

# Authoring Great Web Maps

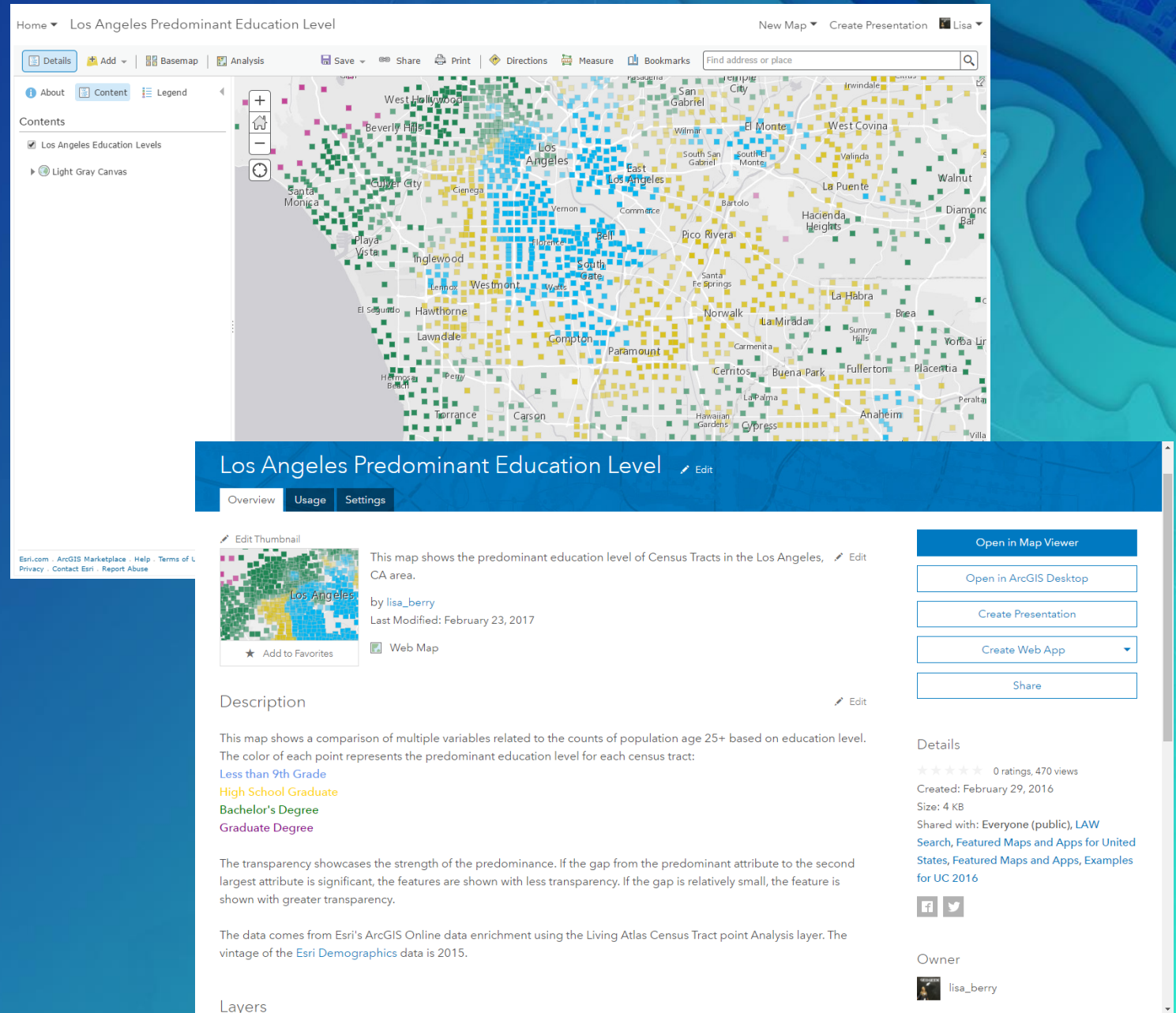
Julia Holtzclaw - Cartographic Product Engineer  @juliah\_gis

Lisa Berry - Cartographic Product Engineer  @lisaberry\_gis

# Overview

What will we be covering?

- What is a Web Map?
- Choose a Basemap
- Adding Data
- Design Your Map
- Add Metadata
- Share Your Map with the World!

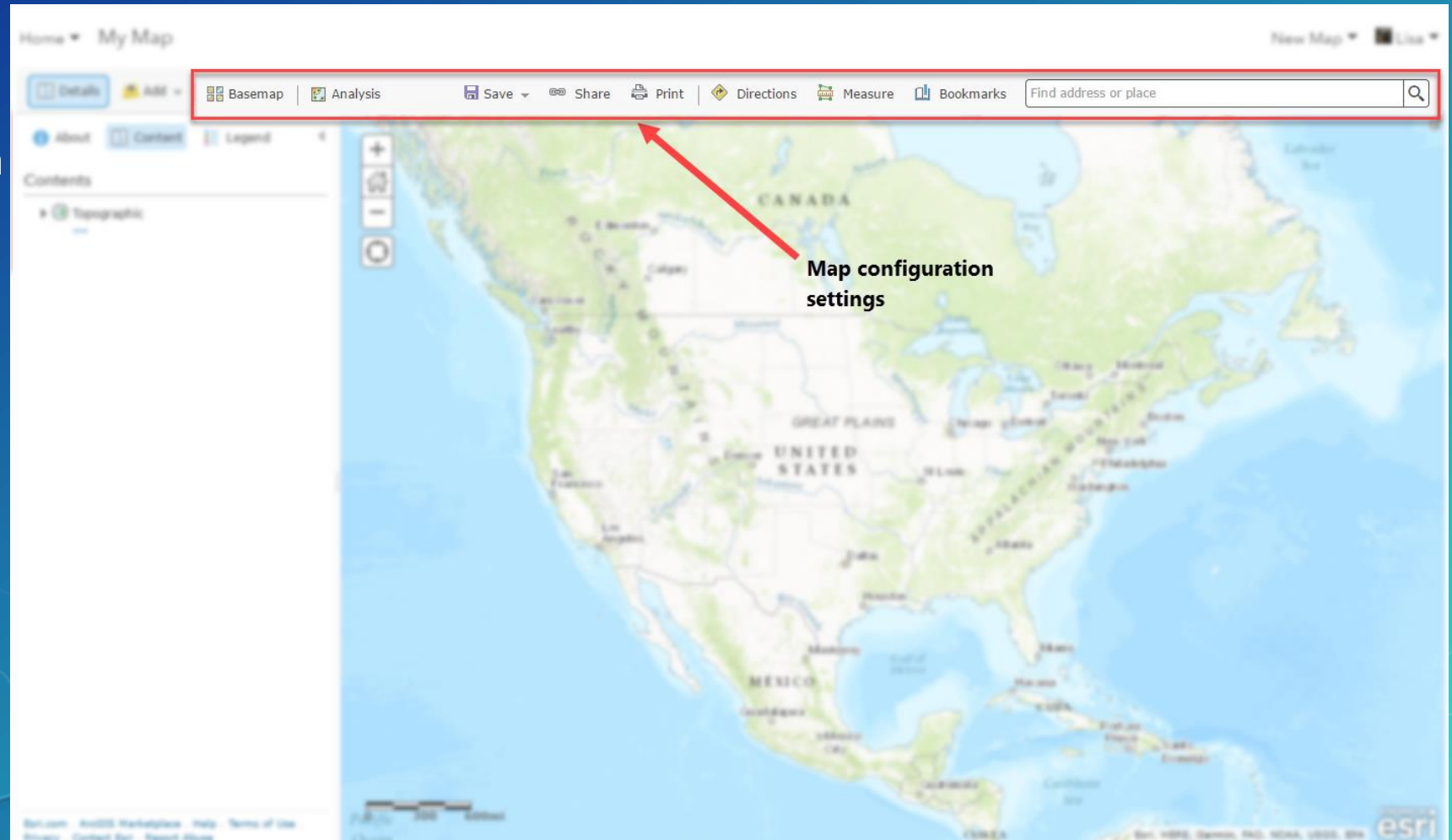


# What is a Web Map?

Container for your map settings and data (like an MXD)

Saves your map configuration in order to share it with the world as a URL

Can be absorbed by different applications like story maps





# Choose a Basemap

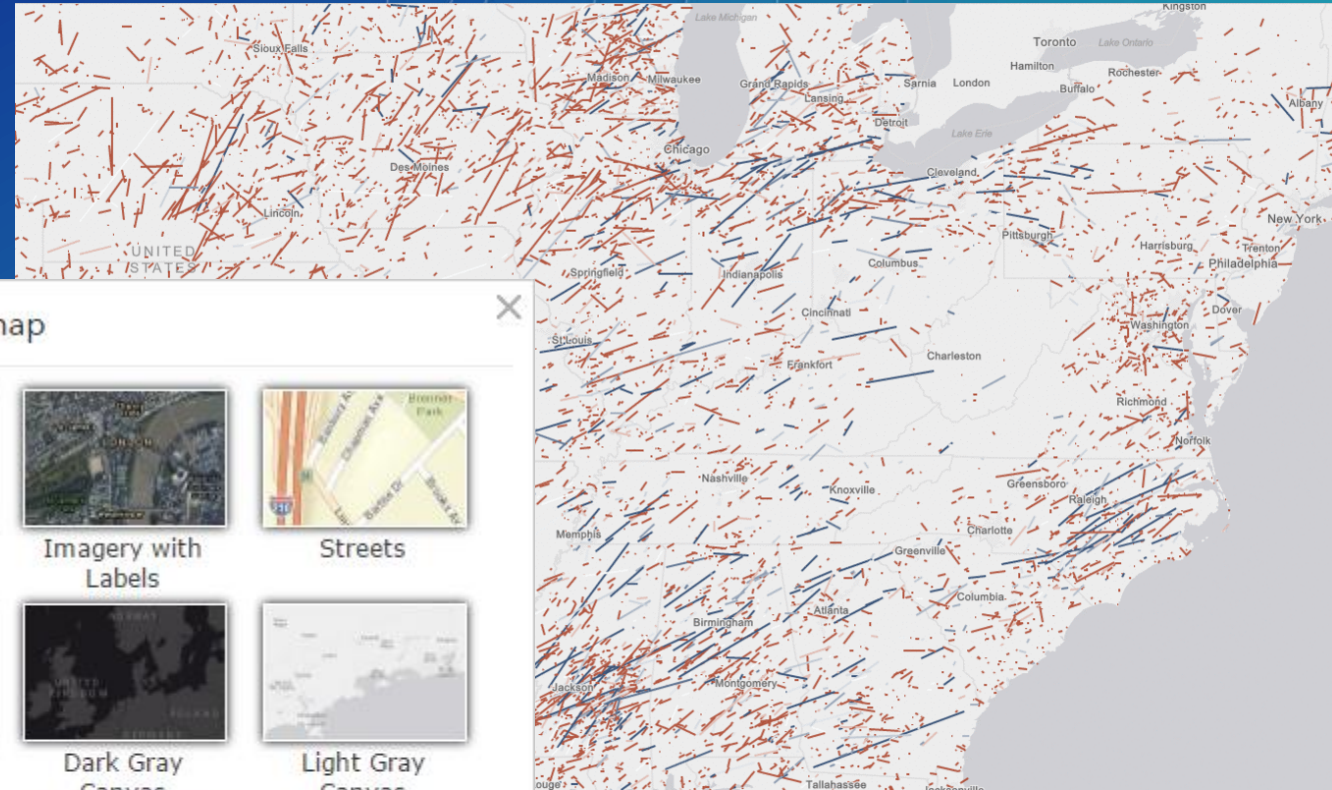
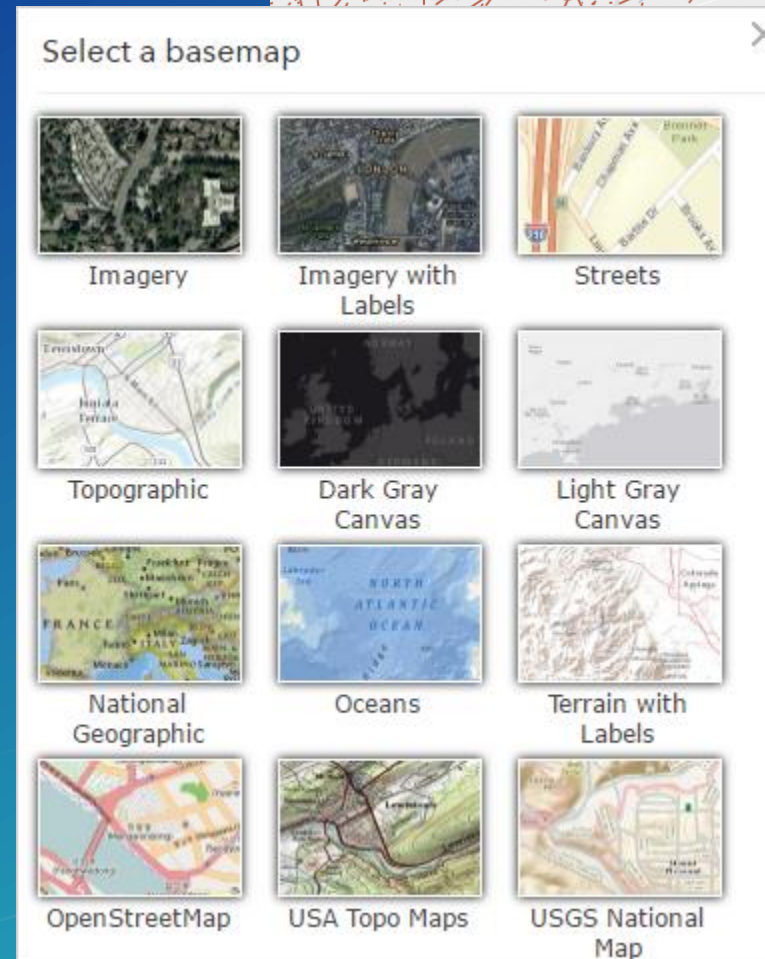
The basemap is the foundation of your map. It provides reference to your data.

Start your map by selecting a basemap that makes sense with your topic/data.

## Questions to ask yourself:

Do I just need the basemap as reference?

Do I need to see roads?  
Imagery? Natural features?



# Adding Data

Every good map starts with good data

## Browse Living Atlas Layers

☐ Show Esri Layers Only ☒ Within map area

All Categories

All Categories

- Imagery
  - Basemap Imagery
  - Multispectral Imagery
  - Temporal Imagery
  - Event Imagery
- Basemaps
  - Esri Basemaps
  - Partner Basemaps
  - User Basemaps
- Historical Maps
- Demographics & Lifestyle
  - Income
  - Spending & Behaviors
  - Population & Housing
  - Business & Jobs
  - Poverty & At Risk
- Landscape
  - Agriculture
  - Climate & Weather
  - Ecology

USA States (Generalized)

USA Counties

World Street Map

World Topographic Map

7 8 9 10 11 12 13

CLOSE

Home Gallery Map Scene Groups My Content My Organization

My Content

Folders

- NEW DELETE
- isa\_berry (Home)
- 2010 Census Services
- ACS Poverty

+ Add Item Create Share Delete Move

Title	Type	Modified	Shared
311 Calls in Minneapolis	Web Map	Mar 30, 2017	Everyone
Adult Population in Dallas	Web Map	Jan 19, 2017	Not Shared
Age and Growth in Phoenix	Web Map	Feb 24, 2017	Everyone
Albuquerque Parking Citations	Web Map	Mar 1, 2017	Not Shared
Arcade Expressions and You	Web Mapping Application	Jan 11, 2017	Everyone
Atlanta Diversity and Unemployment	Web Map	Nov 4, 2016	Everyone
Atlanta Income and Diversity	Feature Layer (hosted)	Nov 17, 2015	Everyone
Average Sales and Daily Population Shift	Web Map	Feb 16, 2017	Not Shared
BeforeAndAfter	Image	Jun 14, 2016	Everyone
Boston Income and Growth	Feature Layer (hosted)	Nov 17, 2015	Everyone
Broomfield Parcel Sale Dates	Web Map	Nov 4, 2016	Not Shared
Cache Test	Feature Layer (hosted, view)	Feb 10, 2017	Not Shared
Cache Test Tiles	Tile Layer (hosted)	Feb 10, 2017	Not Shared

## Add Layer from Web

What type of data are you referencing?

An ArcGIS Server Web Service

URL: [https://demographics1.arcgis.com/arcgis/rest/services/AUT\\_Demographics\\_and\\_Boun](https://demographics1.arcgis.com/arcgis/rest/services/AUT_Demographics_and_Boun)

☐ Use as Basemap

## Search for Layers

Find: (e.g., parcels, fire...)

GO

In: My Organization

☒ Within map area

748 Results Found

World Relief Map

by deane

Add

Esri Demographic Coverage

by lisa\_berry

Add

National Parks, Monuments and More

by deane

Add

Income Extremes

by lisa\_berry

Add

Businesses with Free WiFi

Add

Age\_Gender.gdb

- Block\_Group
- County
- State
- Tract

Households.gdb

- Block\_Group
- County
- State
- Tract

Housing.gdb

- Block\_Group
- County
- State
- Tract

USA Schools - Excel

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	State	Operating	Regular	Sc	Special	Ed	Vocational	Alternativ	Charter	Sc	Magnet	Sc	Title I	Sch
2	United States	98,328	88,663	2,087	1,434	6,144	5,696	2,949	68,276	48,453	49,177,617	48,259,245	190,910	164,013
3	Alabama	1,618	1,386	42	72	118		32	904	873	732,895	729,215	984	26
4	Alaska	511	440	3	3	65	27	1	370	349	132,104	113,484	585	786
5	Arizona	2,252	1,944	20	221	67	531	19	1,776	1,270	1,069,592	1,056,368	910	2,209
6	Arkansas	1,108	1,067	4	26	11	41	38	965	893	482,114	480,303	224	0
7	California	10,170	8,631	146	88	1,305	985	281	8,565	4,867	6,207,959	6,005,125	25,467	4,470
8	Colorado	1,813	1,714	7	5	87	178	24	640	466	842,864	827,731	1,064	778
9	Connecticut	1,150	1,039	48	16	47	17	69	555	205	559,912	543,392	2,712	10,643
10	Delaware	221	188	21	6	6	22	3	184	166	128,935	119,134	1,455	7,195
11	Florida	4,212	3,564	183	52	413	519	489	2,903	2,756	2,642,758	2,581,144	17,894	3,983
12	Georgia	2,388	2,267	58	1	62	128	21			1,677,067	1,663,442	10,097	
13	Hawaii	287	284	2	0	1	31		219	202	179,601	179,409	78	
14	Idaho	762	647	15	9	91	45	4	561	523	275,815	270,795	112	0
15	Illinois	4,336	3,994	141	51	150	52	108	3,277	1,647	2,082,121	2,064,005	9,555	367
16	Indiana	1,993	1,860	34	28	11	65	33	1,404	1,144	1,041,472	1,039,656	612	0
17	Iowa	1,411	1,372	6	0	33	7		971	550	484,856	481,650	557	
18	Kansas	1,359	1,346	10	1	2	17	36	1,143	841	479,996	479,373	486	1
19	Kentucky	1,565	1,257	10	126	172		42	1,100	1,056	673,128	665,064	597	0
20	Louisiana	1,437	1,128	35	8	266	99	84	1,215	1,171	695,772	658,227	997	0
21	Maine	621	591	3	27	0		1	517	396	183,477	183,427	50	0
22	Maryland	1,451	1,331	40	24	56	50	91	369	312	852,202	831,573	4,200	8,188

Points

Title

Description

Image URL

Image Link URL

DELETE CHANGE SYMBOL CLOSE



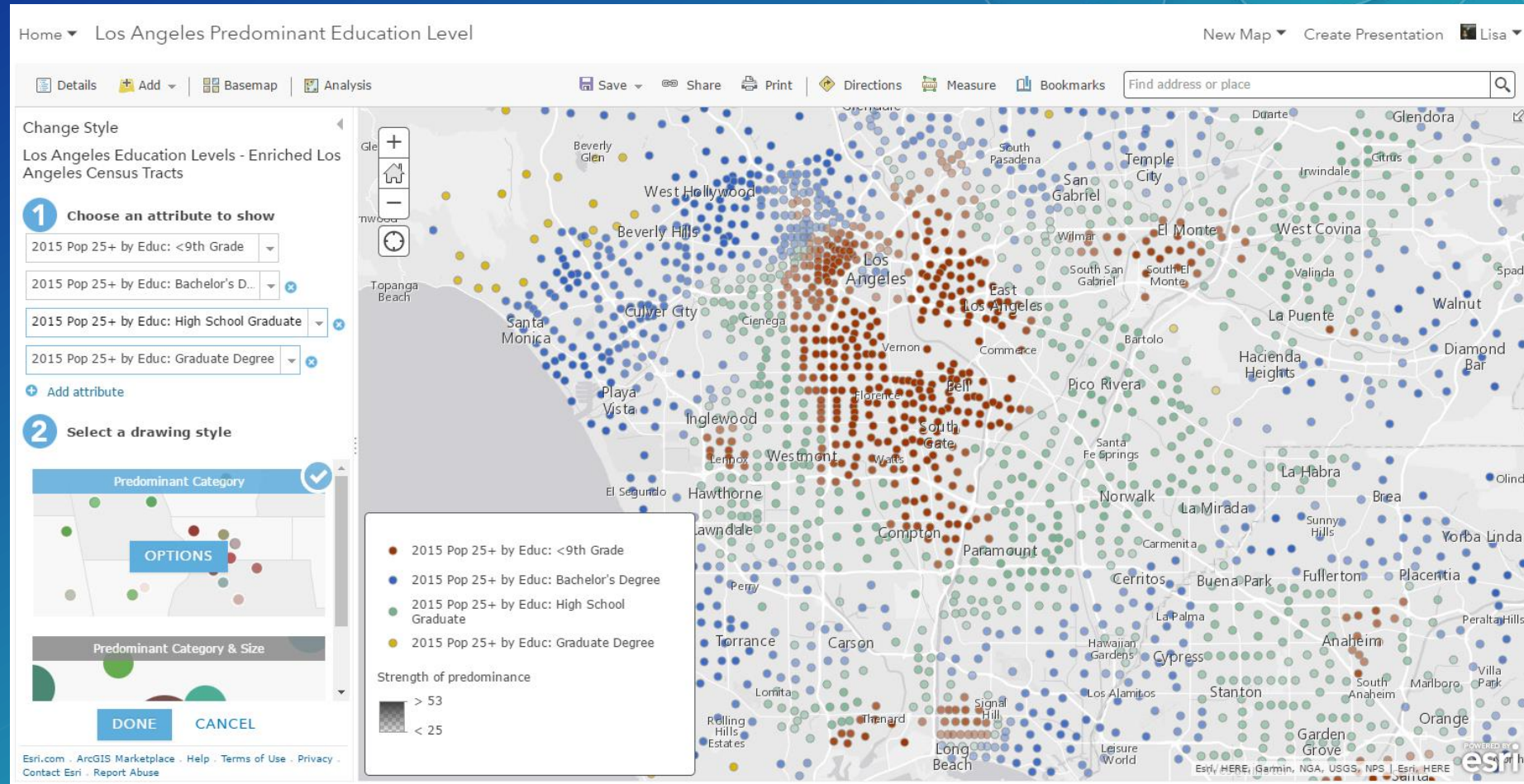
## Don't forget that your map is interactive

# What is smart mapping?

## Making smart choices (color, transparency)

## Different smart mapping options

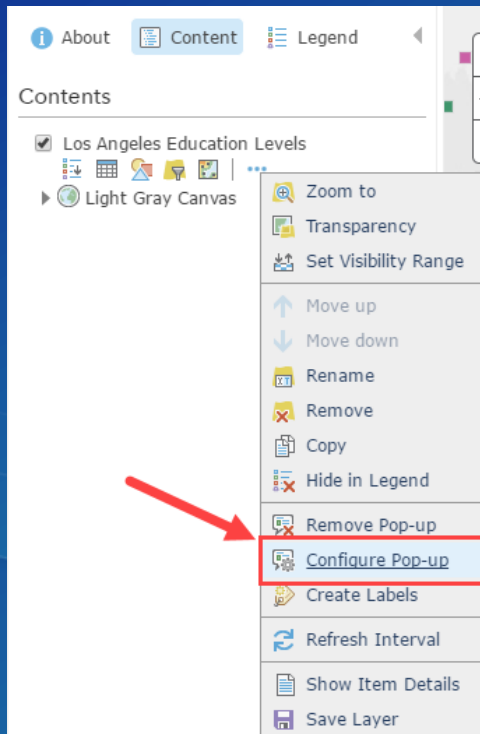
## Preview your changes before accepting



## Don't forget that your map is interactive

## Configure Popups

## Allow people to click on the map and get additional information



Configure Pop-up

Los Angeles Education Levels

☒ Show Pop-ups

Pop-up Title

{STATE}

+

Pop-up Contents

Display: A custom attribute display ▾

CONFIGURE

Configure Attributes

Pop-up Media

Display images and charts in the pop-up:

ADD ▾

Image

Pie Chart

Bar Chart

Column Chart

Line Chart

⚙️

✖️

⬆️

⬇️

## Custom Attribute Display

Use the area below to define, format, and lay out the information you want to display.

**B I U** | |

Font  Size x-small +

This area has {HSGRAD CY} high school graduates

OK CANCEL

## Configure Pie Chart

Specify the title, caption and fields to chart.

Title:

Caption

Count of population 25+ by Education Level

Chart Fields

<input type="checkbox"/> Field Alias	Field Name
<input checked="" type="checkbox"/> 2015 Pop 25+ by Educ: Bachelor's Degree	{BACHDEG_CY}
<input checked="" type="checkbox"/> 2015 Pop 25+/Educ: GED	{GED_CY}
<input checked="" type="checkbox"/> 2015 Pop 25+ by Educ: High School Graduate	{HSGRAD_CY}
<input checked="" type="checkbox"/> 2015 Pop 25+ by Educ: <9th Grade	{NOHS_CY}

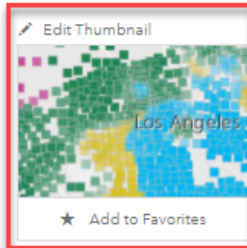
Normalize by: None

OKCANCEL

# Los Angeles Predominant Education Level

[Edit](#)[Overview](#)[Usage](#)[Settings](#)

## Title



This map shows the predominant education level of Census Tracts in the Los Angeles, CA area.

[Edit](#)

by lisa\_berry

Last Modified: February 23, 2017

Web Map

## Thumbnail

## Description

[Edit](#)

This map shows a comparison of multiple variables related to the counts of population age 25+ based on education level. The color of each point represents the predominant education level for each census tract:

[Less than 9th Grade](#)

[High School Graduate](#)

[Bachelor's Degree](#)

[Graduate Degree](#)

The transparency showcases the strength of the predominance. If the gap from the predominant attribute to the second largest attribute is significant, the features are shown with less transparency. If the gap is relatively small, the feature is shown with greater transparency.

The data comes from Esri's ArcGIS Online data enrichment using the Living Atlas Census Tract point Analysis layer. The vintage of the [Esri Demographics](#) data is 2015.

## Description

## Layers

[Los Angeles Education Levels](#)

World Light Gray Canvas Base

[World Light Gray Canvas Base](#)

[World Light Gray Reference](#)

## Access and Use Constraints

[Edit](#)

This work is licensed under the [Web Services](#) and [API Terms of Use](#).

[View Summary](#) | [View Terms of Use](#)

## Access and Use Constraints

[Open in Map Viewer](#)[Open in ArcGIS Desktop](#)[Create Presentation](#)[Create Web App](#)[Share](#)

## Details

0 ratings, 470 views

Created: February 29, 2016

Size: 4 KB

Shared with: Everyone (public), [LAW Search](#), [Featured Maps and Apps for United States](#), [Featured Maps and Apps](#), [Examples for UC 2016](#)



## Owner



[lisa\\_berry](#)

## Folder

[Move](#)

[Smart Mapping Examples](#)

## Tags

[Edit](#)

[predominance](#), [education](#), [Los Angeles](#), [Census Tracts](#), [high school](#), [Bachelors Degree](#), [college](#), [Graduate Degree](#), [university](#), [smart mapping](#), [demographics](#)

## Credits (Attribution)

[Esri](#), [US Census Bureau](#)

## Credits

[Tags](#)[Edit](#)



# Share Your Map With the World! (or not)

## Share

### Choose who can view this map.

Your map is currently shared with these people.

- ☒ Everyone (public) **Anyone with the URL**
- ☒ Esri ArcGIS Content Team **Other users within your Organization**
- ☒ Members of these groups: **Other users who are also part of these groups**

- ☐ Arcade Expressions and You
- ☐ ArcGIS Content Team
- ☐ ArcGIS for Public Transit
- ☐ Awesomeagraphers: The Sharing Group
- ☐ Content Immersion Program 2016
- ☐ Detroit lesson update
- ☐ Esri UK Vector Tile Testing
- ☐ Examples for IIC 2016

### Link to this map

<https://arcg.is/0v0yvD>

- ☒ Share current map extent

 Facebook  Twitter

### Embed this map

EMBED IN WEBSITE

CREATE A WEB APP

## Create a New Web App

Configurable Apps

Web AppBuilder

What do you want to do?

Select a configurable app. ?

Search

Show All

Build a Story Map

Collect/Edit Data

Compare Maps/Layers

Explore/Summarize Data

Map Social Media

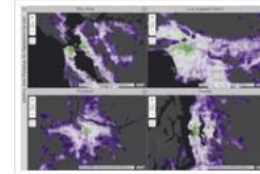
Provide Local Information

Route/Get Directions

Showcase a Map



Basic Viewer



Compare Analysis



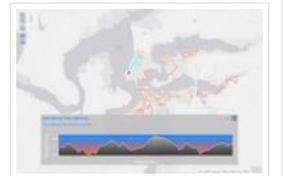
Crowdsourcing Polling



Directions



Edit



Elevation Profile



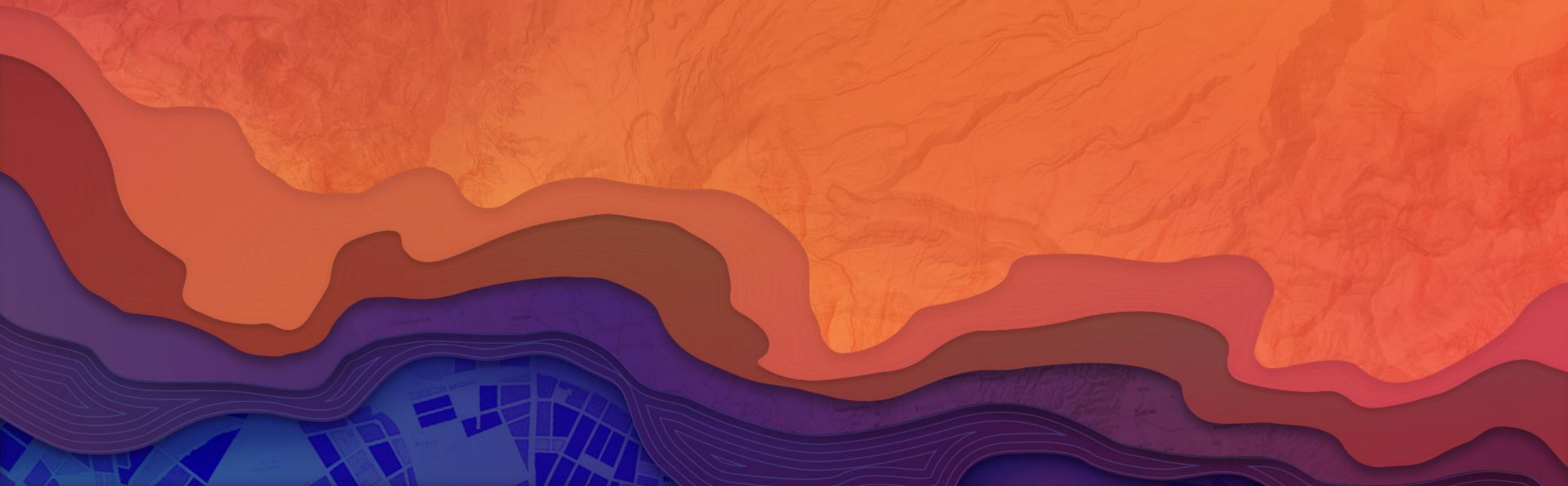
BACK

CANCEL

DONE

# Demo: Julia

Publishing Data, Adding Layers, Geoenrichment





# Demo: Lisa

Using Living Atlas, Smart Mapping, Popups, Metadata, Sharing



# Summary

What did we just go over?

- What is a Web Map?
- Choosing Your Basemap
- Adding Data
- Designing Your Map
- Recording Your Metadata
- Sharing Your Map

## Related Presentations

Want to learn more?

### **Six Easy Ways to Improve Your Maps**

Living Atlas Demo Theater 4

Wednesday July 12, 9:30 - 10:15 am

### **Data Exploration with Smart Mapping**

Room 10

Wednesday 1:30 – 2:45 pm



esri

THE  
SCIENCE  
OF  
WHERE