

Developing & Delivering an Instructional Session

[For History Undergraduates at McMaster University]

Saman Goudarzi

Prompt

"A faculty member in History has asked you to join a class session of their second-year course to introduce students to working with cartographic materials."

Agenda

1. ***Design Approach***
2. ***Sample Lesson Plan***
3. ***Setting the Scene***
4. ***Sample Presentation***
5. ***Questions***

Design Approach

Identify the information needs and capabilities of learners

Identify and fill gaps in my own knowledge in regards to course content

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Identify the information needs and capabilities of learners

Identify and fill gaps in my own knowledge in regards to course content



Assumptions

mid-size
class

canadian
history
course

minimal
technical
expertise

Define Session Objectives

SESSION OBJECTIVES

Introduce print and digital cartographic materials for historical scholarship

Introduce digital mapping tools for historical scholarship

Increase familiarity with MUL's print and digital cartographic collection

Promote MUL as a source for research support

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Ensure the active learning of defined objectives

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KEY TOPICS TO COVER

Prominent print cartographic resources

Prominent digital cartographic resources (spatial data)

Popular cartographic resources used by historians

Introductory explanation of GIS

Popular GIS tools used by historians

Common techniques utilized in historical GIS

MUL's digital and print cartographic collection

How to access this collection

Relevant resources and services offered by the MUL (consultations, online learning, workshops)

How to access them (contact info + links)

**Define
“How”
Session
Objectives
Will be Met**

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How to access them (contact info + links)

Ensure the active learning of defined objectives

Pre-assessment:

Inquire about familiarity with mapping tools & cartographic resources

Participatory learning activities:

Find digitized map in MUL collection & georeference using Map Warper

Post-assessment:

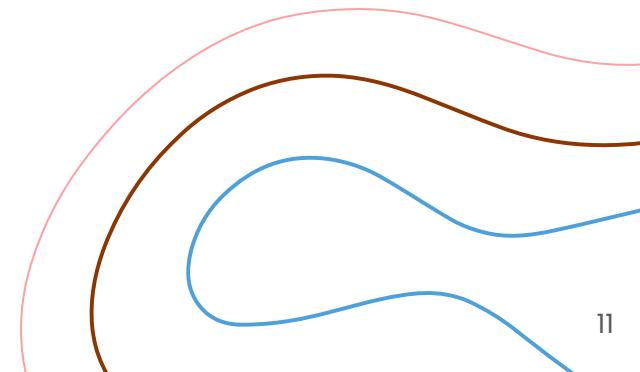
- Polling
- Completion of learning activity
- Follow up with course instructor

Accessibility:

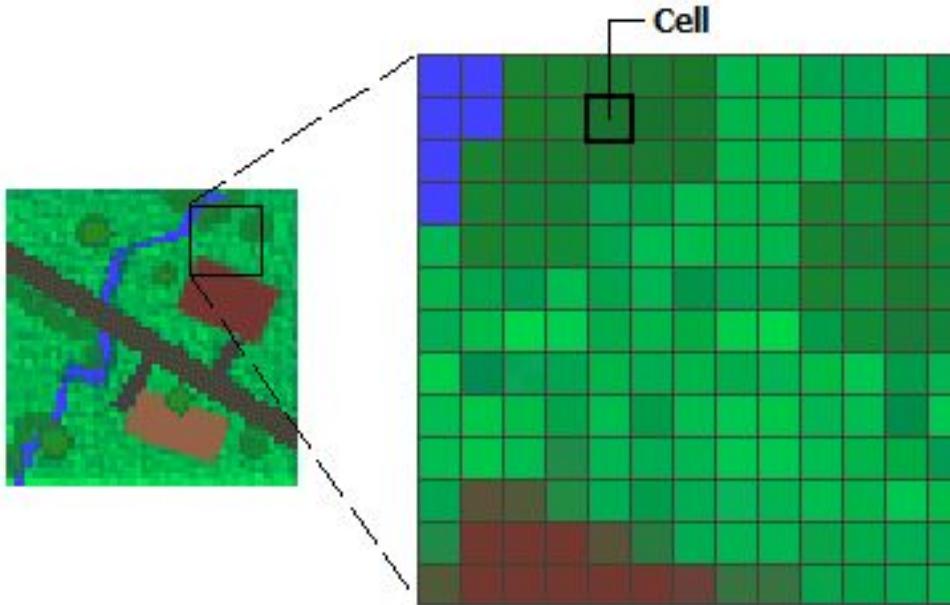
- Learning materials made available in LMS prior to session date
- Minimize the use of technical language

**What would this lesson
plan look like in action?**

In the digital environment, these historical sources are expressed as data.



popular data type: **raster**



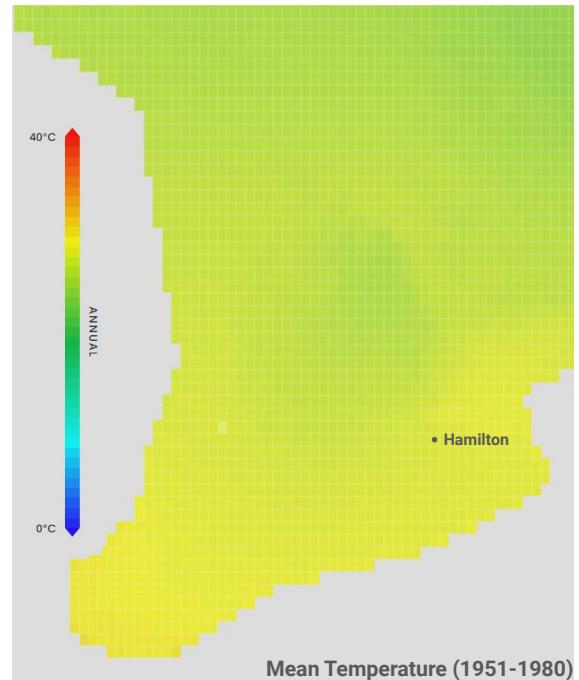
historical data as rasters



digitized fire insurance
plans (x)



digitized historical aerial
imagery (x)

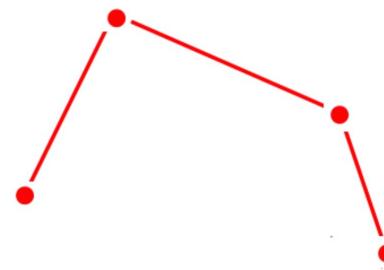


historical climate data (x)

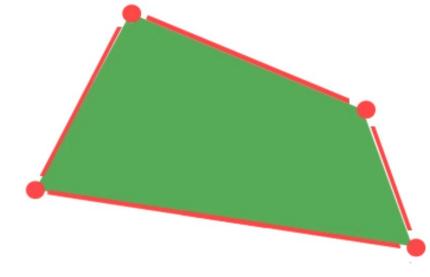
popular data type: **vector**



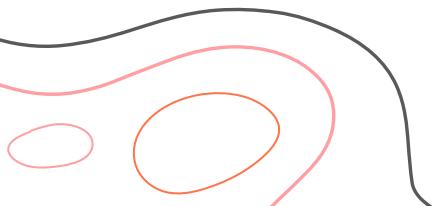
points



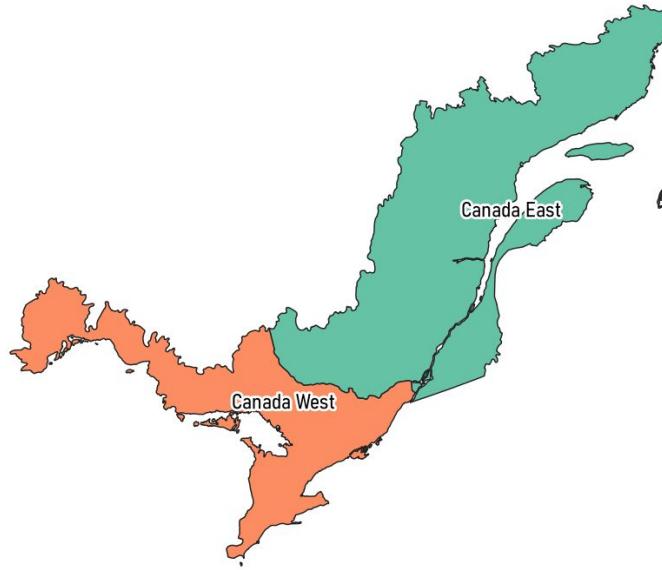
lines



polygons



historical data as vectors

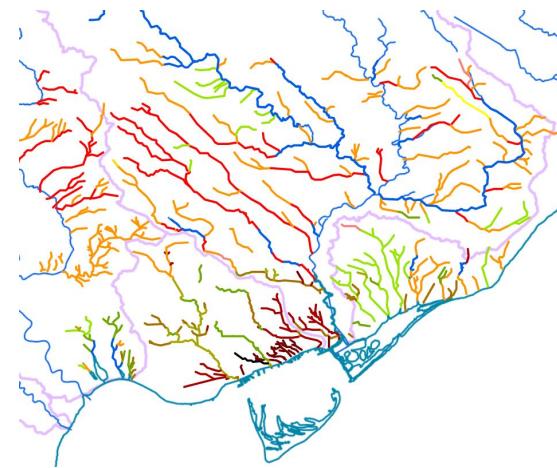


historical political
boundary (x)

historical data as vectors



select residential schools
recorded in ontario (x)

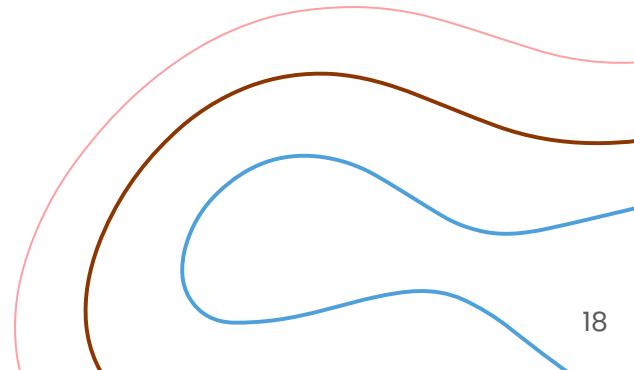


historical rivers of toronto (x)

popular data type: **tabular**

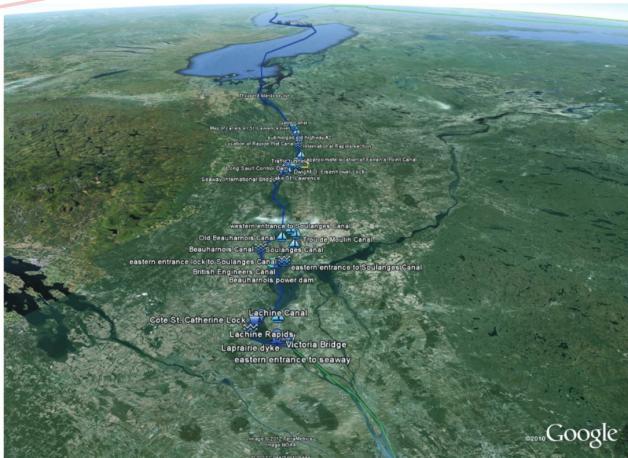
Brewery_Name	ID	Date_Est	Date_Closed	Address	Latitude	Longitude
Cosgrave Brewery	1	1863	1963	297 Niagara Street	43.645267	-79.409781
Ontario Brewing & Malting Co.	2	1885	1901	311-337 King St. E.	43.651565	-79.365705
O'Keefe Brewery (formerly Victoria Brewery)	3	1840	1989	11-17 Gould Street	43.657417	-79.380519
Bloor's Brewery (later Castle Frank Brewery)	4	1830	1843	Bloor and Sherbourne Streets	43.672356	-79.379046
Copland Brewing and Malting Co. Ltd.	5	1832	1946	311-337 King St. E.	43.651556	-79.365532
Copland Brewing Co. Ltd.	6	1847	1946	55-65 Parliament St.	43.652295	-79.362177
Dominion Brewery Co. Ltd.	7	1878	1936	470-496 Queen St. E.	43.657052	-79.359928
Queen City Malting Co.	8	1882	1893	228 Front St. E.	43.651278	-79.365073
East End Brewery (Reinhardt Salvador Brewery)	9	1861	1889	2-22 Mark St. (formerly Beech)	43.661115	-79.356342
Walz Brewery / Korman Brewery	10	1857	1944	Duchess (now Richmond) and Sherbourne	43.6531	-79.3684

Digital mapping tools (GIS) allow historians to organize, visualize, and analyze historical spatial data.

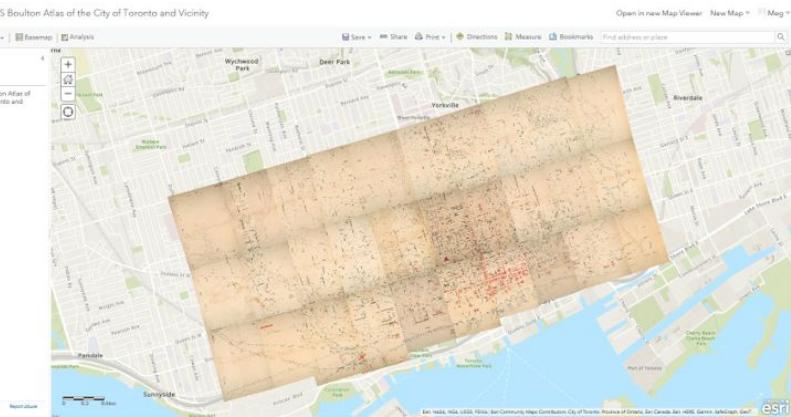


GIS (Geographic Information System):
Any system that's used to analyze,
capture, or work with geospatial data

GIS (Geographic Information System): Any system that's used to analyze, capture, or work with geospatial data



historical points of interest along the St.
Lawrence Seaway visualized in **Google Earth** (x)



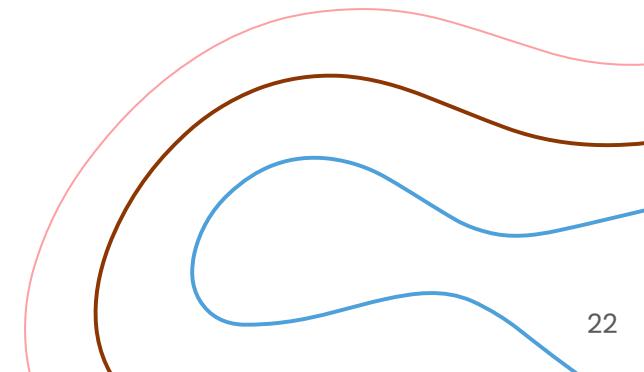
historical map of toronto
visualized within **ArcGIS Online** (x)

In what ways could these digital mapping tools (**GIS**) be useful for historical research?



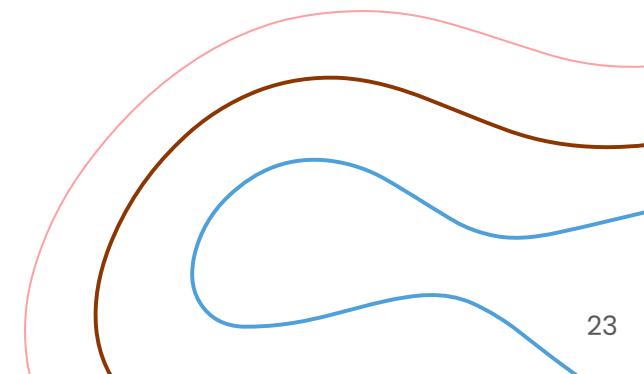
(1) Enable maps from different time periods to be compared systematically

Ex. MUL's Historical Hamilton Portal ([x](#))

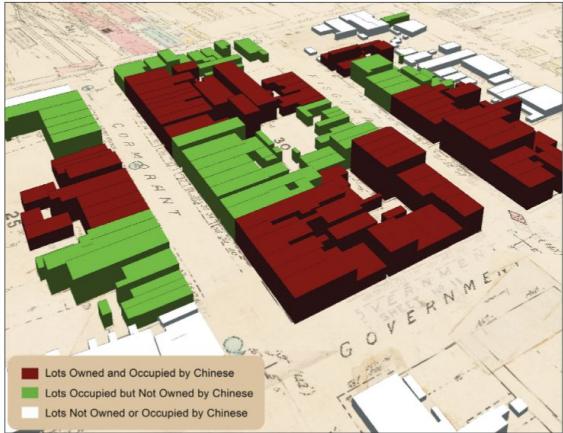


(2) Enable historical narratives to be communicated visually

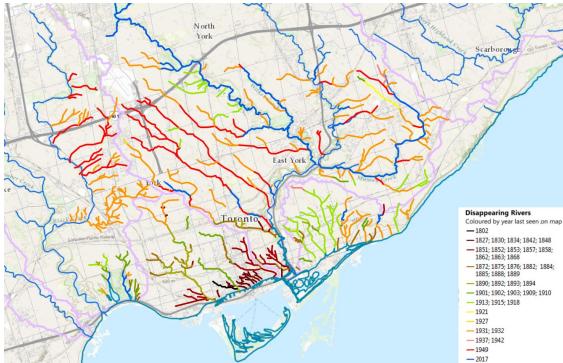
Ex. Historical Village of Waterdown Story Map (x)



(3) Enable the reconstruction of features from the past



chinatown lots in victoria,
british columbia (1891)

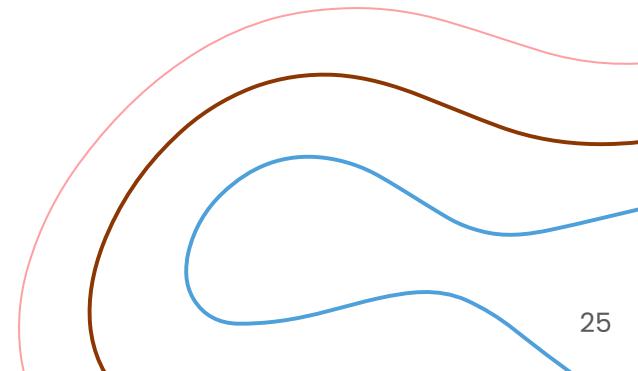


historical rivers of toronto (x)



(x)

(4) Enable geographic patterns
embedded in historical evidence to
be visualized



GENERAL REGISTER OF

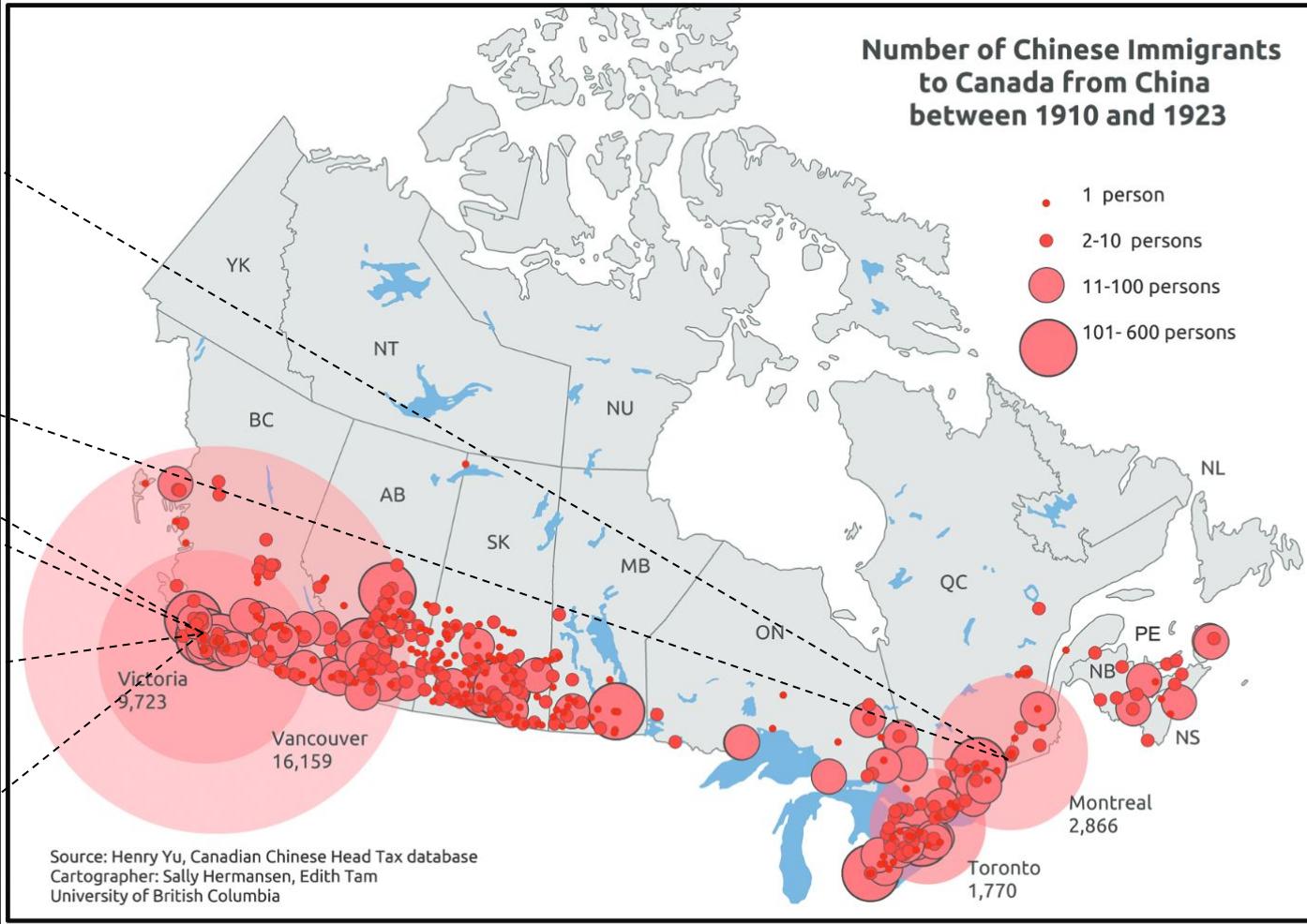
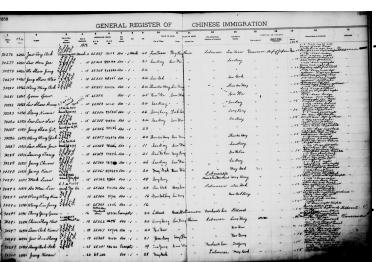
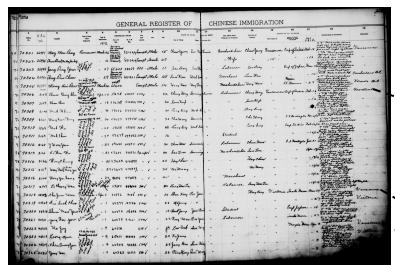
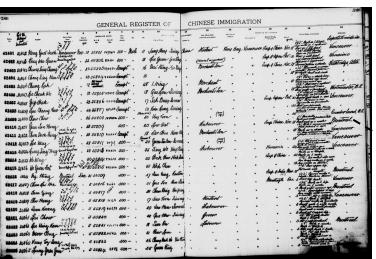
CHINESE IMMIGRATION

1 Recd No. Serial No.	2 Name	3 Port from which Emigrated	4 Date of Arrival	5 CERTIFICATE ISSUED C.I.S. No.	6 C.I.S. No.	7 Fees Paid Amount	8 Sex	9 Age	10 PLACE OF BIRTH	11 NAME OF CITY OR TOWNSHIP
62401 24842 Wong Yuet Jack	Lancaster Nov. 18	55801 107945	500 -	Male	11	Jung Hung Sining	China	Student	Hong Kong	Vancouver Emp. & China Nov. 18
62402 24843 Yung Wee Quon	Montreal Aug. 10	55802 110160	500 -		18	Fee Yuen (or Ping)		(Chinese & is a merchant)	Emp. & Japan Oct. 10	Expect to reside in Vancouver
62403 24844 Chung Sing Chung	Montreal Aug. 10	55803 109460	Exempt		16	Dai King Yit Ling		Merchant Son	Emp. & China Nov. 18	Nanaimo
62404 24845 Cheng Sing Nam	Montreal Aug. 10	55804 106620	Exempt		13	"		"	"	Sethbridge, Alta.
62405 24846 Chung Luh	Montreal Aug. 10	55805 106620	Exempt		48	I. Hing		"	"	Westminster, B.C.
62406 24847 See Cheuk Wo	Montreal Aug. 10	55806 107221	Exempt		18	Quo Chon Sining		"	Emp. Japan Oct. 10	Vancouver
62407 24848 Gip Bak	Montreal Aug. 10	55807 107155	Exempt		17	Sah Duyi Sining		"	"	Cumberland, B.C.
62408 24850 Che Cheung Yeo	Montreal Aug. 10	55808 107155	Exempt		18	Kim Lung Sining		"	Emp. China Nov. 18	Montreal
62409 24850 Chow Chew	Montreal Aug. 10	55809 107052	500 -		20	Ung Toon		(over)	"	Vancouver
62410 24851 Yun Son Hung	Montreal Aug. 10	55809 500 -			20	Gow Wat		Labourer	"	Vancouver
62411 24852 Chun Dick Sing	Montreal Aug. 10	55810 105145	Exempt		18	Siau Boo Nam Ho		Merchant Son	"	Vancouver
62412 24853 See Way	Montreal Aug. 10	55811 104721	500 -		20	Yuen Lam Sining		(over)	"	Vancouver
62413 24854 Fung Sing Tong	Montreal Aug. 10	55812 102325	500 -		35	Ting Wo Ying Pin		Labourer	"	Vancouver
62414 24855 Wo Wing	Montreal Aug. 10	55814 107461	500 -		25	Bak Boo Hochan		"	"	Vancouver
62415 24856 Ho Yuen Fat	Montreal Aug. 10	55815 102220	500 -		25	Wah Chun		"	"	Montreal
62416 24857 Ng Ting	Montreal Dec. 31	55309	500 -		37	San King Canton		"	"	Vancouver
62417 24857 Chan Chi Kee	Montreal Dec. 31	55816 102220	500 -		31	Fee Too Huen Lin		"	"	Montreal
62418 24858 Sam Ying	Montreal Dec. 31	55817 102220	500 -		28	Chun Hing Hoiping		"	"	Vancouver
62419 24859 Chu Hang	Montreal Dec. 31	55818 102220	500 -		17	Yeo Toon Sining		Student	"	Montreal
62420 24860 Sam Kwong	Montreal Dec. 31	55819 101170	500 -		20	Van Hau Sining		Labourer	"	Vancouver
62421 24861 See Chow	Montreal Dec. 31	55820 102220	500 -		28	Fee Hoo Sining		Grocer	"	Montreal
62422 24862 See King Nam	Montreal Dec. 31	55821 101170	500 -		18	Sam On		Labourer	"	Vancouver
62423 24863 Moor Pong	Montreal Dec. 31	55822 101170	500 -		21	Bow Lun		"	"	Montreal
62424 24864 Kung Toy Song	Montreal Dec. 31	55823 102220	500 -		36	Chung Hock Ho Yin Pin		"	"	Vancouver
62425 24865 Young Jen Yum	Montreal Dec. 31	55824 101170	500 -		35	Yum Pui		"	"	Montreal

city names

Number of Chinese Immigrants to Canada from China between 1910 and 1923

- 1 person
- 2-10 persons
- 11-100 persons
- 101-600 persons



POPULAR HISTORICAL DATA TYPES



RASTER DATA



VECTOR DATA



TABULAR DATA



PRINT CARTOGRAPHIC MATERIAL

Source of historical evidence



DIGITAL MAPPING TOOLS (GIS)

Enable the organization, visualization and analysis of digital historical evidence with spatial elements

How can historians utilize digital mapping tools (GIS)?

01

Systematically compare maps
from different time periods

02

Visualize geographic patterns
embedded in historical
evidence

03

Reconstruct features from the
past

04

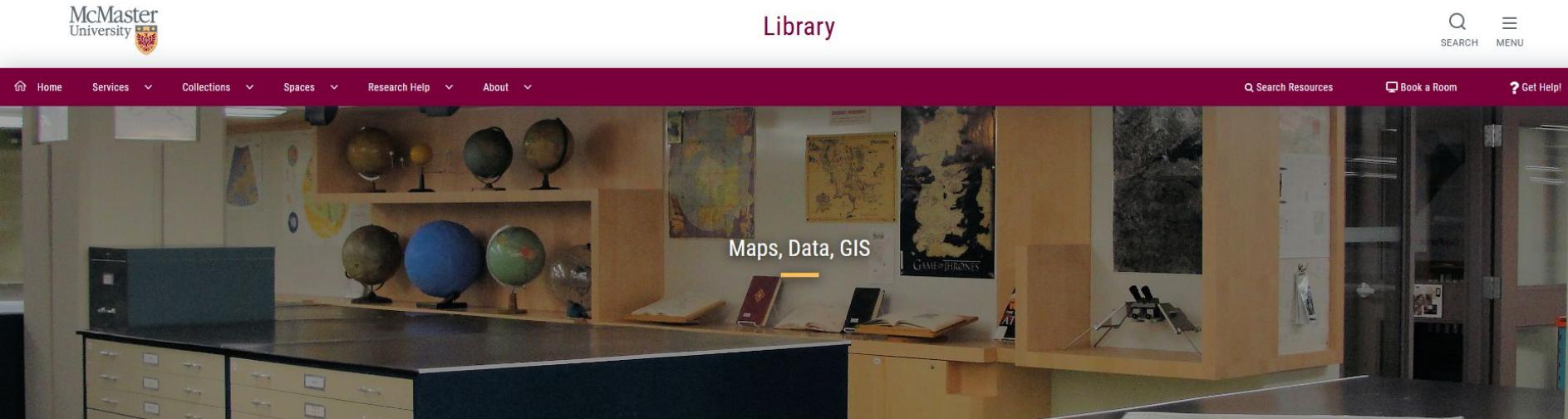
Present historical narratives
visually

How can MUL support me with this stuff?

01 Librarian Support (x)

02 Online Learning (x)

03 Workshops (x)



Maps, Data, GIS

McMaster Library's Maps, Data, GIS Centre supports the geographic, geospatial, statistics, and research data needs of students, staff, and faculty at McMaster University. It provides researchers with access to a wide range of maps, geospatial, statistical and microdata sets, as well as resources and support for managing research data.

[Mills Memorial Library](#)

[Hamilton, Ontario L8S 4L6](#)

[Closed](#)

[905-525-9140 ext. 24745](#)



How can MUL support me with this stuff?

01 Librarian Support ([x](#))

02 Online Learning ([x](#))

03 Workshops ([x](#))

9. StoryMaps

Presented in collaboration with DASH

Synchronous Workshop | March 3, 2022

Link to online module coming soon

Instructor: Christine Homuth

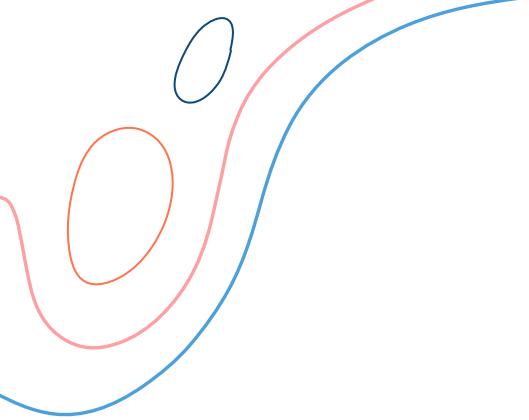
Learn how to make maps tell stories with ArcGIS StoryMaps. This multimedia digital storytelling tool allows you to incorporate maps and apps from your ArcGIS account, as well as text, photos, and videos.

At this workshop, Christine Homuth (Spatial Information Specialist) will provide attendees with an introduction to storytelling through maps using ArcGIS Online and ArcGIS Storymaps. No prior knowledge of GIS is required. This session will be recorded and made available openly.



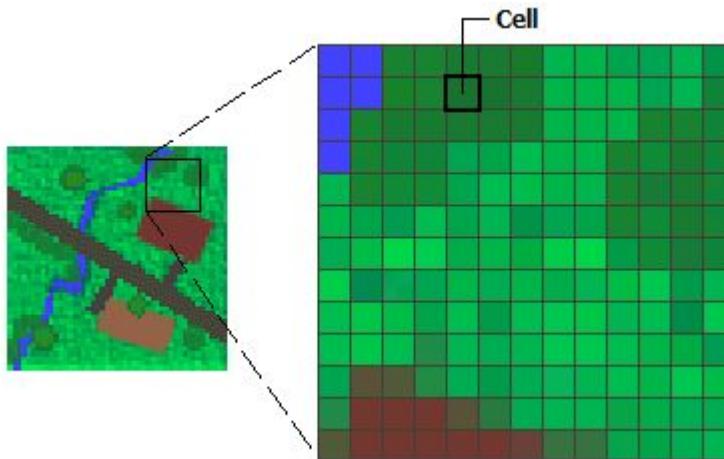
Activity: Georeference a historical map
in MUL's digital collection using Map
Warper ([x](#))

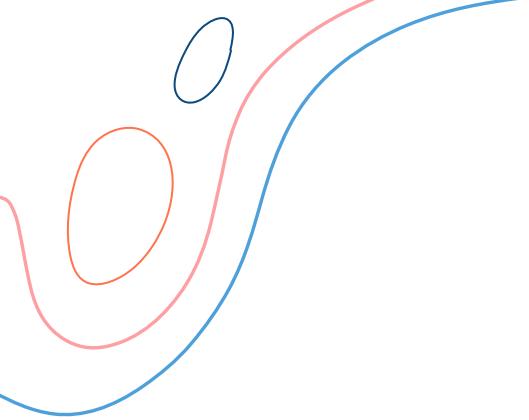
Thank You

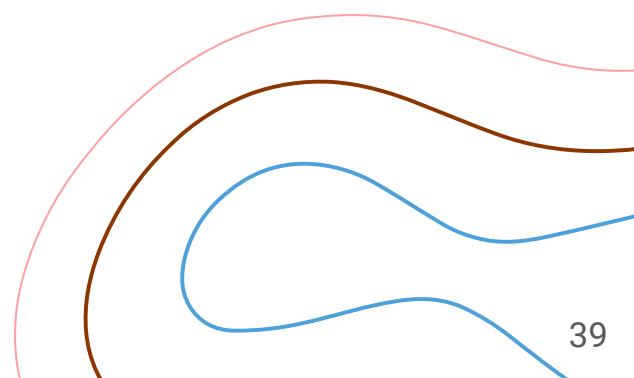


Popular data type: raster

- What's a raster







Last session

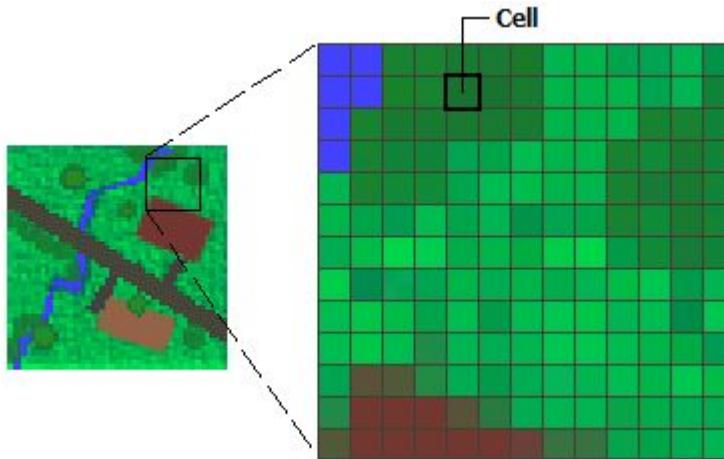
- Looked at different kinds of maps as a source of historical evidence

**Any historical source
with an embedded
spatial element.**

In the digital mapping tools world, these historical sources can be expressed as a data type.

Popular data type: raster

- What's a raster

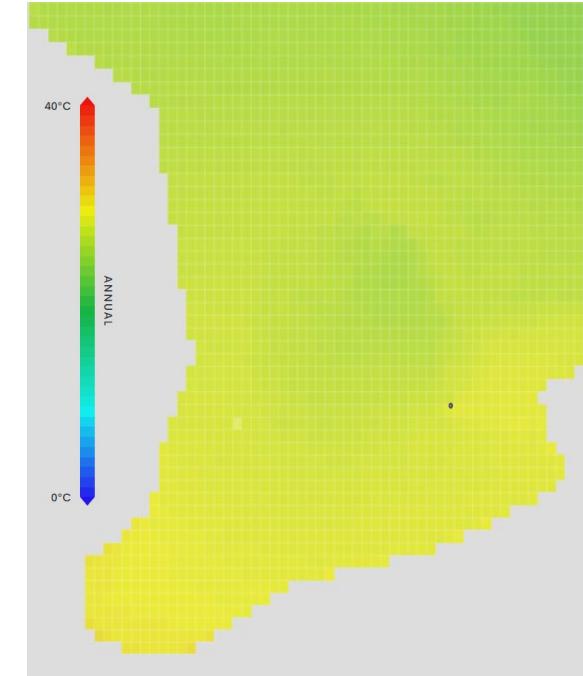
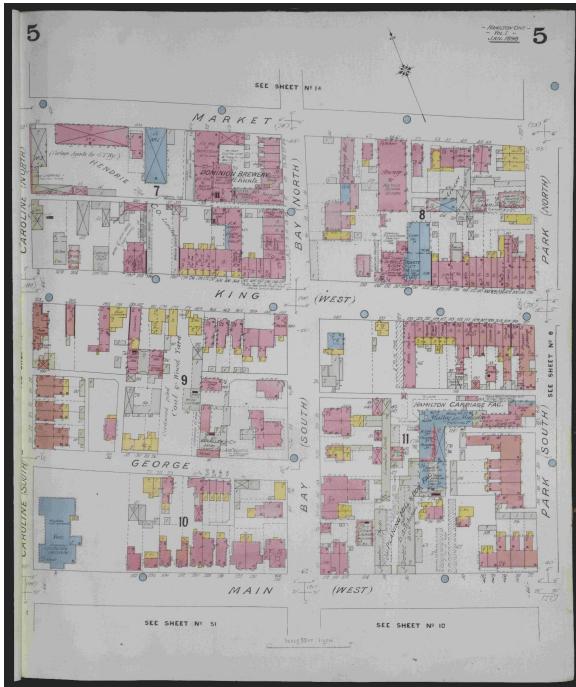


ample: digitized + georef maps

ample: aerial image

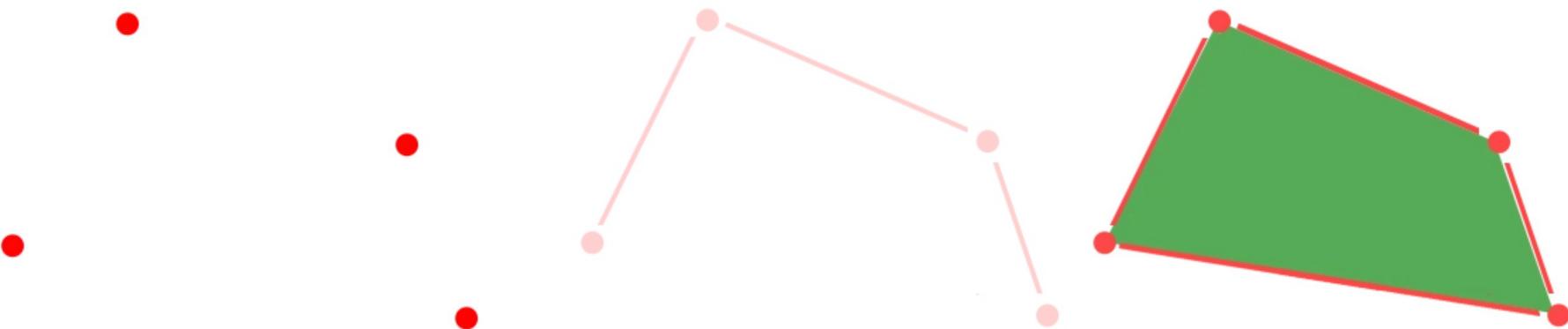
ample: historical climate data

Popular data type: raster



Popular data type: vector

- What's a vector

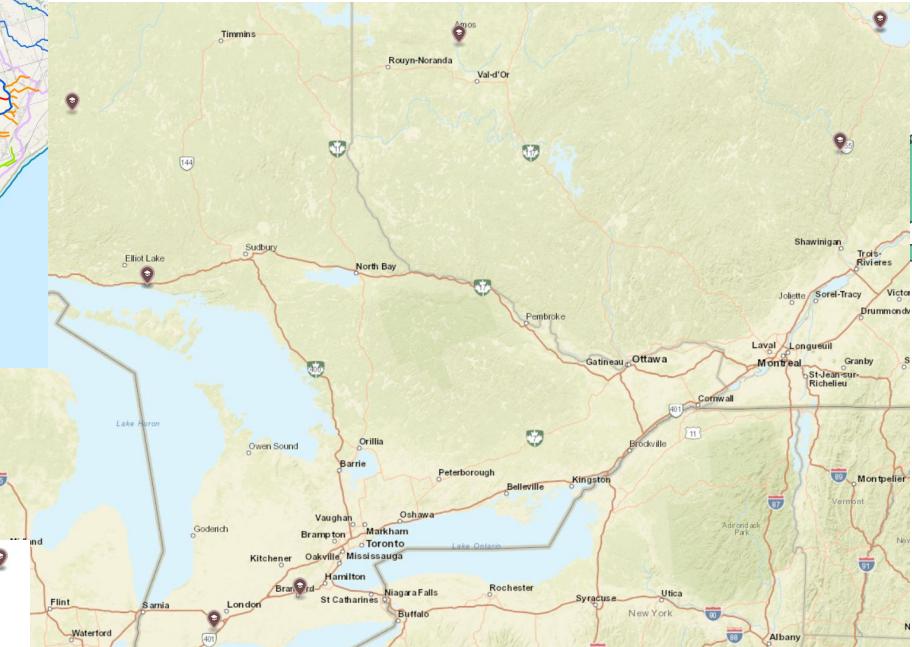


- Example: historical political boundaries

- Example: historical topography

- Example features

Popular data type: vector



Popular data type: tabular

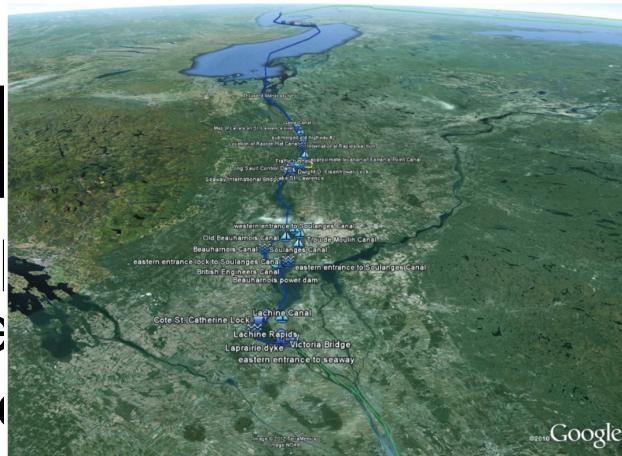
- What is it
- Example with coordinates

Brewery_Name	ID	Date_Est	Date_Closed	Address	Latitude	Longitude
Cosgrave Brewery	1	1863	1963	297 Niagara Street	43.645267	-79.409781
Ontario Brewing & Malting Co.	2	1885	1901	311-337 King St. E.	43.651565	-79.365705
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Copland Brewing and Malting Co. Ltd.	5	1832	1946	311-337 King St. E.	43.651556	-79.365532
Copland Brewing Co. Ltd.	6	1847	1946	55-65 Parliament St.	43.652295	-79.362177
Dominion Brewery Co. Ltd.	7	1878	1936	470-496 Queen St. E.	43.657052	-79.359928
Queen City Malting Co.	8	1882	1893	228 Front St. E.	43.651278	-79.365073
East End Brewery (Reinhardt Salvador Brewery)	9	1861	1889	2-22 Mark St. (formerly Beech)	43.661115	-79.356342
Walz Brewery / Korman Brewery	10	1857	1944	Duchess (now Richmond) and Sherbourne	43.6531	-79.3684

What kind of digital mapping tools might

historical

- Any system with geospatial data
- A system that analyzes and organizes data with space



systems
size, capture or work
use, manipulate,
that's associated

- While maps can be great sources of historical evidence, gis can be utilized as a tool to organize, visualize and analyze historical data

In what ways can these tools helps me with my research?

- Systematically compare maps from different time periods
- Visualize geographic patterns embedded in historical evidence
- Reconstruct features from the past (boundaries, landscapes)
- Present historical narratives visually

**Communicate
historical narratives
visually**

Historical Village of Waterdown

**Communicate
historical narratives
visually**

Historical Village of Waterdown

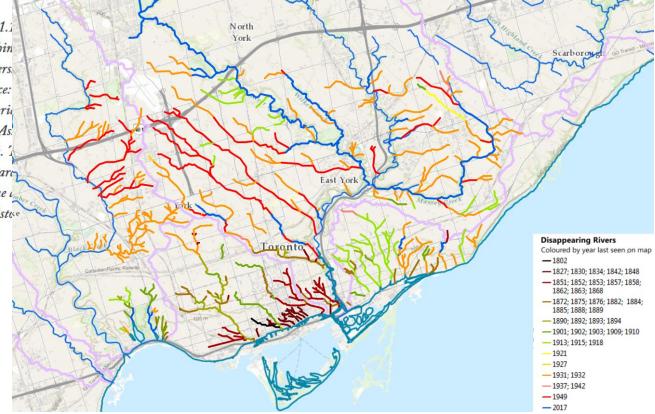
**Systematically
compare maps from
different time periods**

[MUL's Historical Hamilton Portal](#)

Reconstruct features from the past



Fig. 1.1
of Chin
owners.
Source:
Victori
Tax As
Rolls.
rolls ar
online t
villages.



Native Land Digital

**Visualize geographic
patterns embedded
in historical evidence**

GENERAL REGISTER OF

CHINESE IMMIGRATION

1 Reg No. Name Descriptive	2 NAME	3 Port or Town where Resided	4 Date of Registration	5 CERTIFICATE ISSUED G. I. S. No.	6 C. I. S. No.	7 Fees Paid Amount	8 Rate	9 Age	10 Place of Birth	11 Disease
62401 24842 Wong Yuet Jack	Vancouver	Nov. 18	55801 147943	300 -	Male	11	Jung Hong Sining		China	Student
62402 24843 Tong Kee Queen	Vancouver	Dec. 15	55802 150160	300 -		18	See Yuen Fong Ping		China	Merchant Son
62403 24844 Chung Sing Chung	Vancouver	Dec. 15	55803 150161	Exempt		16	Dai King Yin Ping		China	Merchant Son
62404 24845 Chong Sing Nan	Vancouver	Dec. 15	55804 150162	Camp		13	"		China	Merchant Son
62405 24846 Chung Suk	Vancouver	Dec. 15	55805 150163	Exempt		48	I. Hing		China	Merchant Son
62406 24847 See Cheuk Wo	Vancouver	Dec. 15	55806 150164	Exempt		18	Quan Fon Sining		China	Merchant Son
62407 24848 Gip Bak	Vancouver	Dec. 15	55806 150165	Camp		17	Sah Duen Servo		China	Merchant Son
62408 24849 Que Cheong Yeo	Vancouver	Dec. 15	55807 150166	Exempt		13	Kien Kung Sining		China	Merchant Son
62409 24850 Chow Chew	Vancouver	Dec. 15	55808 150167	300 -		20	Ung Toon		China	Merchant Son
62410 24851 Gun Son Hung	Vancouver	Dec. 15	55809 150168	300 -		20	Gow Wat		China	Labourer
62411 24852 Chun Dick Sing	Vancouver	Dec. 15	55810 150169	Exempt		18	See Boo Nam Ho		China	Merchant Son
62412 24853 Lee Way	Vancouver	Dec. 15	55811 150170	500 -		20	Guem Lin Ton Servo		China	Labourer
62413 24854 Fung Sing Tong	Vancouver	Dec. 15	55812 150171	300 -		35	Ting Wo Ying Pin		China	Labourer
62414 24855 Wo Wing	Vancouver	Dec. 15	55814 150172	500 -		25	Bak Boo Hochan		China	Humorous
62415 24856 Ho Yuen Fat	Vancouver	Dec. 15	55815 150173	500 -		25	Wah Chun		China	Labourer
62416 24857 Ng Fung	Montreal	Dec. 31	55816 150174	300 -		37	San Kong Banton		China	Student
62417 24858 Chan Fui He	Vancouver	Dec. 15	55816 150175	300 -		31	Yee Foo Han Sa		China	Labourer
62418 24859 Sam Ying	Vancouver	Dec. 15	55817 150176	300 -		38	Chun Haig Hoi Ping		China	Student
62419 24860 Chu Hang	Vancouver	Dec. 15	55818 150177	300 -		17	Yoo Toon Sining		China	Labourer
62420 24861 Sam Kwong	Vancouver	Dec. 15	55819 150178	300 -		20	Van Han Servo		China	Grocer
62421 24862 See Chow	Vancouver	Dec. 15	55820 150179	300 -		48	See Thor Sining		China	Labourer
62422 24863 See King Nam	Vancouver	Dec. 15	55821 150180	300 -		18	See On		China	Student
62423 24864 Moto Pong	Vancouver	Dec. 15	55822 150181	300 -		21	Beow Lam		China	Labourer
62424 24865 Kung Toy Seng	Vancouver	Dec. 15	55823 150182	300 -		36	Chung Lek Ho Kin Pin		China	Labourer
62425 24866 Spring Yam Yam	Vancouver	Dec. 15	55824 150183	300 -		35	Gum Racy		China	Student

12 Title of Officer Producing or Testifying to Description	13 Arrival in Canada	14 Last place of Residence	15 Date of Birth	16 Physical Marks or Peculiarities	17 Remarks	18 Physical Marks or Peculiarities	19 Remarks	
Emp. of Japan Oct. 30	Emp. of China Nov. 18	Vancouver	1912	My hair is black, long and wavy, my face is round, my eyes are black, my nose is straight, my mouth is wide, my hands are small and my feet are large.	Expect to reside in Vancouver	1912	My hair is black, long and wavy, my face is round, my eyes are black, my nose is straight, my mouth is wide, my hands are small and my feet are large.	Nanaimo
Emp. of China Nov. 18	Emp. of Canada Oct. 10	Lethbridge, Alta.	1912	My hair is black, long and wavy, my face is round, my eyes are black, my nose is straight, my mouth is wide, my hands are small and my feet are large.	Expect to reside in Lethbridge, Alta.	1912	My hair is black, long and wavy, my face is round, my eyes are black, my nose is straight, my mouth is wide, my hands are small and my feet are large.	Westminster, B.C.
Emp. Japan Oct. 30	Emp. of China Nov. 18	Vancouver	1912	My hair is black, long and wavy, my face is round, my eyes are black, my nose is straight, my mouth is wide, my hands are small and my feet are large.	Expect to reside in Vancouver	1912	My hair is black, long and wavy, my face is round, my eyes are black, my nose is straight, my mouth is wide, my hands are small and my feet are large.	Cumberland, B.C.
Emp. China Nov. 18	Emp. of Canada Oct. 10	Montreal	1912	My hair is black, long and wavy, my face is round, my eyes are black, my nose is straight, my mouth is wide, my hands are small and my feet are large.	Expect to reside in Montreal	1912	My hair is black, long and wavy, my face is round, my eyes are black, my nose is straight, my mouth is wide, my hands are small and my feet are large.	Vancouver
Emp. of Canada Oct. 10	Emp. of China Nov. 18	Vancouver	1912	My hair is black, long and wavy, my face is round, my eyes are black, my nose is straight, my mouth is wide, my hands are small and my feet are large.	Expect to reside in Vancouver	1912	My hair is black, long and wavy, my face is round, my eyes are black, my nose is straight, my mouth is wide, my hands are small and my feet are large.	Vancouver
Emp. of China Nov. 18	Emp. of Canada Oct. 10	Montreal	1912	My hair is black, long and wavy, my face is round, my eyes are black, my nose is straight, my mouth is wide, my hands are small and my feet are large.	Expect to reside in Montreal	1912	My hair is black, long and wavy, my face is round, my eyes are black, my nose is straight, my mouth is wide, my hands are small and my feet are large.	Vancouver
Montreal	Dec. 3	Vancouver	1912	My hair is black, long and wavy, my face is round, my eyes are black, my nose is straight, my mouth is wide, my hands are small and my feet are large.	Expect to reside in Vancouver	1912	My hair is black, long and wavy, my face is round, my eyes are black, my nose is straight, my mouth is wide, my hands are small and my feet are large.	Montreal
Montreal	Dec. 3	Montreal	1912	My hair is black, long and wavy, my face is round, my eyes are black, my nose is straight, my mouth is wide, my hands are small and my feet are large.	Expect to reside in Montreal	1912	My hair is black, long and wavy, my face is round, my eyes are black, my nose is straight, my mouth is wide, my hands are small and my feet are large.	Vancouver

Activity: Georeference a historical map using Map Warper

How can I learn more about this stuff?:

**Librarian support
Online learning
Workshops**

design approach

- Understand needs/constraints of community
 - Sources: Professor, Colleagues
- Understand myself: identify gaps in my own knowledge to meet community needs
 - Sources: myself, the library
 - Fill knowledge gap direction of professor
- Develop a lesson plan that outlines:
 - (1) objectives (balance information needs with goals of the library)
 - (2) pedagogical approach
 - (3) assessment strategy

Pedagogy

- Lecture-led
- Student-centered

Assessment Strategy

- Observations/check-ins throughout session
- Completion of workshop activity
- Discussion with professor (?)

Define “how” objectives will be met

Objectives	Topics to cover in session	Method
Introduce gis as a resource for historical research	Explanation of relevance to their field	
Introduce gis as a digital scholarship tool	Explanation of GIS	Engaging lecture Hands-on Workshop
Introduce the library’s collections	Showcase library’s collection in demonstration	
Promote myself and the library as space for research support	Overview library resources including: workshops, research guides, training material and contact info	Engaging lecture Embed session and key topics in LMS
Ensure students are engaged throughout the session	n/a	Apply participatory learning strategies

Define Session Objectives

Learning Objectives	Source
Introduce digital cartographic materials for historical scholarship	Instructor
Introduce digital mapping tools for historical scholarship	McMaster University Library Strategic Initiative: Research Acceleration
Increase familiarity with MUL's digital cartographic collection	McMaster University Library Strategic Initiative: Distinct and Diverse Collections
Promote MUL as a source for research support	McMaster University Library Strategic Initiative: Learning and Curriculum Support

INPUTS	PARTICIPANTS	ACTIVITIES	INTERVENTIONS	OUTCOMES	&	IMPACT
				NEAR	MEDIUM	LONG
75+ hours of interviews	Practitioners	Convene experts, communities of practice.	Data exchange models & frameworks	Model frictionless interaction * interop among layers of the stack	Align power & influence across networks & programs	Take an active role in directing pricing & terms for vendors, service providers
Participant calls	Tool developers	Conduct research to map user needs, gather information to inform analysis.	Tools for vendor negotiation	Build collective power through trusted peer networks to increase efficiency, accountability, negotiating power	Shift existing consortial models towards investment & stewardship of shared infra	Direct funding effectively in measurable and scalable ways
In-depth design workshops	Budget owners & decision makers		Shared service/support models for existing networks			
	Scholarly publishing infrastructures	Analyze & synthesize findings.	Establish OI Technology Oversight Committee			
	Societies	Co-design outputs, action plans, deliverables.	Pilot Rapid Response Fund			
Targeted outreach & additional research	Scholarly presses	Model costs, risk, collab frameworks.	Test feasibility for shared service & collective fund			
Modelling & analysis	Funders		Establish Provost Council			
	Researchers	Recommend solutions grounded in participants' needs and realities.				
Requests for feedback / async input	Analysts					
	OI Community					

ASSUMPTIONS

EXTERNALITIES

<--(Ongoing) Stewardship & Casemaking-->