

Indigenous Populations in Canada

Introduction

This is a free resource for teachers and students and is part of the [Callysto](#) project, a federally-funded initiative to foster computational thinking and data literacy in Canadian Grade 5-12 classrooms.

In this lesson, we will examine two sets of data: the Indigenous populations before contact with European explorers and settlers, and the current Indigenous populations in Canada. Throughout this lesson, we will explore the challenges and limitations associated with studying pre-contact populations and will examine various sources of data that can be utilized to piece together their histories. Additionally, this lesson presents an opportunity to delve into some of the major debates and controversies that exist in the realm of Indigenous populations studies, such as those related to representation, bias, and cultural appropriation.

By the conclusion of this lesson, students will gain a greater understanding of the approaches that scholars took when investigating pre-contact Indigenous populations, as well as the complexities that come with interpreting and evaluating historical data, all while comparing it to contemporary statistics from Statistics Canada.

To log in to the Callysto Hub, you and your students will need a Google or Microsoft account. This can be a school division-provided account or a personal account. Callysto does not collect any personal information about accounts.

Grade Level and Audience

Grade 5-12

Necessary Background Knowledge

Insert if any prior knowledge is necessary for this lesson

1. Students should know how to log in to the [Callysto Hub](#) as well as run a notebook prior to interacting with it. Teachers, to get started with Callysto notebooks and running material on the Callysto Hub, see our [Starter Kit](#).

2. Students would benefit from having an introduction to First Nations groups and an understanding of their ways of living and cultural practices.
3. Before starting this lesson, teachers should have some [knowledge and understanding](#) of First Nations, Métis and Inuit histories, cultures, and experiences and perspectives, including the legacy of residential schools and treaties.

Learning Outcomes

- Understanding traditional Indigenous lands in Americas (Canada and United States)
 - Current location of Indigenous Lands in the Americas
 - Geographic Locations of First Nations people at the time of contact with Europeans.
- What do data visualizations show us about historical population changes over time
- Critically assessing the historical and current Indigenous populations in the Americas.

Required materials

1. A charged computer
2. Access to the internet
3. An installed internet browser, preferably Google Chrome
4. A Google or an Outlook email account

Modifications

In Canada, it is important to learn about the present-day Indigenous communities to recognize and address systemic injustices and inequalities they continue to face. Achieving reconciliation and taking action towards these issues is essential. However, these topics can be challenging to discuss in a classroom setting. Teachers may need to adjust the content and resources to be age-appropriate for their students.

Preparation

In order to participate in this lesson, every group of students will need access to a chromebook or other device with a keyboard or peripheral keyboard.

The Truth and Reconciliation Commission's Calls to Action ([Age-Appropriate Truth and Reconciliation and Call to action Resource](#)) provides a roadmap for addressing the legacy of residential schools and building positive relationships with Indigenous communities based on

respect, understanding, and collaboration. It would be an excellent resource to familiarize yourself with Indigenous issues and work towards reconciliation.

[From Call to Action #62](#)

62. We call upon the federal, provincial, and territorial governments, in consultation and collaboration with Survivors, Aboriginal peoples, and educators, to:

i. Make age-appropriate curriculum on residential schools, Treaties, and Aboriginal peoples' historical and contemporary contributions to Canada a mandatory education requirement for Kindergarten to Grade Twelve students.

In-Class Activities

Activity 1: Exploring Indigenous Population in Americans (Canada and United States) prior to European contact (30 mins)

[Notebook Link](#)

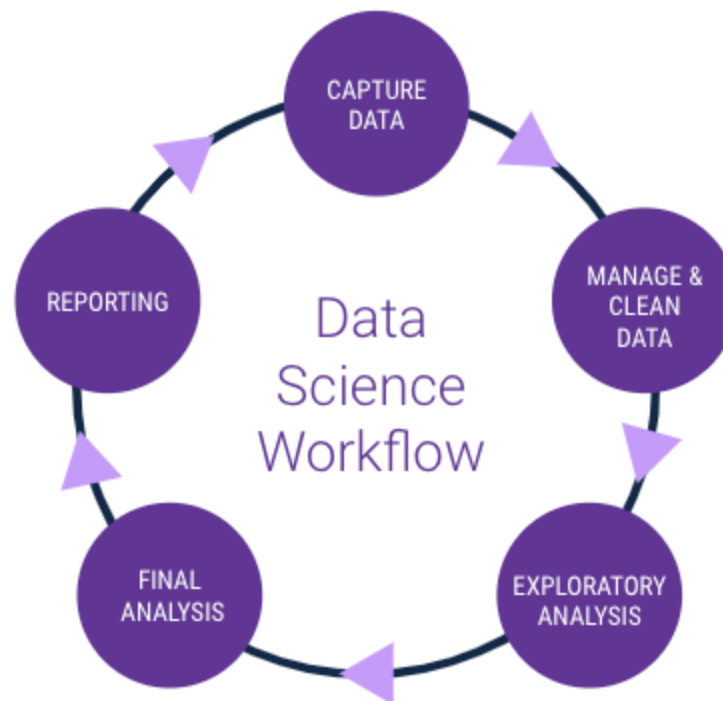


Figure: Data science workflow

Your data science workflow:

1. Capture the data (Step 1): source [Population History of Indigenous of the Americas](#)
Data Scientist Note: We were looking for easy data sources, Wikipedia provided a summary of historical research on pre-contact. We were surprised by the big variation in estimates of pre-contact Indigenous population sizes, and how large the overall population was. We didn't imagine that there were so many millions of people in North America that long ago.
2. Manage and clean data (Steps 2,3,4): Create a dataframe of the Indigenous populations based on scholars estimates. We are going to focus on United States and Canada Indigenous population estimates.
3. Exploratory Analysis (Step 5): Create a bar graph plotting the estimated Indigenous populations of the United States and Canada according to the scholar's findings.
4. Final Analysis: An essential piece to the data science workflow is analyzing and interpreting the data. Discussion questions are provided which can lead to further understanding and insightful conclusions based on Indigenous demographics in Canada prior to European Contact.

Prompting questions for further investigation:

- *Research a couple of authors and their own history. Knowing their background, do you think they may have any biases that impacted their findings?*
- *Why do you think there are some discrepancies between the findings of each scholar?*
- *Does the year of their publication have any impact on their findings?*
- *What methods/tools do you think the scholars used to gather Indigenous population numbers prior to Europeans arriving? For example, archaeological sites, elder oral storytelling, etc.*

Activity 2: Indigenous population in Canada: A current data analysis - (30 mins)

[Notebook Link](#)

Your data science workflow:

1. Capture the data (Step 1): source [Indigenous population of Canada](#) from Statistics Canada
Data Scientist Note: We were looking for easy data sources, and Statistics Canada provided current population data.
2. Manage and clean data (Steps 2,3,4): Create data frames of the Indigenous populations in Canada. Cleaning the data (columns) to give a representation of the different Indigenous cultures in each province.
3. Exploratory analysis #1 (Steps 5,6) Indigenous populations of each province
 - Chart C: Create a bar graph by plotting 2016 Indigenous populations for each province
4. Exploratory analysis #2: (Step 7)
 - Chart E: Create a bar graph by plotting 2016 identifying Indigenous cultures for each province
5. Exploratory analysis #3 (Step 8) Percent Indigenous populations of each province
 - Chart F: Create a bar graph by plotting 2016 percent of Indigenous populations for each province.
6. Final analysis: An essential piece of the data science workflow is analyzing and interpreting the data. Discussion questions are provided which can lead to further understanding and insightful conclusions based on 2016 Indigenous populations in Canada.

Prompting questions for further investigation:

- *Who do you think represents "other" in the bar graph?*
- *Do you think some Indigenous people identify themselves as multiple representations?*

- *Nunavut has more Inuit people compared to the rest of Canada. What other province has a higher Inuit population and why do you think that maybe?*
- *Based on the percent of Indigenous population of each province, what surprised you? Explain?*
- *Can you find the exact questions that Statistics Canada asked the Indigenous people for their representation, if so is there a better way to formulate the question(s)?*
- *What do you think the Indigenous population will be 10 years from now?*
- *Comparing the two notebooks, what conclusions and comparisons can you draw from the data and visualizations?*

Reflections

Some suggested questions:

- *What went well? Why?*
- *What was tricky? How did you overcome it?*
- *What would you do differently? What would you do the same? Why?*
- *What connections can you make between what you learned from this lesson and your other coursework, lessons, or experiences?*

Next Steps

For more information, you can check out our [YouTube videos](#), [online courses](#), or [callysto.ca](#) for [learning modules](#), [tutorials](#), [lesson plans](#), [exercises](#) and events.

Contact

If you encounter any issues or have any suggestions, please get in touch with us at contact@callysto.ca or twitter.com/callysto_canada.