

Creating a choropleth map of the world

A choropleth map is a thematic map that uses different colours and shades to represent statistical data. A choropleth map is split into a geographic area, whether it is a country, city, region or statistical area.

Step 1

Finding your data

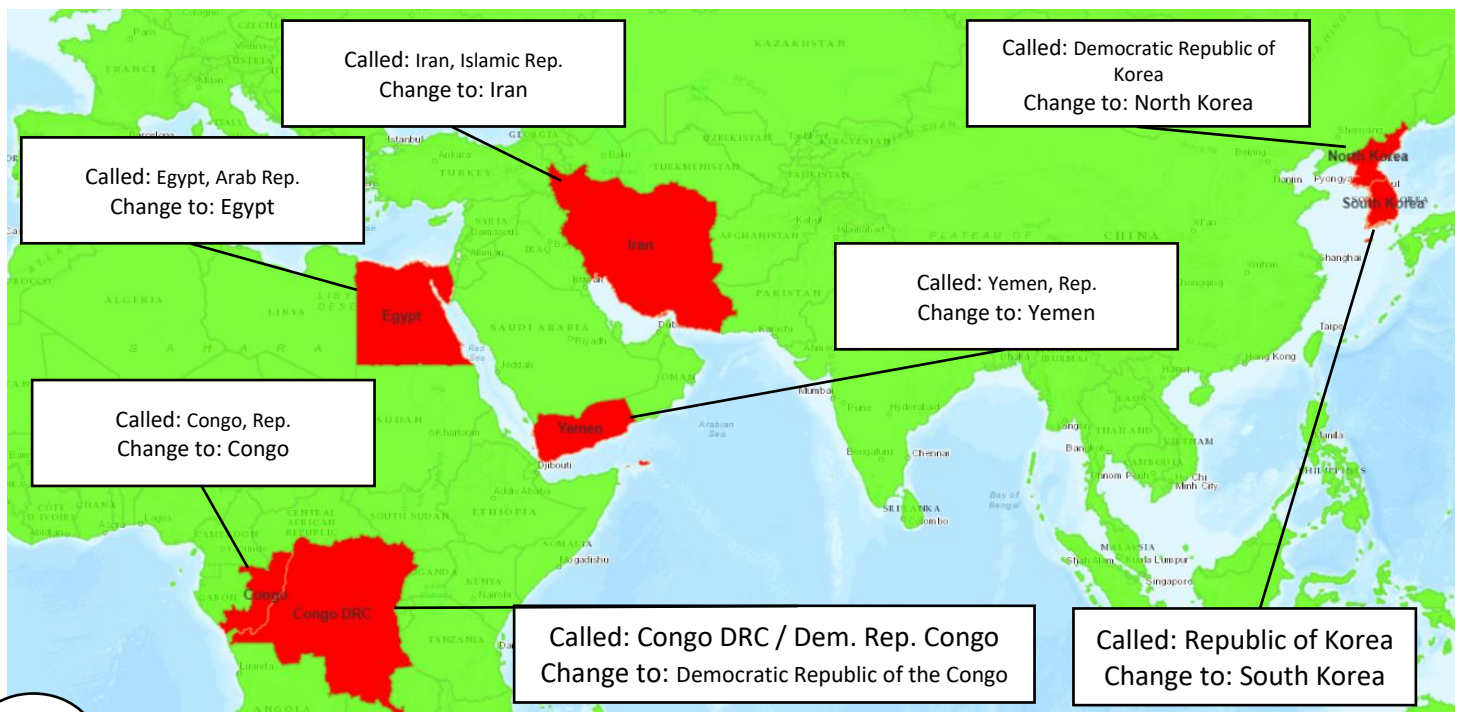
The first steps in making a choropleth map is **sourcing** your data. There are some great websites which contain world level data, including: [WorldBank Stat](#), [Our World In Data](#), and [GapMinder](#). Download your data as an Excel or CSV File.

Cleaning and preparing your data

Cleaning your data is an important step, otherwise your map won't work. Read more about cleaning data [here](#).

When we are making a map about the world, one of the major issues we might face is different countries have alternative or official names. Take for example African country Côte d'Ivoire. Can't pronounce it? Neither can a lot of English-speaking people, so it's commonly referred to as the Ivory Coast. The issue with this is that GIS will only accept certain names, so it is important to take the time to check your data.

Here are some common country names that need changing:



Step 2

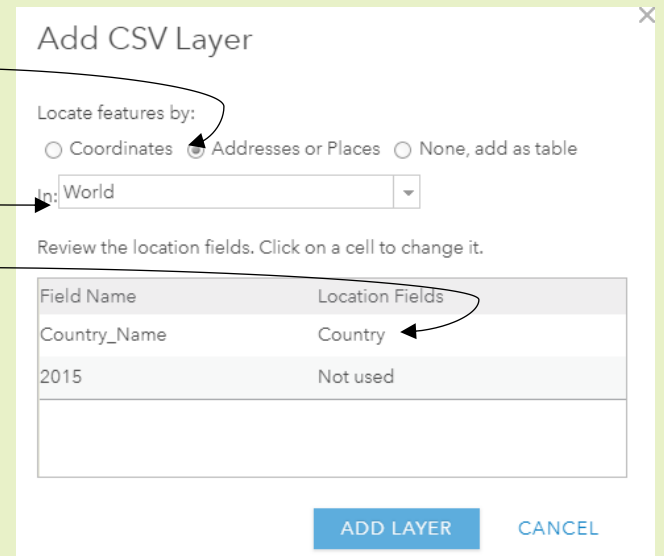
Uploading your data

1. Once your data is cleaned, save the file as a CSV (Comma Separated Values)
2. Open ArcGIS Online and click on the Map Tab
3. Select Add > Add Layer from File
4. Find your file and press Import Layer

5. The next step involves stating where the locations can be found. Select Address or Place from the options as our data has country names
6. From the drop down, choose World as the location
7. Select Country from the drop down in the Excel column that has your country data
8. Select Add Layer
9. You should see your data appear on the map as point data

If you received any of the following error messages:

- Duplicate field names: check row values for duplicates and make sure column headers use underscores instead of spaces
- Address or place not found: check for correct spelling



Add CSV Layer

Locate features by:

☐ Coordinates ☒ Addresses or Places ☐ None, add as table

In: World

Review the location fields. Click on a cell to change it.

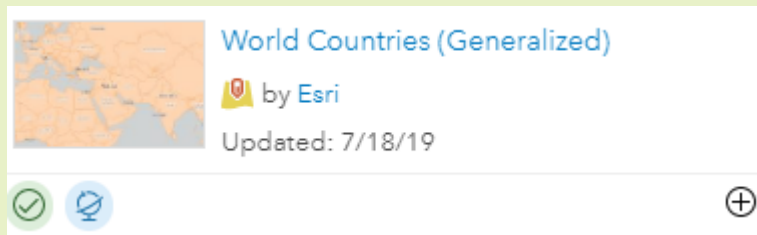
Field Name	Location Fields
Country_Name	Country
2015	Not used

ADD LAYER **CANCEL**

Step 3

Finding the correct map

1. It is time to find the correct world map for your choropleth. Go to Add > Browse Living Atlas
2. Search for 'World Countries' and look for the below option
3. Select the + symbol

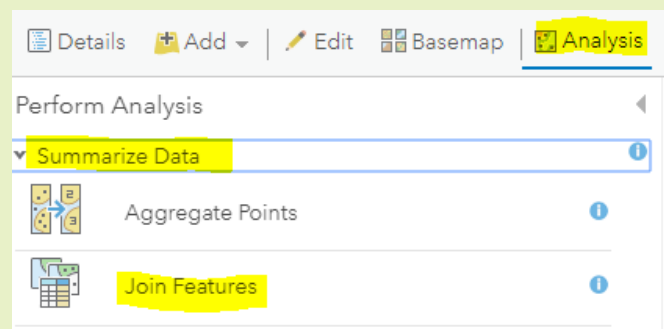


If your case study focuses on Hong Kong, or other small islands choose 'World Countries'

Step 4

Joining layers together

1. We are going to join these two layers together into one layer, which allows us to turn it into a choropleth map. To do this, select Analysis
2. Choose Summarize Data > Join Features



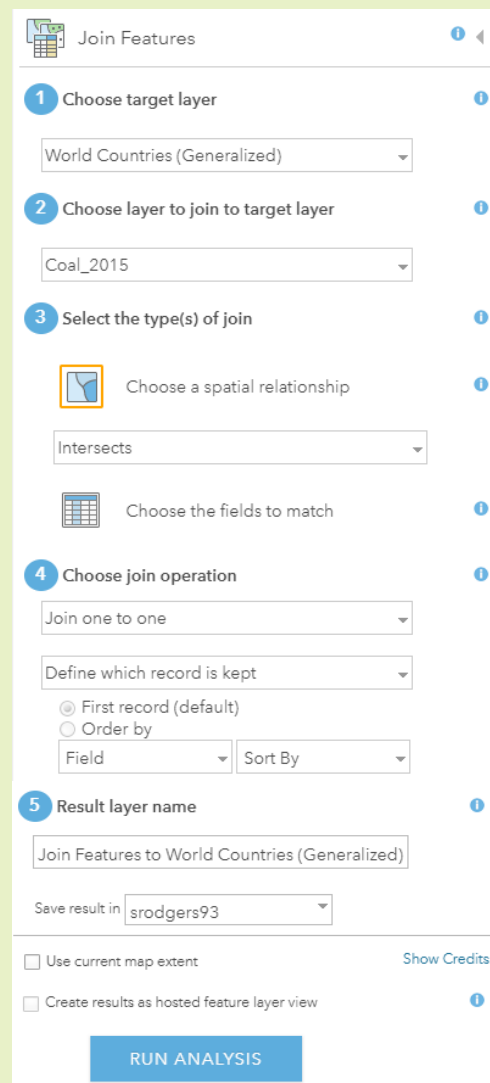
3. Follow the below steps:

1. Choose World Countries
2. Choose your data layer
3. Choose a spatial relationship
4. Leave this option on One to One
5. Give your layer a name

Turn off current map extent

Press Run Analysis

A warning message will appear saying performing analysis on Living Atlas will take longer. Press Ok.

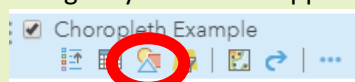


Step 5

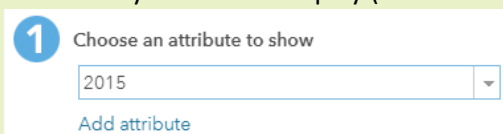
Styling your layer

Once the layer has loaded, you should see your map turn blue. It's time to colour the map now!

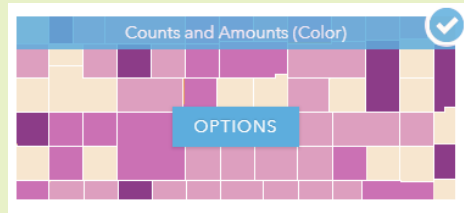
1. Click on your layer name and select the Change Style icon that appears underneath



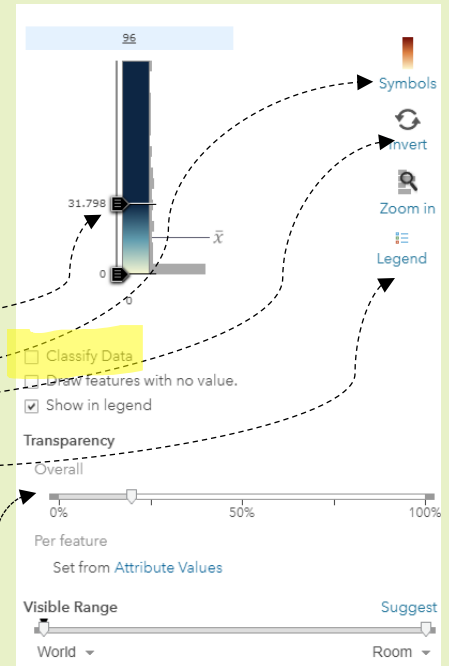
2. From the drop down, choose your data that you want to display (will match your Excel column header)




3. Your map should now change to a choropleth. It's time to change the colours now. Select Options



4. You can change the scale by sliding the bar, as well as add more classifications by selecting **Classify Data**
5. You can change the colours of the map by selecting Symbols
6. You can invert the colours by selecting invert
7. If you have classified your data, you can also customise what the legend says (this will only appear if you have Classified Data selected)
8. You can change the transparency for the layer by dragging the transparency slider
9. When you are done, select Ok then Done at the bottom of the pane
10. If you want to go back and change the style, simply select the Change Style button again
11. When you are done with your map, be sure to press SAVE and give your map a Title and a Tag



 Save ▼

12. Your teacher will be able to see your map without Sharing, but if you need to Share it externally, select Share

Choosing Colours – Rules of Thumb

- ✓ Typically, the **higher a statistic, the darker the colour**. If I was creating a map about total cases of Malaria in Sub-Saharan Africa, only one of these options is correct. You can reverse the colour orders in Symbols. This rule is abandoned if the lower statistic is worse i.e. total hospital beds per country
- ✓ Make sure if you choose blues or greens, it does not interfere with your basemap (choose your basemap first)
- ✓ If you have other layers on your map, make sure you choose colours that won't clash



Incorrect



Correct