

Open Parliament

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 Jupyter Notebook, our focus lies in exploring the extensive collection of Canadian parliamentary discussions known as the [Hansard](#). This transcript serves as a meticulous record, capturing the intricate deliberations and debates that unfold within the chambers of the Canadian Parliament.

This invaluable Social Studies lesson plan focuses on analyzing Parliamentary debates while utilizing contemporary open-source data related to government information. Examples of such data sources include [Open Parliament](#) and [LiPaD](#), both of which are also known as the Linked Parliamentary Data Project.

As we progress through this notebook, it's important to note that we are extending our exploration to include data obtained from Open Parliament. This broader research scope is intended to provide us with valuable insights into how parliamentary conversations have evolved and shed light on the wider landscape of government activities within Canada. Additionally, keen observers will identify that Open Parliament's API has been utilized in a preceding section of this notebook. More precisely, the API's functionalities were employed to access up-to-the-minute information about topics under discussion in ongoing parliamentary debates.

Finally, in our pursuit to gather the Hansard Data from the website <https://openparliament.ca> (following our prior use of their API), we will employ a technique known as web scraping. This process involves interacting with simple code to extract specific details from the website. The purpose of this code is to assist us in collecting and organizing information related to speakers, their political affiliations, roles, and the content of their contributions during debates.

Learning Outcomes/Curriculum Connections

- Social Studies
 - Grade 6: Studying how democratic principles manifest in local and provincial governments, while investigating historical democratic models and citizens' political roles across time.
 - Grade 9: Understanding how Canada's political processes influence citizenship and identity, aiming to serve the diverse needs of all Canadians.
 - High School: Exploring the connections between identity, nation, and nationalism

- Math

Gather, present, and assess data to address issues. This involves;

 - Investigate questions
 - Acquiring data
 - Filtering the sample
 - Effectively displaying data using visual representations
 - Drawing conclusions to address the questions

Required Materials

1. a charged computer, with internet access, for each student or group
2. an internet browser, preferably Google Chrome
3. a Google or Microsoft account (Callysto does not collect any personal information)

In-Class Activities

[Notebook Link](#)

Activity 1: Hansard Activities - (30 mins)

Let's start by examining specific topics discussed in Parliament, as documented in the Hansard. We'll then compare these with current themes using Open Parliament's API (Application Programming Interface) data. While the concept of an API might initially seem complex, we'll thoroughly clarify it in upcoming sections of this notebook.

By building upon the foundational insights gained from the Hansard, we can delve deeper by utilizing Open Parliament's API. The main benefit of using an API in this context is that it obtains data that is current-day. This allows us to draw comparisons between subjects discussed in 2019 and those relevant today. The concept of topics discussed in Parliament can also be used

in other applications, such as guessing specific parties based on their top ten most spoken topics.

Activity 2: Open Parliament API/Web Scraping - (60 mins)

Open Parliament's API has versatile applications, such as collecting bill data to recognize voting patterns and outcomes. These insights offer a window into party and member behaviours in Parliament.

As an extension to obtaining current-day information in Parliament, we'll use "web scraping," a technique that collects data from websites, similar to copying notes from a webpage. For this, we make a request to the website using a tool called the "requests module." The website responds with data in a unique code, like a secret language websites use. This code shows how the webpage is set up. To understand this code, we use "BS4," acting as a translator, helping us find and pull out the specific details we want. With the provided codes and some user input, this process extracts important details from a chosen webpage. In this particular instance of web-scraping, we'll be using it to collect noun data. This information helps us see common nouns spoken by parties, representatives, provinces, cities, or ridings.

Activity 3: Extension Activities - (60 mins)

Perhaps you can try extension activities such as investigating predictions on which bills pass or fail in Parliament, identifying the most commonly [named entities](#), or creating [word clouds](#)

Reflections

- Why is the examination and analysis of Parliament members' discussion topics significant in Canadian politics?
- How might the frequency of conversations on specific subjects reflect both government and societal concerns?
- What insights can be gained from exploring the correlations between Hansard/Open Parliament data and the insights derived from data science analytics in the realm of political studies?

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.