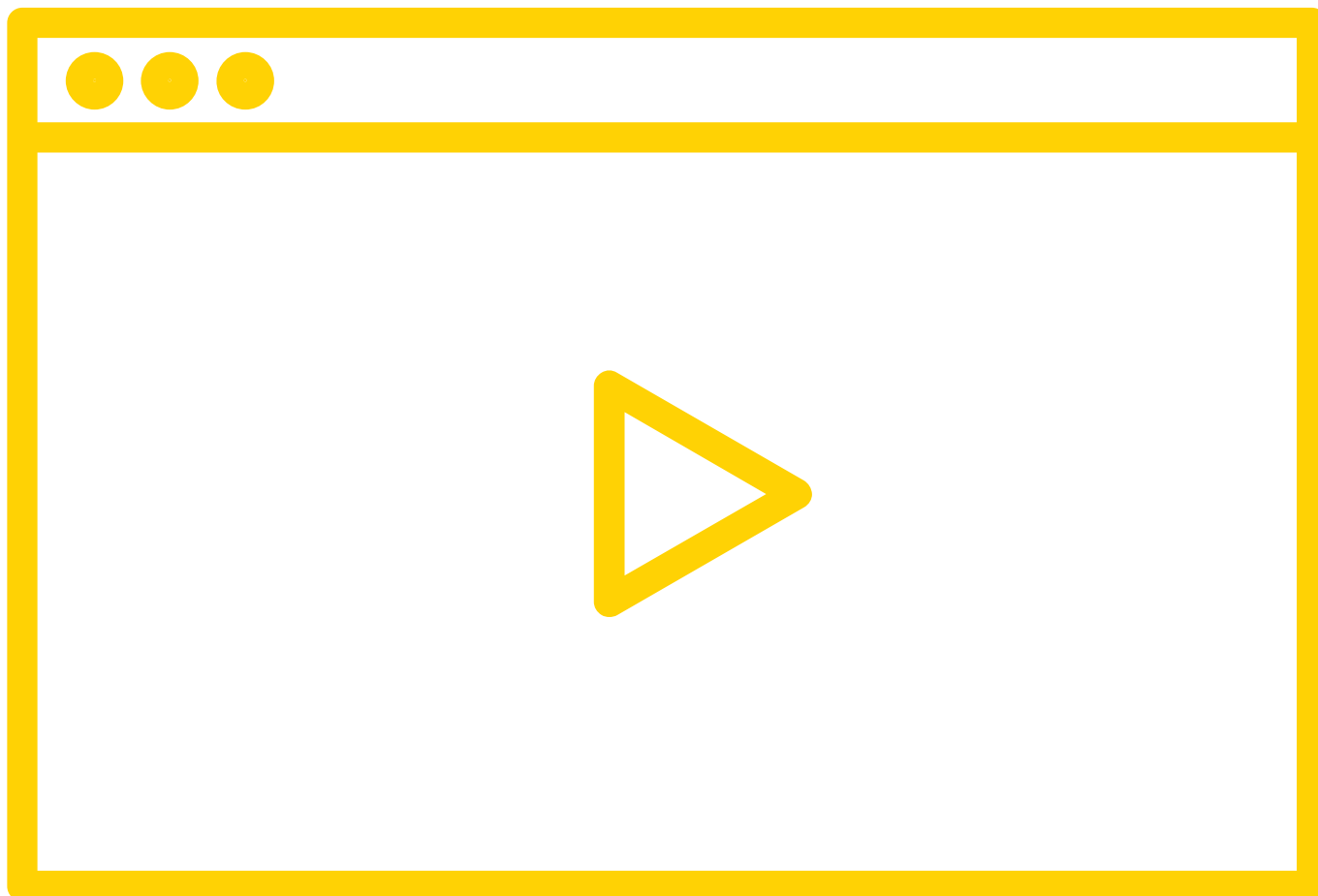
Class Collaboration: Analyzing Climate Change Data

- Day 4
- Each group will share their research in the form of a presentation
  - Students will analyze one another’s research and discuss each other’s findings
  - Class will discuss whether or not each of the topics serve as a reliable source of evidence for climate change, and the need for multiple sources of evidence to support theories
  - Students will use the research and data to come to the conclusion that climate change is occurring, and there are multiple sources of evidence to support this theory



  
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## RESOURCES

-  observing evidences of climate change activity.docx ([https://connex.stao.ca/sites/default/files/observing\\_evidences\\_of\\_climate\\_change\\_activity.docx](https://connex.stao.ca/sites/default/files/observing_evidences_of_climate_change_activity.docx))
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