

ORIAL ArcGIS



OBJECTIVES

- understand the main uses of GIS technologies, types of data involved, and ways the three dimensional world is projected onto two dimensional surfaces.
- 2. become familiar with GIS software.
- 3. become familiar with the basic conventions of map-making and map legibility.
- 4. learn to access, download and display spatial data.
- 5. learn basic analysis in ArcGIS, and how to export map layouts.





WHAT IS GIS? WHY IS IT USEFUL?

"Just as we use a word processor to write documents and deal with words on a computer, we can use a **GIS application** to deal with **spatial information** on a computer. GIS stands for 'Geographical Information System'."

Different ways students use GIS data - environmental sciences, biology, sustainable development, urban studies, architecture, history, and economics.

First rule of geography:

"Everything is related to everything else, but near things are more related than distant things."

BUTTERWORTH KOMGA © OGIS 2009

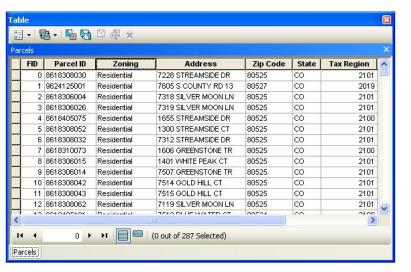
VECTOR DATA read as a shapefile, .shp or a feature class in a .gdb

RASTER DATA can be an image like a .tif, or even a .jpg

0.04 degrees 0.4 degrees

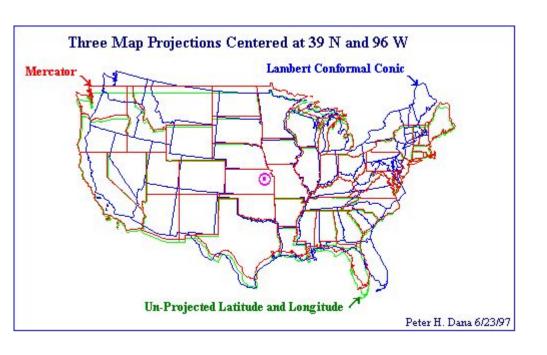
TYPES OF DATA

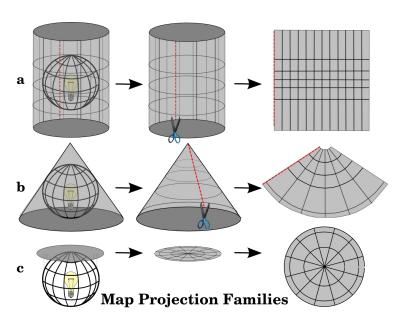
TABULAR DATA excel sheets, .csv,

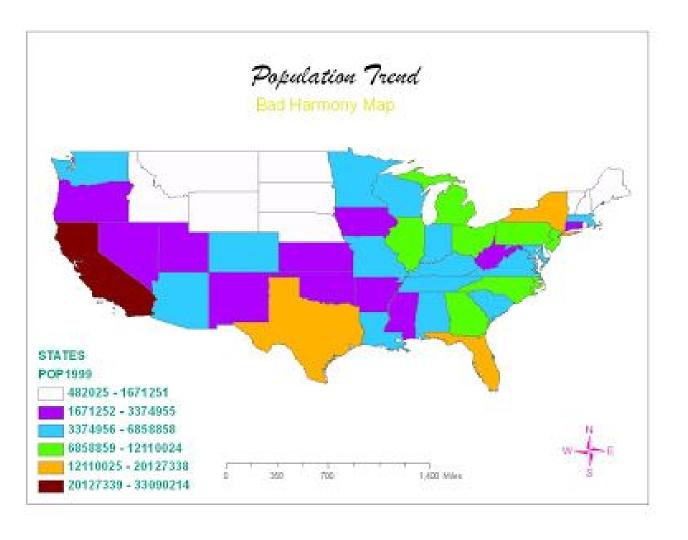


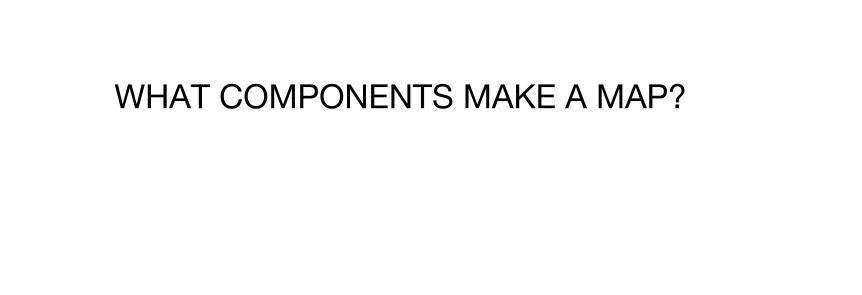


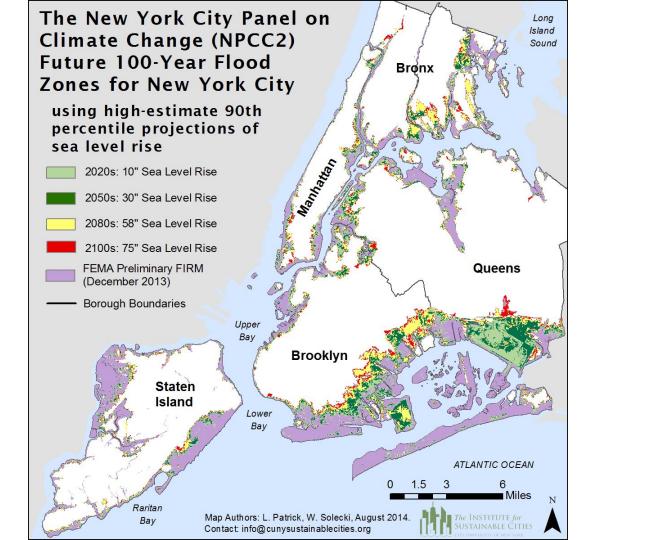
PROJECTIONS + COORDINATE SYSTEMS

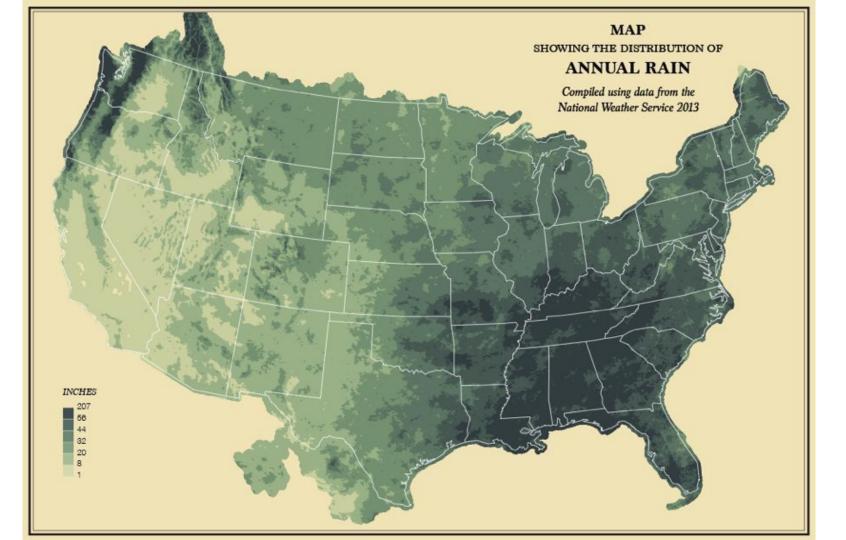


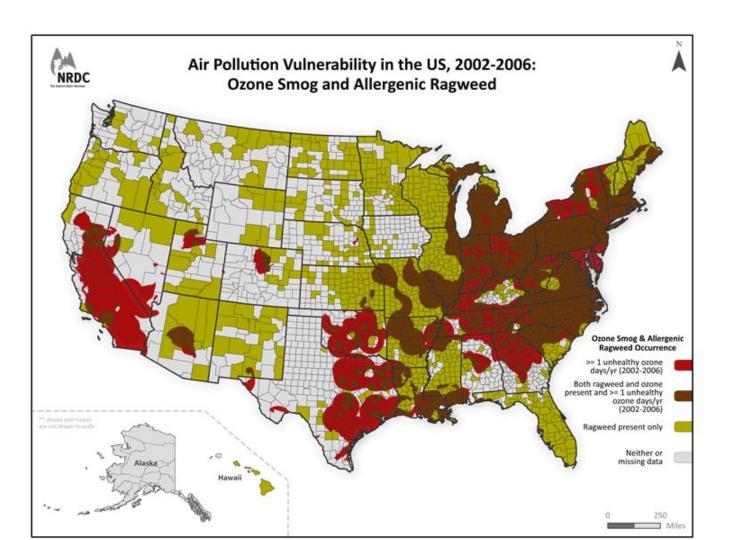




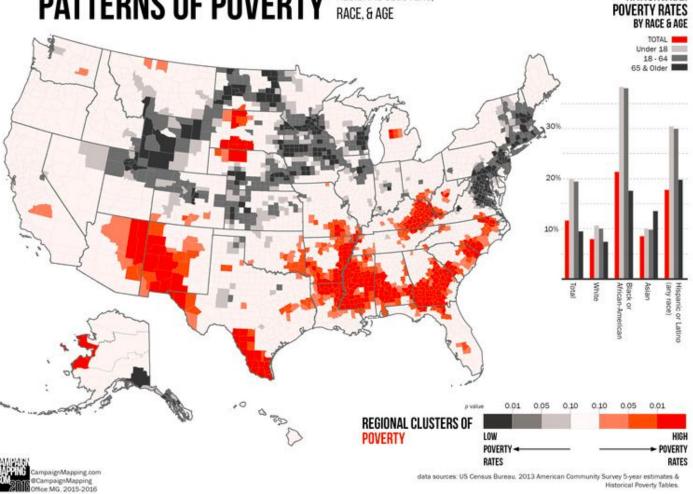






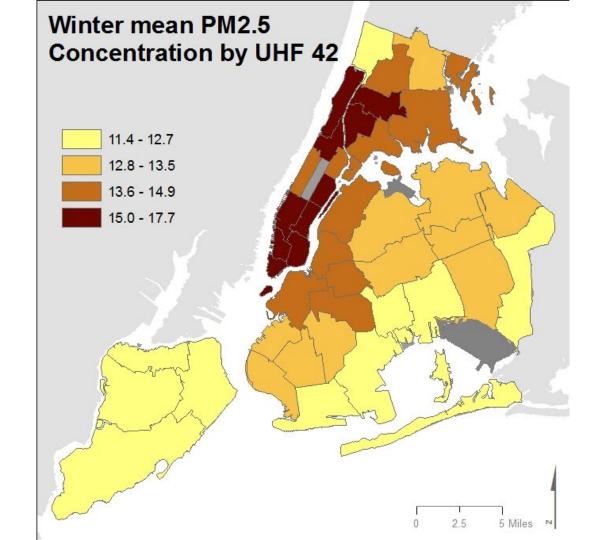


REGIONAL CLUSTERS, RACE, & AGE PATTERNS OF POVERTY





NATIONWIDE:



MAP ELEMENTS

TITLE - DESCRIPTIVE

DATA SOURCE

CLEAR LEGEND - WITH EXPLANATION

SCALE BAR - IN UNITS THAT MAKE SENSE]

NORTH ARROW - AT AN APPROPRIATE SIZE

PROPERLY PROJECTED MAP

ANY NECESSARY LABELS

Now, we will:

Open ArcMap, bring in our dataset.

Join our vector data and our tabular data.

Visualize variables.

Learn how to utilize the attribute table.

Learn how to export a map as a PDF/Image.