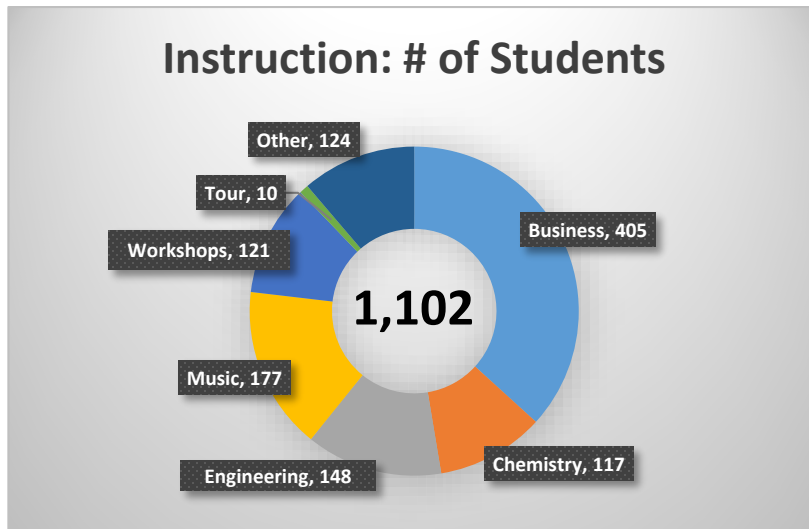


Visualization

Making an Impact with Your Data

An Online Presentation at
**Outcomes, Value, & Impact
Metrics for Libraries Success**
By Greg R. Notess



Tactics and Techniques

Info Lit & Core Story

- Presentation to New Core Committee
- Limited Preparation Time
- Quick Call for Data

Data Dump to Annual Report

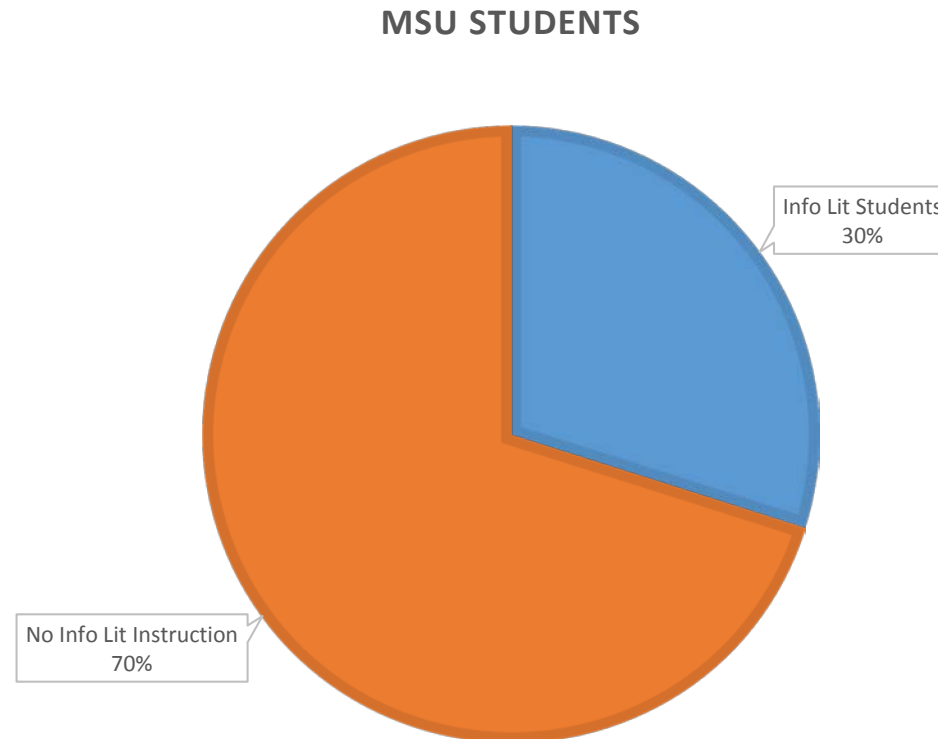
Library Instruction 2008-14	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Instruction Sessions	287	406	396	450	456	378
Course-Integrated (First Meetings)	212	279	241	285	244	242
Repeats for Same Section	33	74	59	76	92	38
Workshops	20	37	35	40	62	102
Tours & Other	15	62	35	49	58	34
Students in Instruction Sessions	5,271	8,083	8,057	9,159	8,364	6,988
Course-Integrated (First Meetings)	4,244	5,530	5,917	6,545	5,237	4,570
Repeats for Same Section	567	1,618	1,294	1,616	1,891	826
Workshops	112	136	183	159	377	1,237
Tours & Other	354	1,013	654	839	859	355
Student Reached via Worksheet (est)	700	500	500	250	200	NA
Hours of Instruction Delivered	NA	375	358	431	499	NA
Student Body Reached (est)	40%	47%	46%	48%	37%	30%

Annual Report to External Audience

Hours Instruction (Total)	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Instruction Sessions	287	416	396	438	456	378
Course Integrated (First Offerings)	232	279	241	245	268	242
Requests for Same Section	55	76	55	76	92	38
Workshops	20	37	35	40	42	112
Hours & Other	35	42				26
Students in Instruction Sessions				8,364	6,988	
Course Integrated (First Offerings)	5,273	6,083	6,111	5,237	4,570	4,818
Requests for Same Section	4,268	5,330	5,111	1,891	826	710
Workshops	347	5,408	5,111	1,891	826	1,146
Workshops				377	1,237	
Hours of Instruction (Delivered)	358	5,053	5,111	859	355	1,115
Student Reached via Workshop (est)	700	300				700
Hours of Instruction (Delivered)	700	300	300	600	400	700
Student Daily Reached (est)	43%	47%	44%	48%	37%	38%

Better Options

- Highlight Key Points

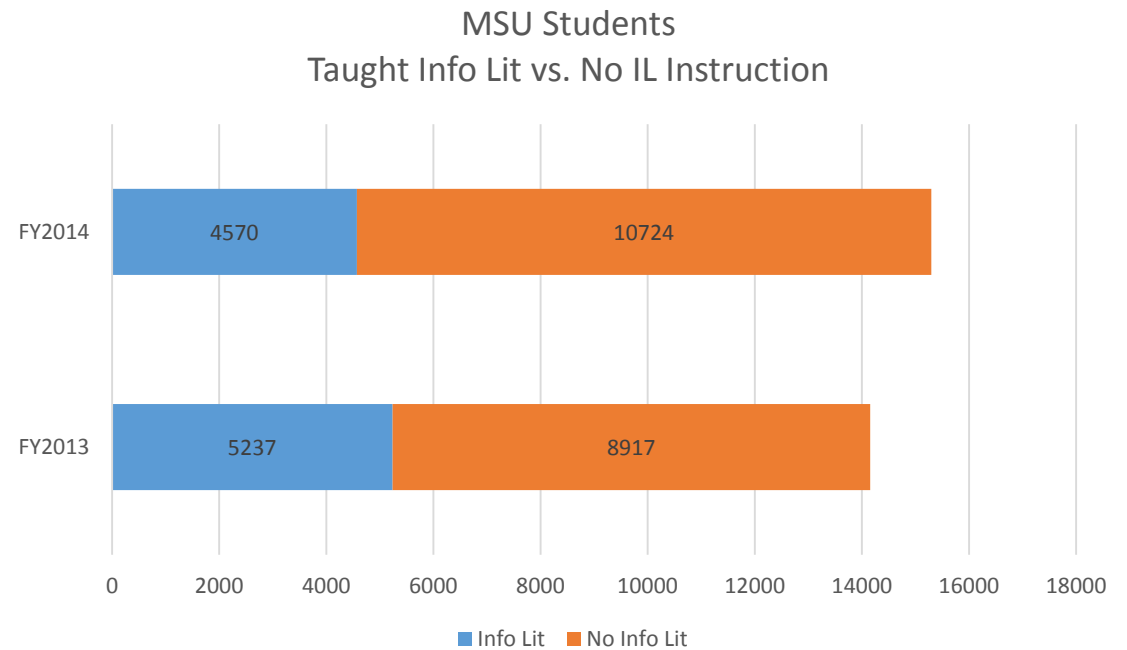
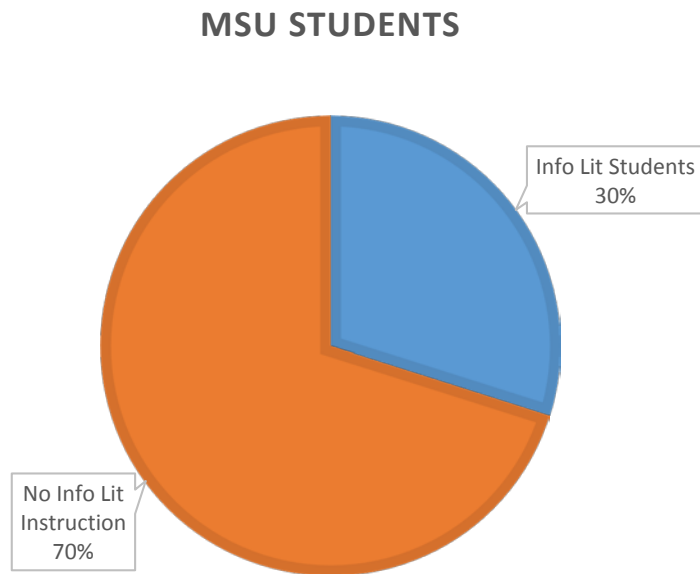


Standard Charts and Overview

- Choosing the right data
- Choosing the right chart type
 - Numerical Data: Chart
 - Geographic Component: Data Map

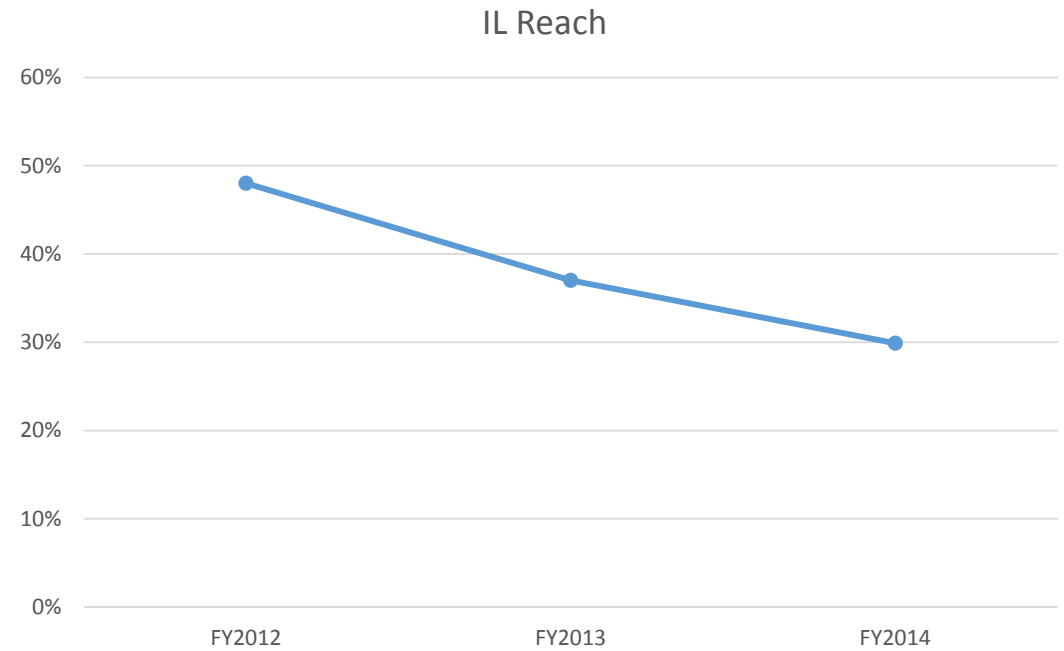
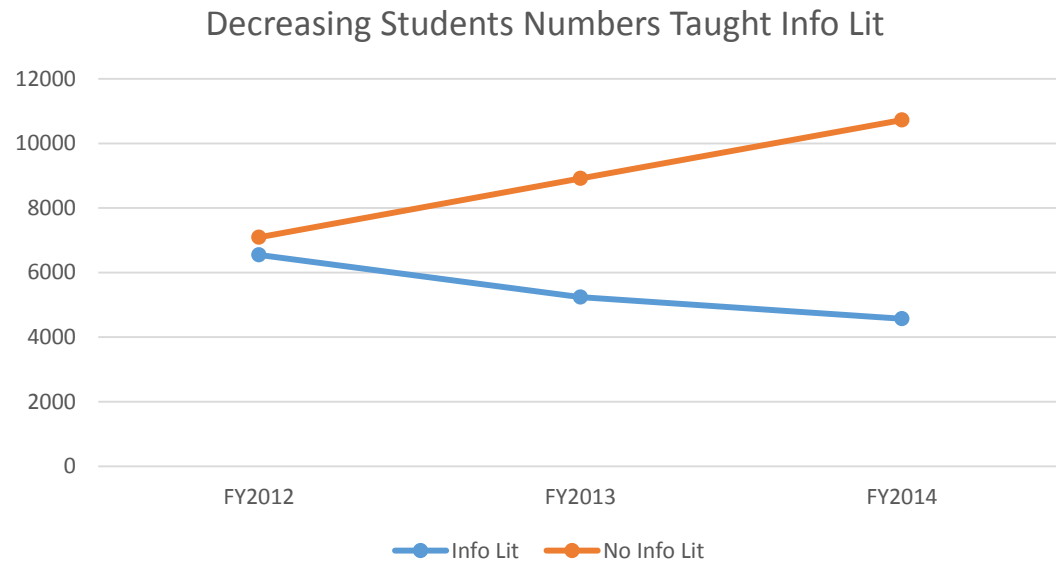
Comparing Parts of a Whole?

- Pie Chart or Stacked Bar Chart



Compare Change Over Time?

- Line Chart

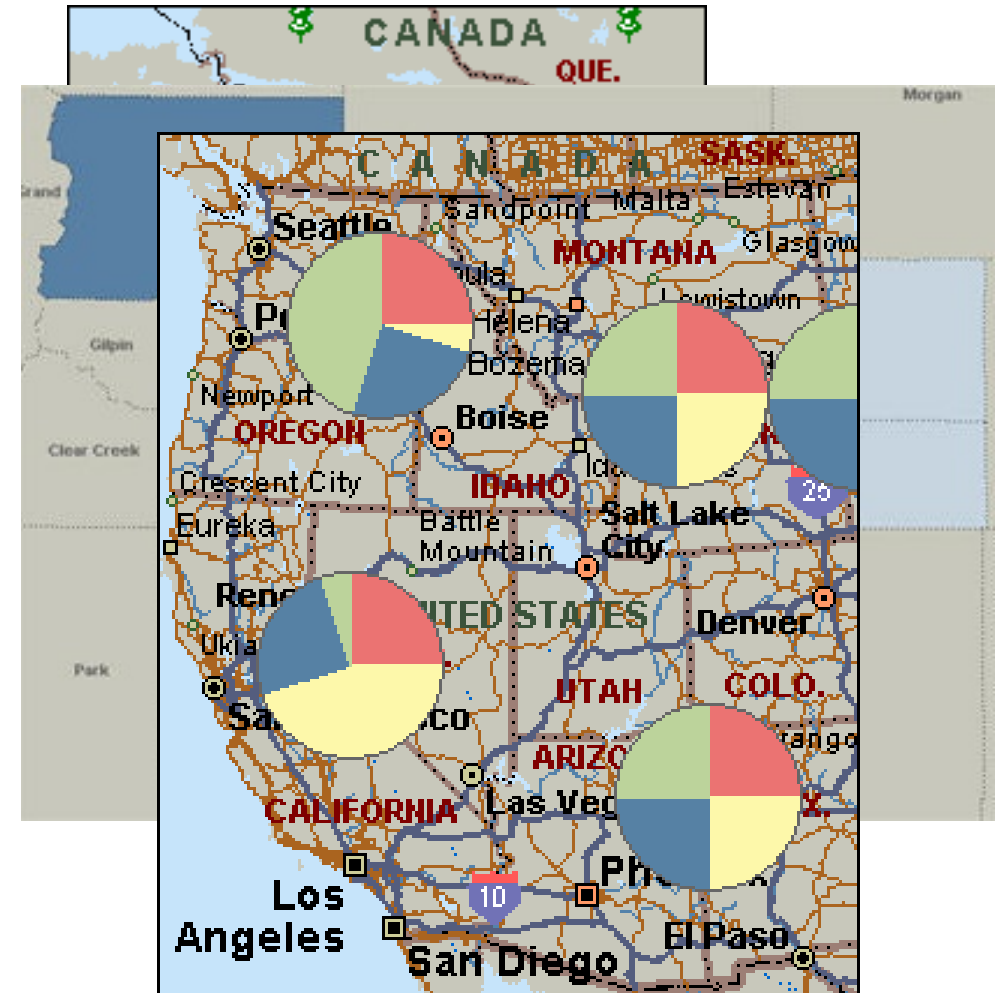


Other Types

- Frequency Distribution or Items Within Ranges
 - Step Column or Line Chart
- Correlation Comparison or Relationship between Variables
 - Scatter Chart or Paired Bar chart

Data Map Types

- Numerical Data?
 - Pushpin
- Numerical Single Field?
 - Shaded Area
- Numerical Multiple Fields?
 - Pie or Column Chart



7 Basic Rules for Making Charts and Graphs

snipr.com/7chartrules [flowingdata.com]

1. Check Data
2. Explain Encodings (Clear Legends)
3. Label Axes
4. Include Unites
5. Keep Geometry in Check
6. Include Sources
7. Consider Audience

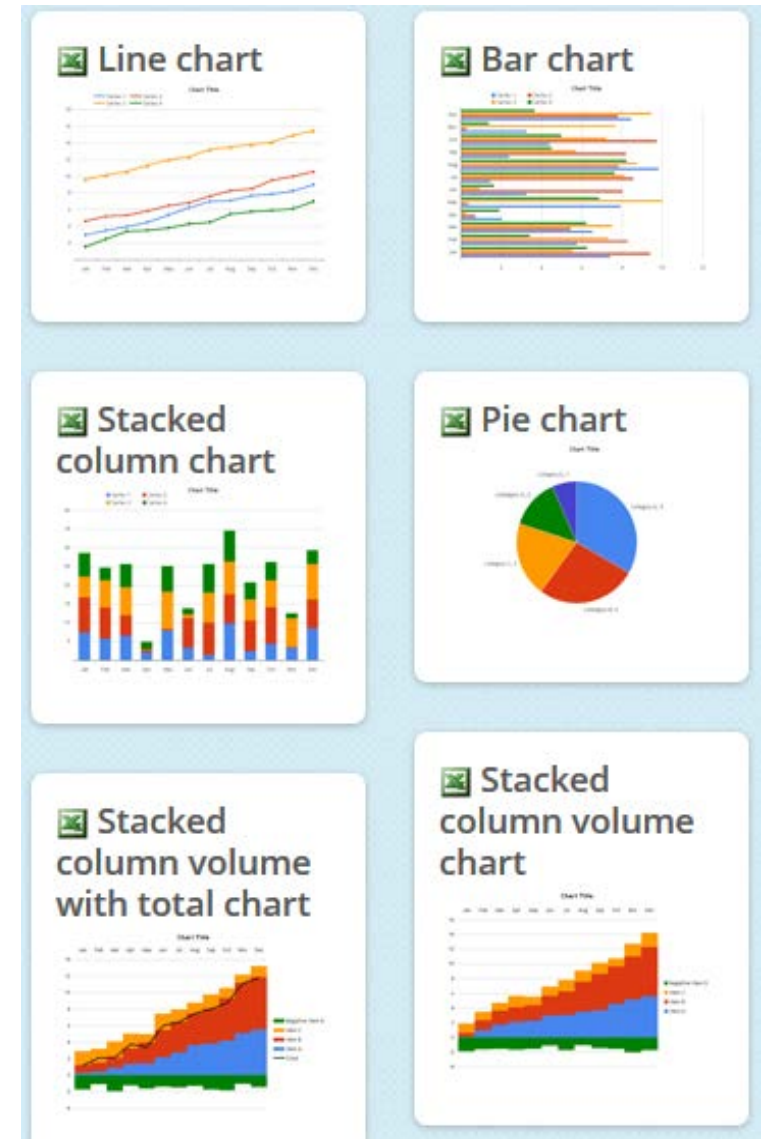
Tools

Chart Choosing

- Juicy Labs' **Chart Chooser**

labs.juiceanalytics.com/chartchooser

- Includes Templates



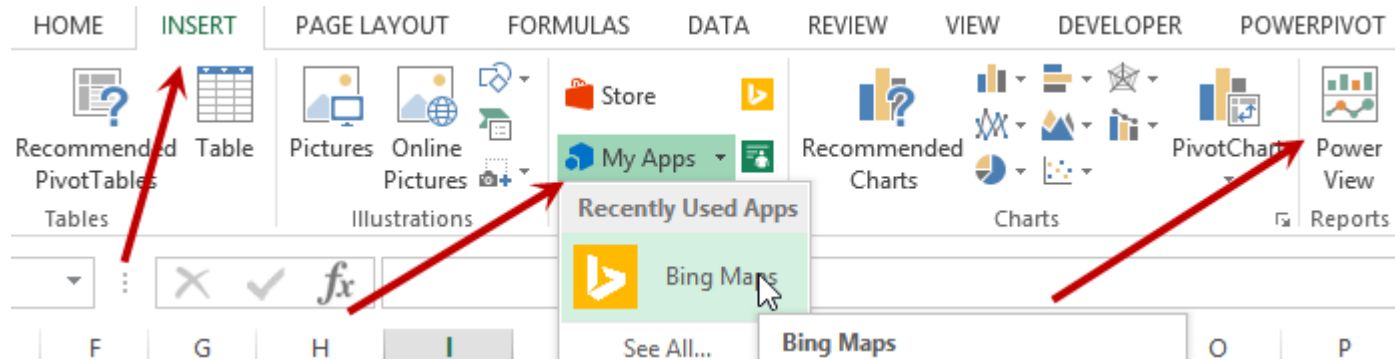
Spreadsheet Recommendations

Excel Charts

- Recommended Charts
- Pivot Tables and Pivot Charts
- Many Add-Ins

Google Sheet

- Insert Chart/Chart Editor
- Recommended Charts
- Also has Many Add-ons



Web Sites & Services

iCharts.net

- Free for individual; otherwise commercial
- Supports real-time data

ZingChart.com

- JavaScript Charts for Web Sites
- Free and Fee Versions
- Can handle Big Data

Infographics

Infogr.am

- Three Step Infographics:
 1. Choose Template
 2. Add Data
 3. Share
- Can be Interactive & Use Real-Time Data
- Changed Terms
 - Only 10 Infographics for Free

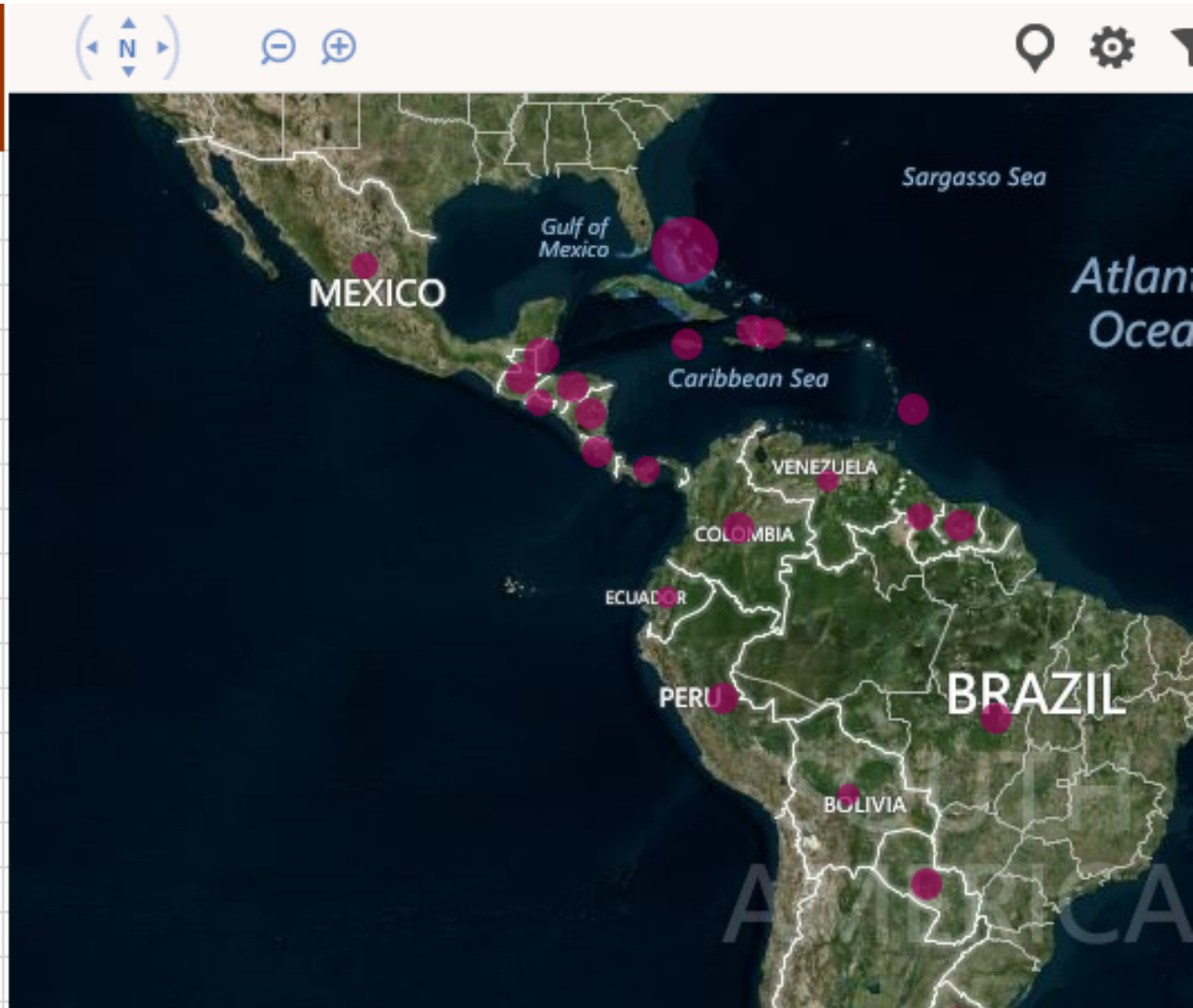
Piktochart.com

- Free and Pro accounts
- Multiple Types
 - Infographic
 - Reports
 - Banners
 - Presentations

Data Maps

- Excel
 - Bing Maps Add-In
 - Power View
- Download and/or Install Needed
- Geographic Data in Spreadsheet

Country	Retail price gasoline: US\$/liter
Bahamas	\$5.46
Uruguay	\$2.01
Chile	\$1.77
Belize	\$1.74
Paraguay	\$1.60
Dominican Republic	\$1.58
Costa Rica	\$1.57
Suriname	\$1.57
Barbados	\$1.50
Argentina	\$1.46
Brasil	\$1.43
Peru	\$1.39
Colombia	\$1.31
Haiti	\$1.25
Honduras	\$1.25
Nicaragua	\$1.23
Jamaica	\$1.20
Guatemala	\$1.14
Guyana	\$1.08



Google Fusion Tables

google.com/fusiontables

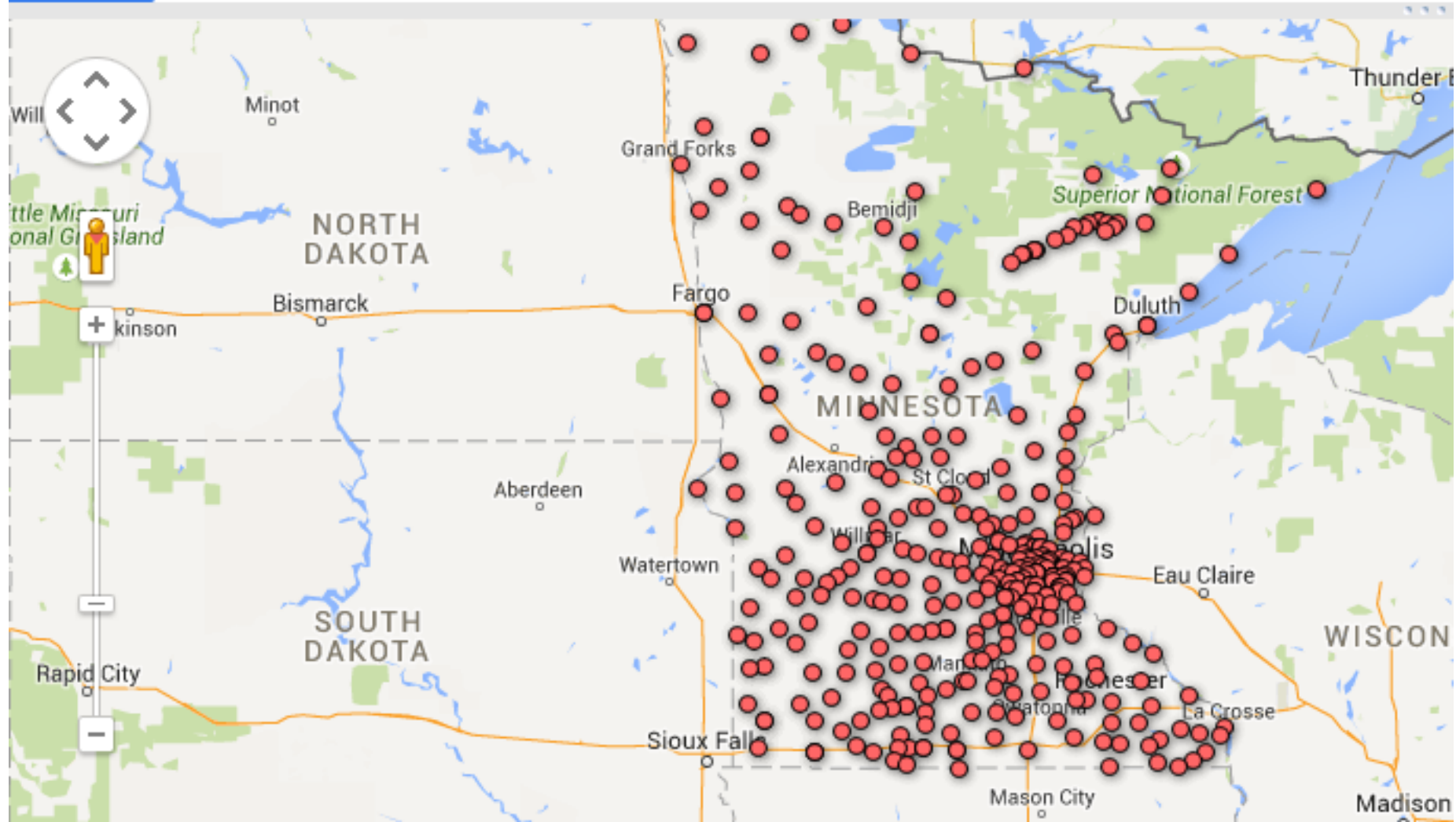
- “An experimental data visualization web application to gather, visualize, and share data tables”
- If Location Data is Included and Identified, Can Create Map
- Many Public Data Sources

Minnesota Public Libraries

www.publiclibraries.com - Imported via Fusion Tables search - Edited on April 26, 2015

File Edit Tools Help ☰ Rows 1 ☰ Cards 1 📍 Map 1 ▾ 📄 Summary 1 📊 Chart 1

Filter ▾ No filters applied



Color Help?

ColorBrewer2.org

- Color Advice for Cartography
- Choose
 - Number of Data Classes
 - Nature of Data
 - Color Schemes
- Colorblind safe option

The screenshot displays the ColorBrewer2.org interface. At the top, the 'Number of data classes' is set to 3. Under 'Nature of your data', the 'sequential' option is selected. The 'Pick a color scheme' section shows a grid of color schemes, with the '3-class BuGn' scheme selected. This scheme is a sequential color palette with three classes: light blue, medium blue, and dark blue. The 'Only show' section has checkboxes for 'colorblind safe', 'print friendly', and 'photocopy safe', all of which are unchecked. The 'Context' section shows the selected color scheme's name, '3-class BuGn', and the hex code for the selected color, '#e5f5f9'. The 'EXPORT' button is visible on the right side of the interface. A map of the United States is shown on the right, with the selected color scheme applied to the data classes.

Selected Readings

Fichter, Darlene and Jeff Wisniewski. "Telling Your Library's Story One Number at a Time." *Online Searcher* 38, no. 4 (2014): 74-76.

Lyons, Ray, "Lib(Rary) Performance" libperformance.com

McDermott, Irene E. "Show, Don't Tell: Data Visualization for Libraries." *Online Searcher* 38, no. 4 (2014): 35-37.

Phelps, Marcy. "Visualization Tools for Turning Information into Insights." *Online* 36, no. 5 (2012): 14-19.