PDAC PROFESSIONAL DEVELOPMENT WORKSHOP

GIS MAPPING ACROSS THE CURRICULUM

Christopher Swift

FRAMING QUESTIONS

How have you used digital tools in the past to help your students pursue research questions in your course?
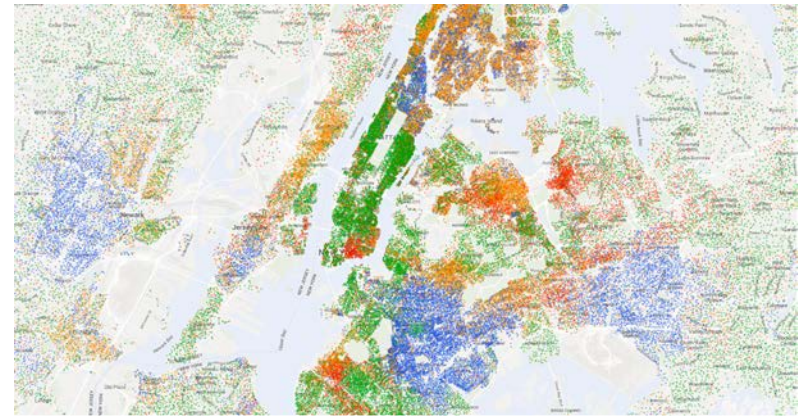
GIS

- A framework for gathering, managing, and analyzing data

- Analyzes spatial location and organizes layers of information into visualizations using maps and 3D scenes

- Reveals insights into data, such as patterns, relationships, and situations
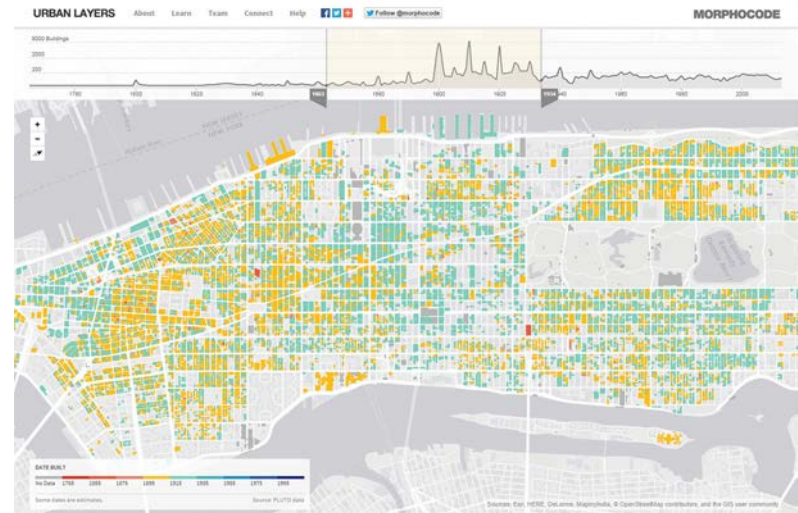
  -ESRI
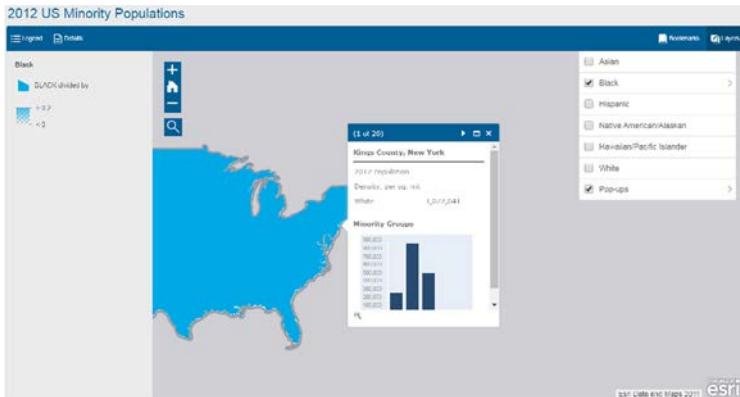 https://www.esri.com/en-us/what-is-gis/overview

Location of Census Groups by Race- NY Times 2015

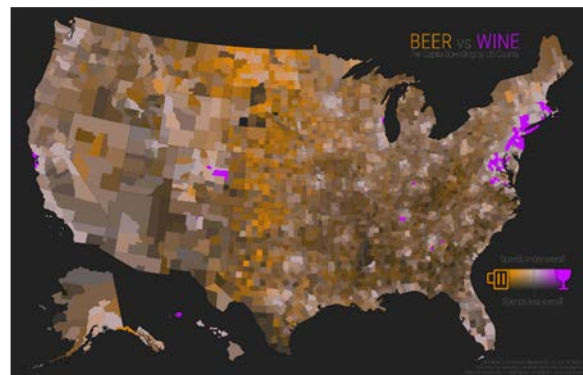
WHY MAPPING?

Interactive Timeline of When Building were Built- Morphcode

GIS ACROSS THE DISCIPLINES

HUMAN SERVICES

HOSPITALITY MANAGEMENT

PHYSICS

HISTORY

GIS and Mapping in Architecture History

- Mapping is used to creatively and critically engage students using sets of data, archival material, and digital media to discover connections between the multitude of forces that impact the development of culture in their built environments.
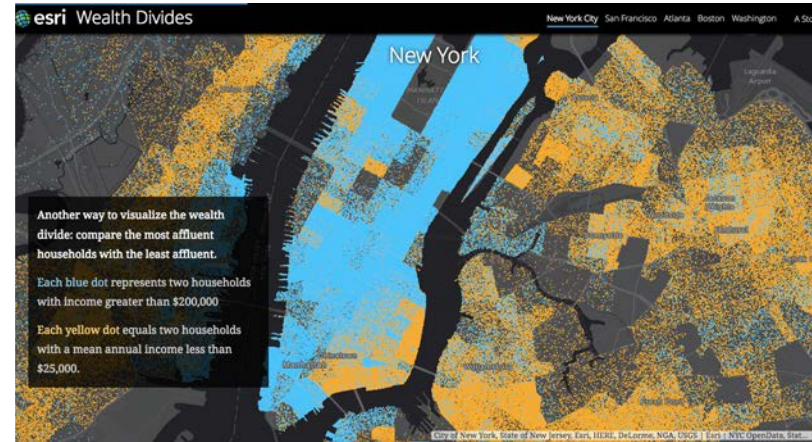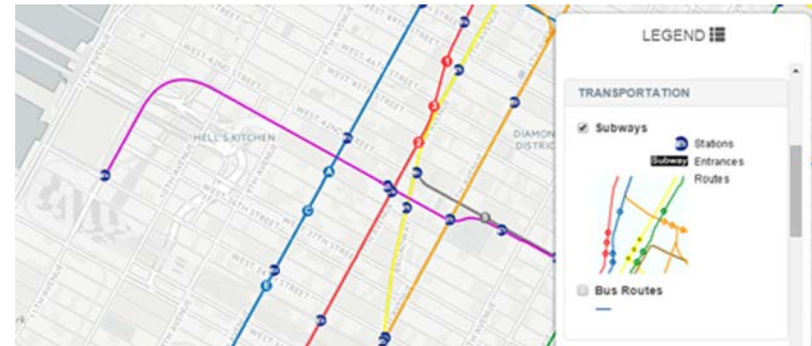

NYC DDC

WHY MAPPING?

GIS and Mapping in THE2280ID

- GIS mapping application serves as a common mechanism for students to situate the history of theatrical production within the context of the built urban environment.

- In both disciplines—architecture technology and theater history—an understanding of social, economic, political, and technological forces is crucial.

- The act of mapping data relevant to a theater's urban context, such as adjacent building typologies, land use, commercial zoning, average household incomes, location of transportation and municipal infrastructure, and demographics promotes an understanding that the construction of any theater does not happen in isolation

WHY MAPPING?

http://storymaps.esri.com/stories/2016/wealth-divides/index.html

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GIS STEP ONE

- Assignment: research history of a theater and identify resources for information and write summary providing insight into theater culture and architectural history.

- Students enter data into spreadsheet, the substructural layer of GIS map.

Google Spreadsheet

THE MODULE

GIS STEP 2

- Students are taught how to access and map open source data, from sources such as ESRI Open Data and NYC Open Data, in order to collect, analyze, and represent data from diverse perspectives.

- Students then use mapping software such as ArcGIS and the New York Public Library's Digital Mapping Collection to graphically represent this data.

https://opendata.cityofnewyork.us/

http://hub.arcgis.com/pages/open-data

THE MODULE

GIS STEP 3

- Mapping is an interdisciplinary tool, a shared pedagogy for analyzing and presenting research findings from different fields.

- Teaching students to collect, analyze, and map data is also a general education skill that can be applied to many disciplines, either independently or as a method for finding common ground between different disciplines.

THE MODULE

The City Performs Story Map
Christopher Swift, PhD
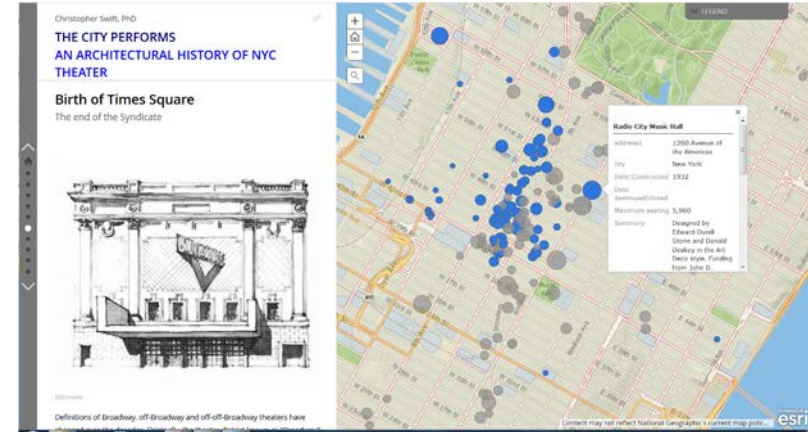
Historical overlay:
https://arcg.is/LW5Sf

GO TO MAP

NYC theater history

https://arcg.is/9L8vH

QUESTIONS FOR CONSIDERATION

1. What are the spatio-temporal dimensions of your course? Are areas of research related to environmental or governmental regions? Topography? Demographics? Historical change?
2. In what ways could cartography help your students engage in the subjects you teach?