W6 Exercise: The ESRI Dashboard

OBJECTIVE. Create your own ESRI dashboard. Your dashboard should contain at least 3 panes with different views of the data. Total: 40pts.

Thanks to Jennifer Hall for preparing this tutorial.

Step 1: Login to ArcGIS Online
Go to http://www.arcgis.com and sign in using your U of U account.

Step 2: Create a web map
Before we create a dashboard, we need to create a web map and load all data into it.
From the Home page let's click on *Map* in the top left of screen (Figure 1).
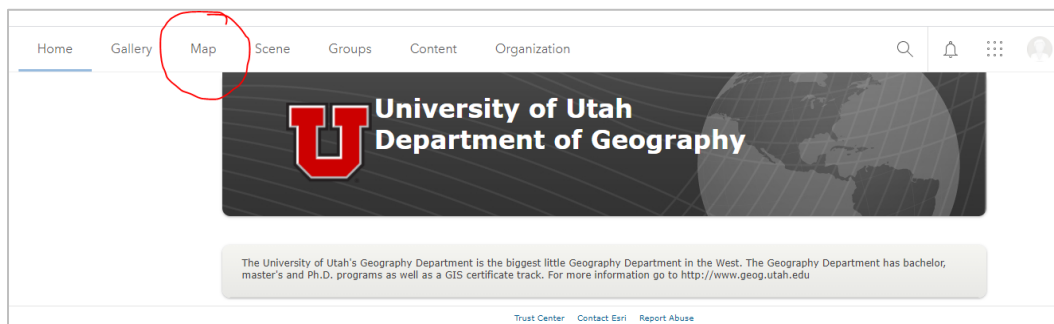

Figure 1

First, you need to select your basemap (unless you like the default, Figure 2, #1), then add your data by either searching ArcGIS Online or the University of Utah Department of Geography rest services (Figure 2, #2). For instance, go to arcgis.com and click the magnifying glass in the top bar to search for geospatial data (i.e. type "covid-19"). Click on any result that is either a *feature layer* or *web map*. This takes you to the landing page of the service. The page contains an URL on the right-hand side column (you may have to scroll down a bit, Figure 3). Here, we are using the Johns Hopkins Centers for Civic Impact Covid-19 County Cases (Daily Update) feature layer. Copy the URL, go back to your map, and paste it into the dialog box that appears when you click *Add → Add Layer from Web* (Figure 4). If you want to add a CSV dataset, you will need to load it into your *Content* page first, then copy the URL and add it that way (Figure 5). However, make sure to share it with "everyone" first (Figures 6, 7). Finally, save your map (Figure 2, #3), this will be saved into your contents page as well.

1

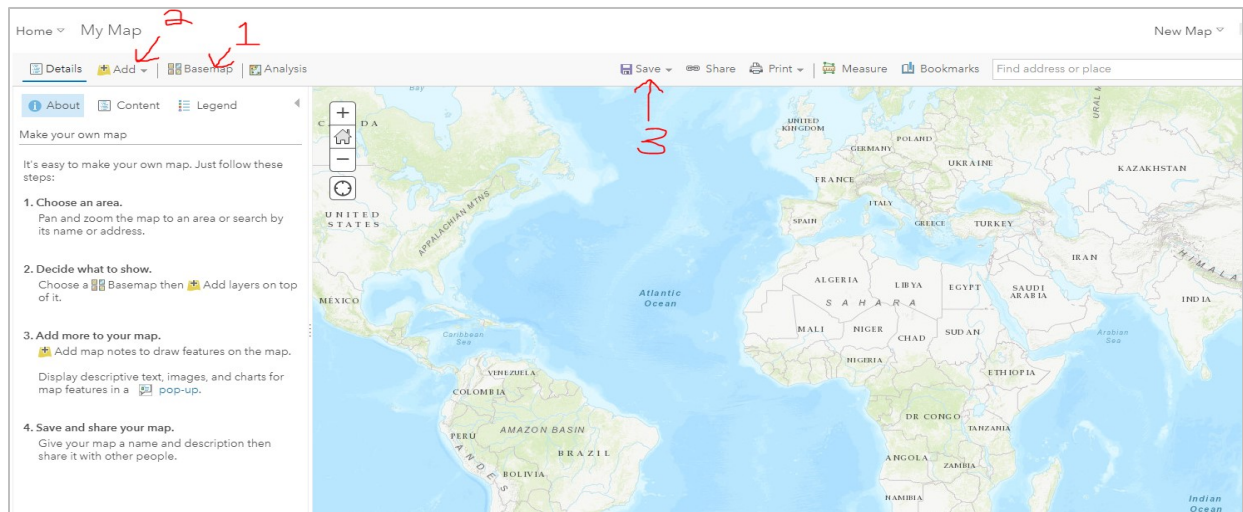https://services6.arcgis.com/ubm4tcTYICKBpist/ arcgis/rest/services/ Canada_BC_Water_Quality_Stations_ver2a/ FeatureServer
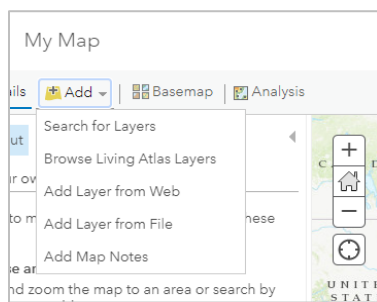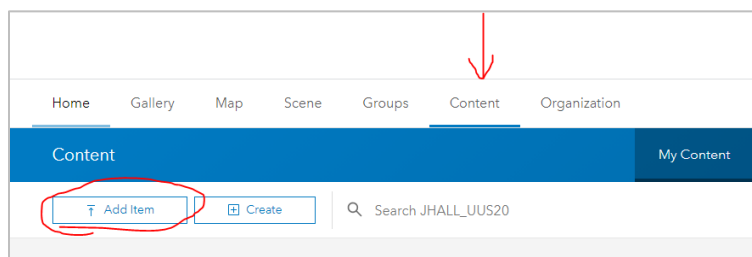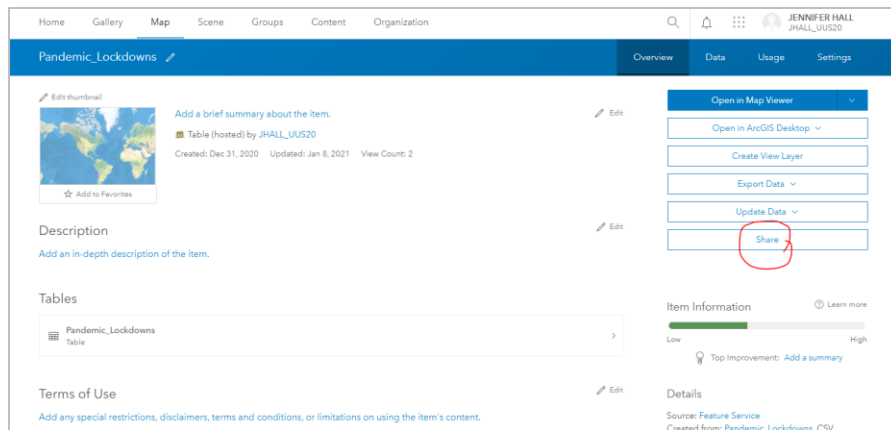
Figure 2

Figure 3

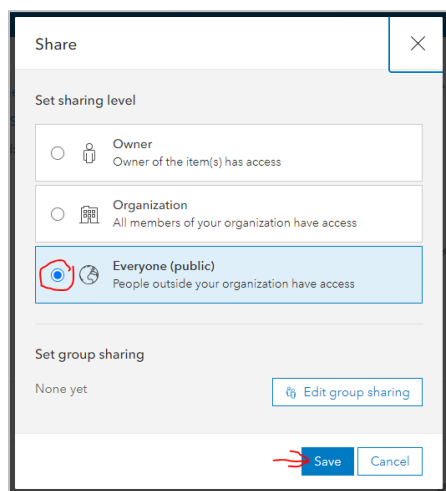
Figure 4

Figure 5

Figure 6

Figure 7

My map looks like this (Figure 8) after I added John Hopkins coronavirus data by searching ArcGIS online because it is available to everyone.
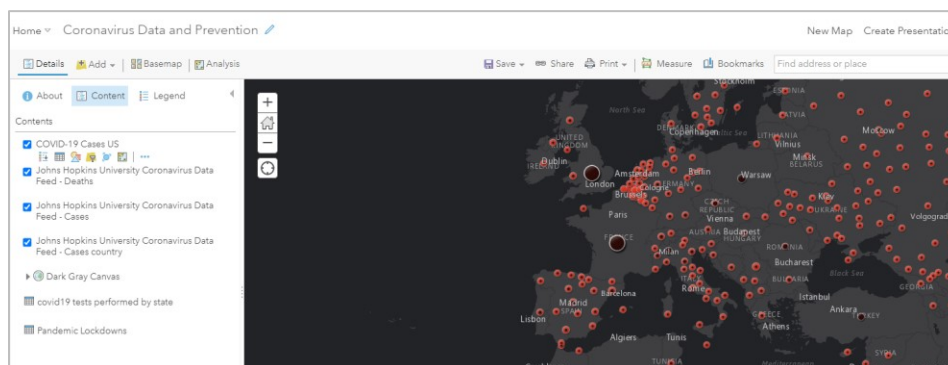

Figure 8

Back at the Home page, lets click on the *Apps* icon in the top right of the screen and then the *Dashboards* icon (Figures 9, 10).
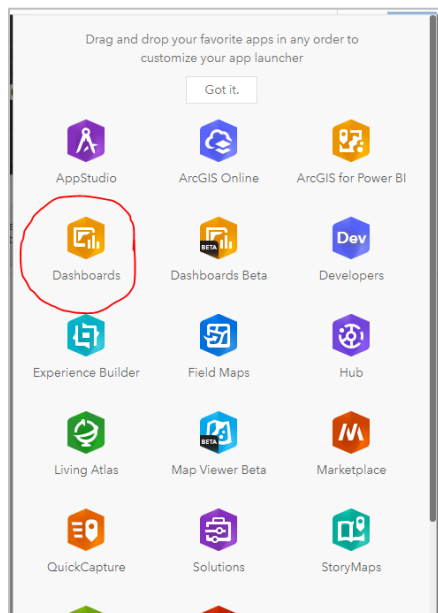

Figure 9

Figure 10

A new tab opens, in the top right corner area of your screen there should be a button "create dashboard": Click it (Figure 11).
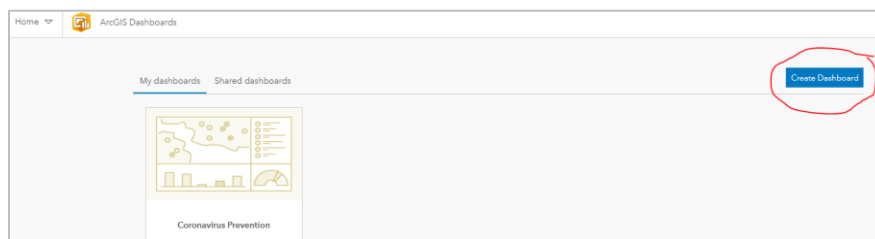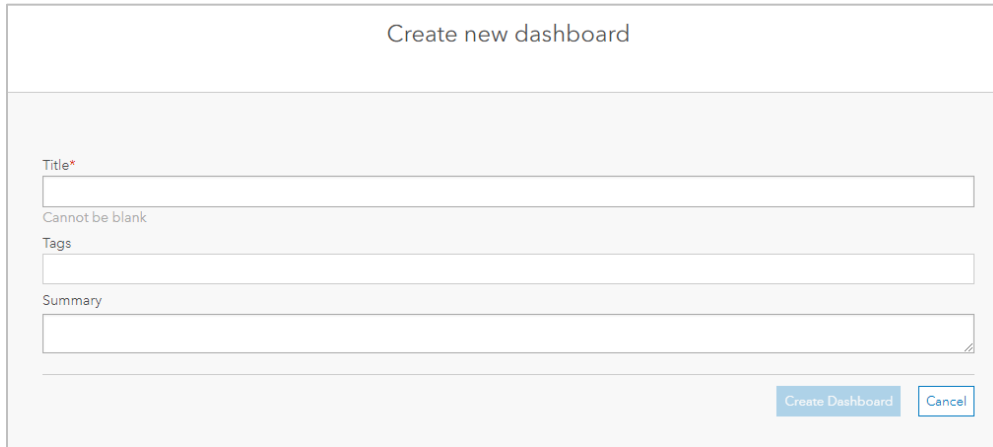

Figure 11

Now we will name, add tags, and a summary to our new dashboard (Figure 12).

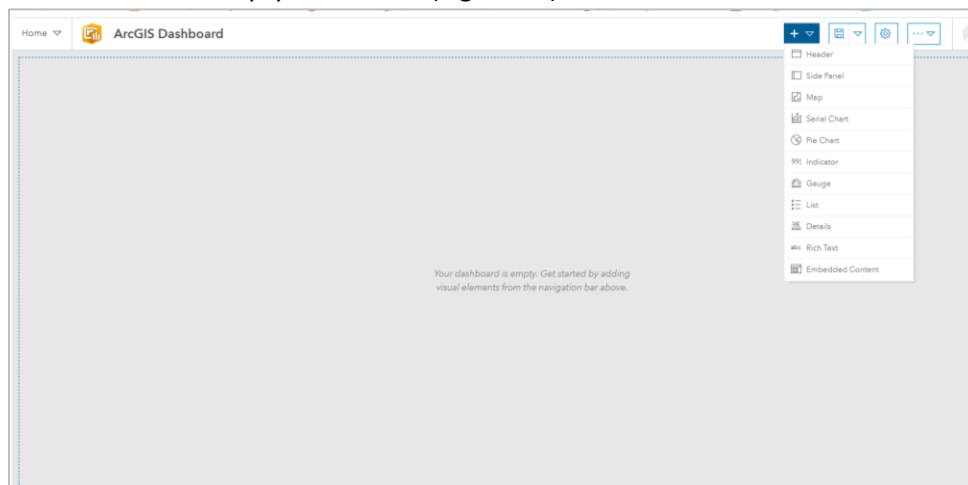Figure 12

Now we have an empty Dashboard (Figure 13).

Figure 13

Let's add our map: click the down arrow next to the plus sign button at the top-right and click on Map. Find the map you made earlier and select it (Figure 14).
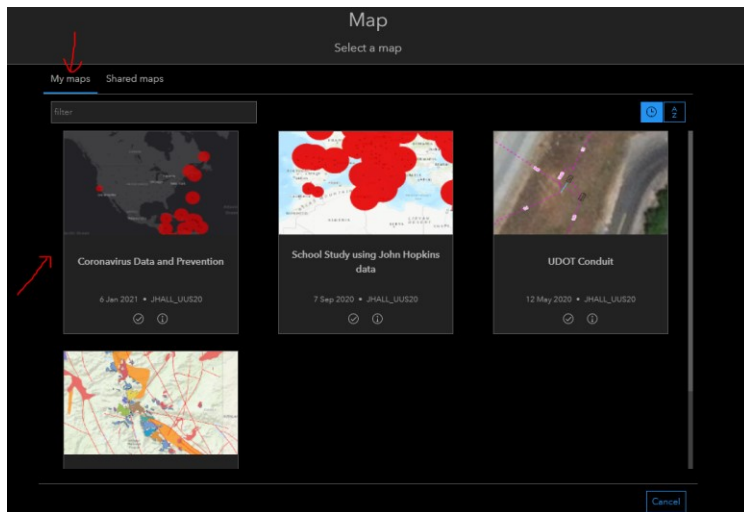
Figure 14

Next, select all sliders so they look like Figure 15 (all in blue) and choose what type of scalebar you would like:
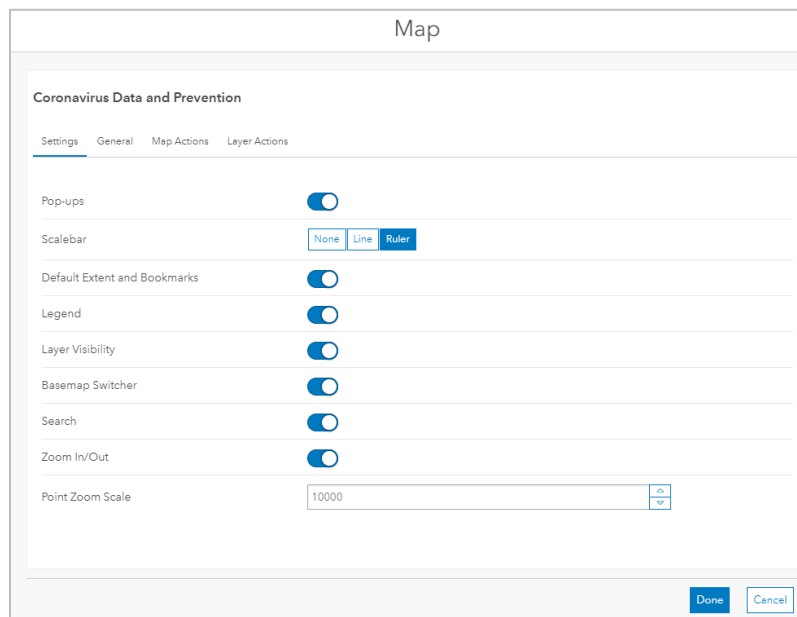

Figure 15

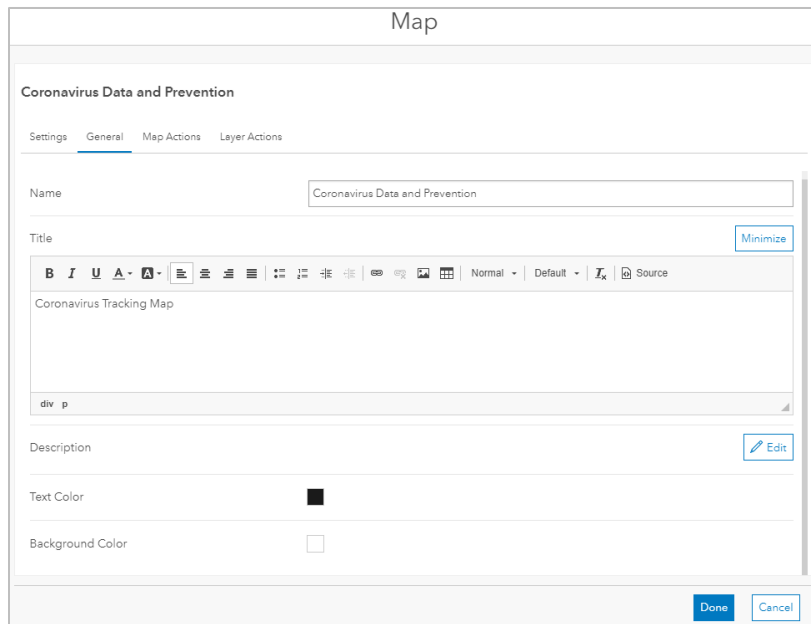Now move to the *General* tab and add a title to your map (Figure 16).

Figure 16

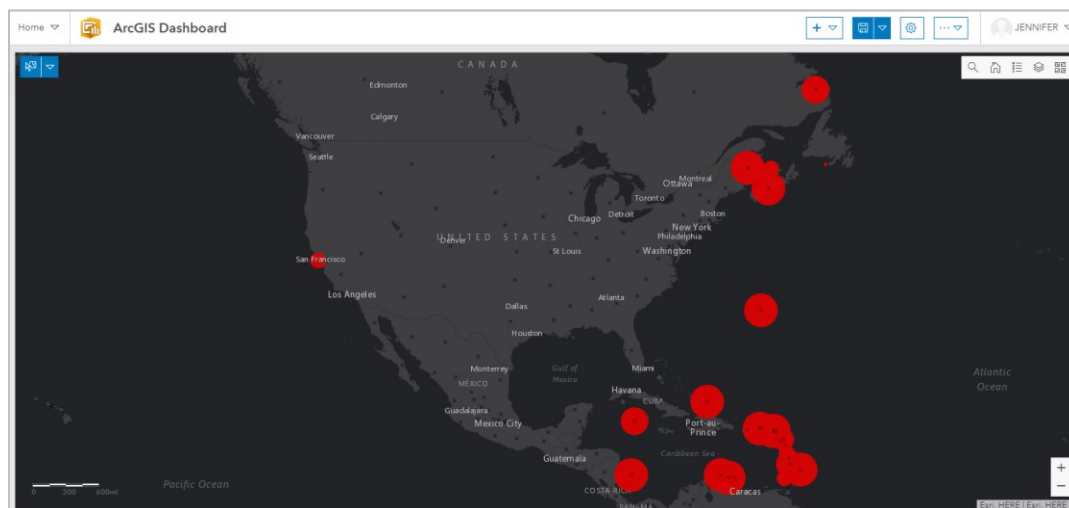Now click Done, and the screen should look like Figure 17.

Figure 17

Please note that any data you wish to use in this dashboard needs to first be connected to this map, by adding it into the table of contents in the web map application. And save often.

Here is a link to ESRI's dashboard documents if you would like to learn more: https://doc.arcgis.com/en/dashboards/get-started/what-is-a-dashboard.htm

Next, add a Header to your dashboard by clicking on the plus sign icon and select *Header*. A new window appears, where you can change the title, add an image or icon (Figure 18). Give the title a background

color and change the text color. You could also add an image as its background but not right now. Click done.
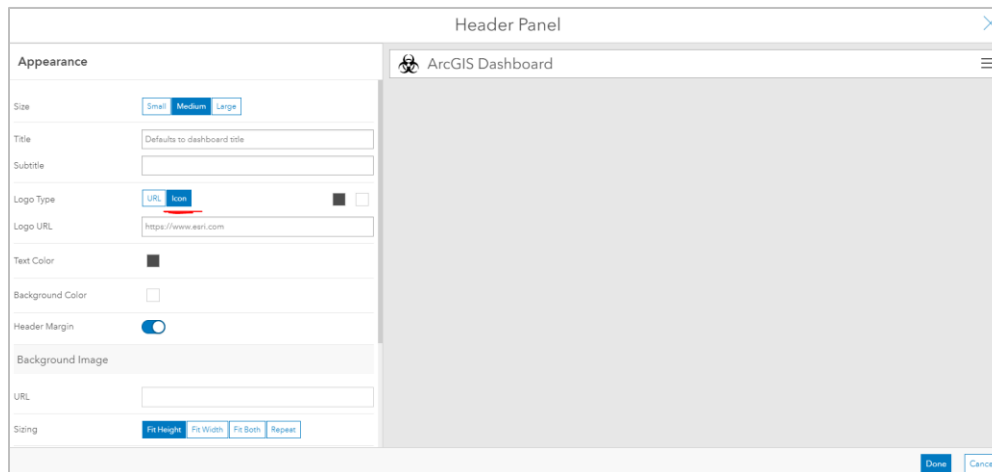

Figure 18

Next, add a pie chart by clicking the plus sign icon and select *Pie Chart*. You now see a list of data you added to your map, which you can now use for your pie chart. Select your Johns Hopkins COVID-19 data. In the *Pie Chart* window *Data Options*, select "fields" for Categories from, use the drop down menus to select three different variables, such as *Beds_Licen*, *Beds_staff*, and *Beds_ICU* (Figure 19).
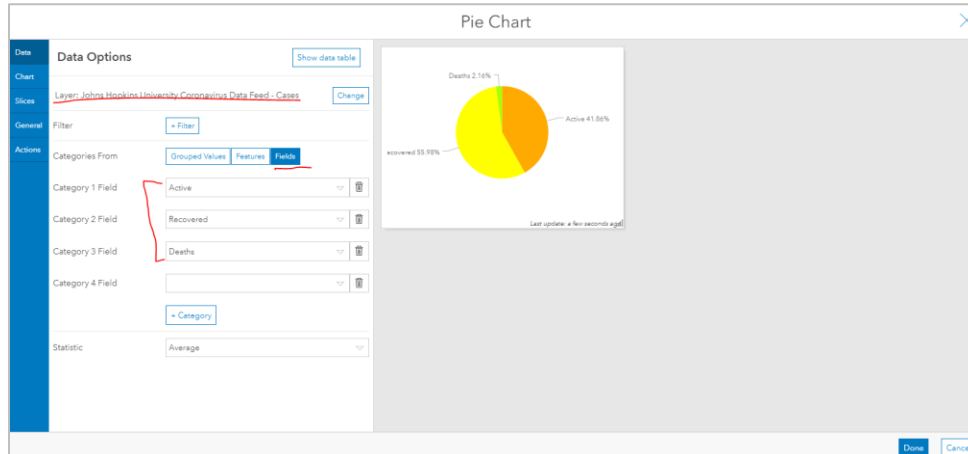

Figure 19

Next, choose the *Chart* tab, scroll to the bottom where it says *Legend*, and select *value* and *Bottom* (Figure 20)*.*
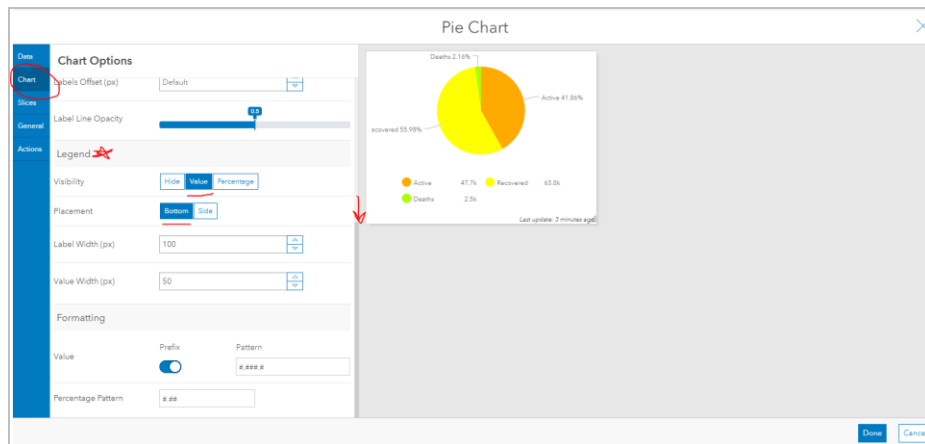
Figure 20

Next, choose the *Slices* tab and change the colors of the slices to what you think works best (Figure 21).
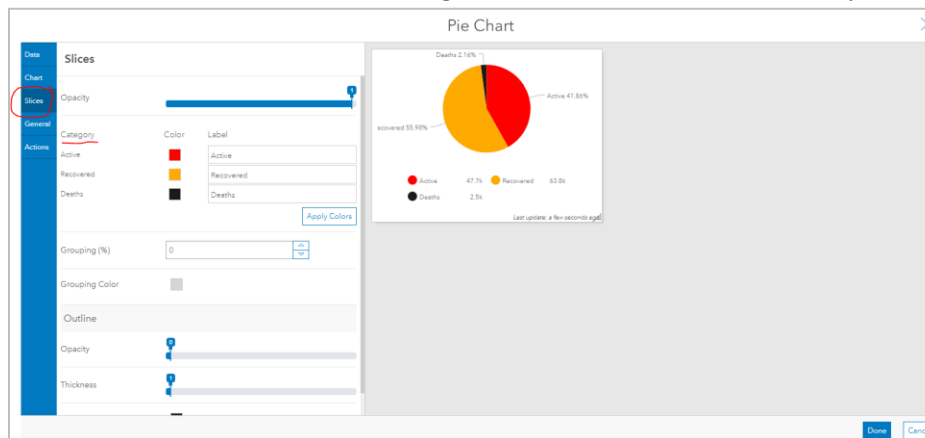

Figure 21

Next, choose the *General* tab and add a title to your pie chart, if you feel the chart needs more explanation add a description (Figure 22). Click Done.
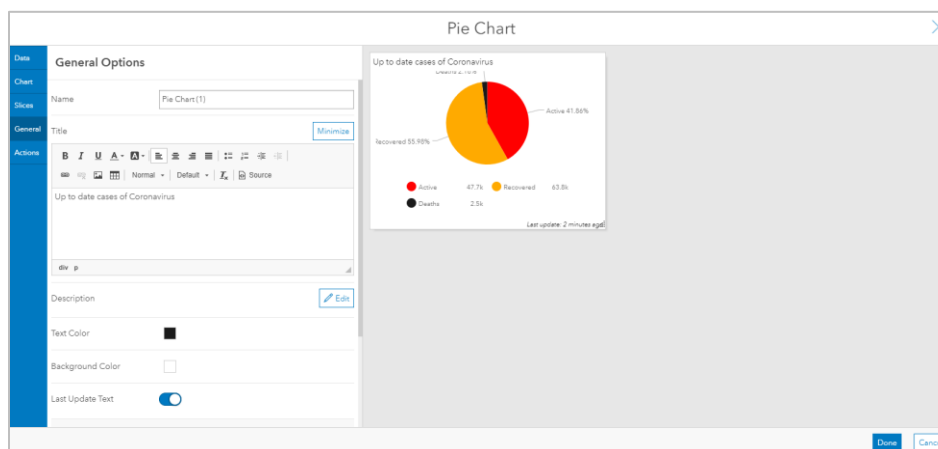

Figure 22

Do not panic as the pie chart will show up taking half of the page. We will add all the elements first and then rearrange everything so it looks nicer.

Next, add a serial chart, by clicking the plus sign and select *Serial Chart*. Again, select your Johns Hopkins COVID-19 data. In the following window, select *fields* for *Categories From*, use the drop-down menus to select *Age_85, Age_80_84*, … until you have all age groups you'd like (Figure 23).
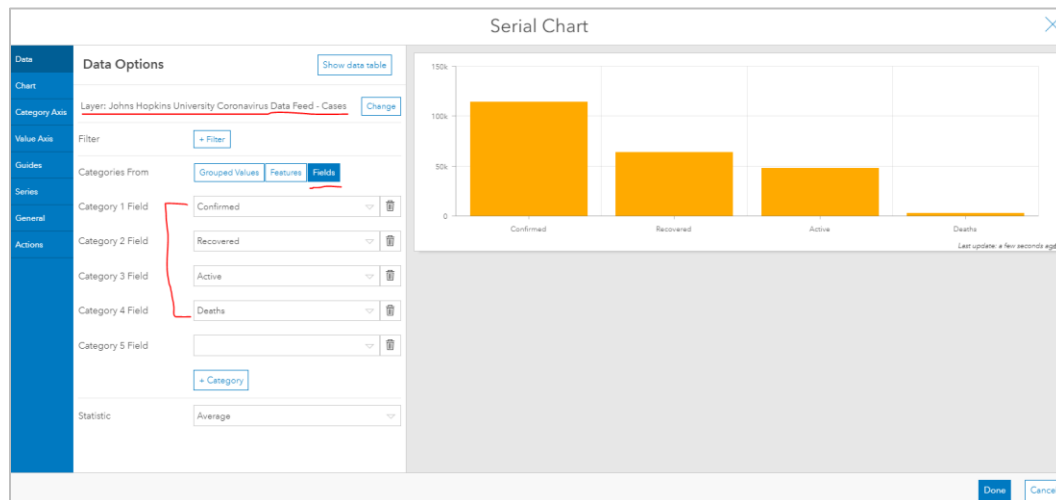

Figure 23

Next, click the *Series* tab and select the labels, click the slider for *Labels* and for *Bar Colors,* click *By Category* and choose the colors you feel work best (Figure 24). Click done.
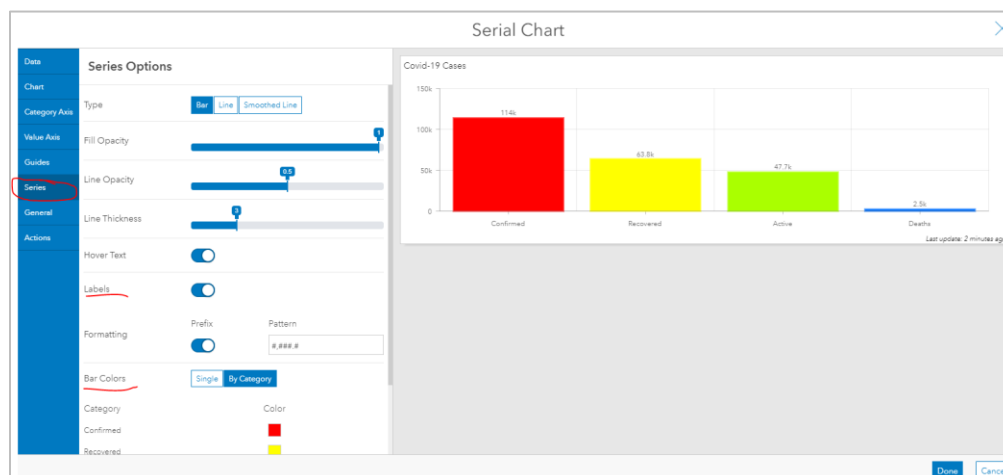

Figure 24

You can at this point move the pie chart and serial chart so they are on top of your map by hovering over the blue bar in the left corner of the chart's border, a drop down menu of actions will appear the icon with the 4 arrows in + shape will allow you to move the boxes around. Drag any of your charts into

the center of the map anchor icons will appear on each side of the map asking you where you would like to anchor that chart around the map. I choose to place them both on top of the map (Figure 25).
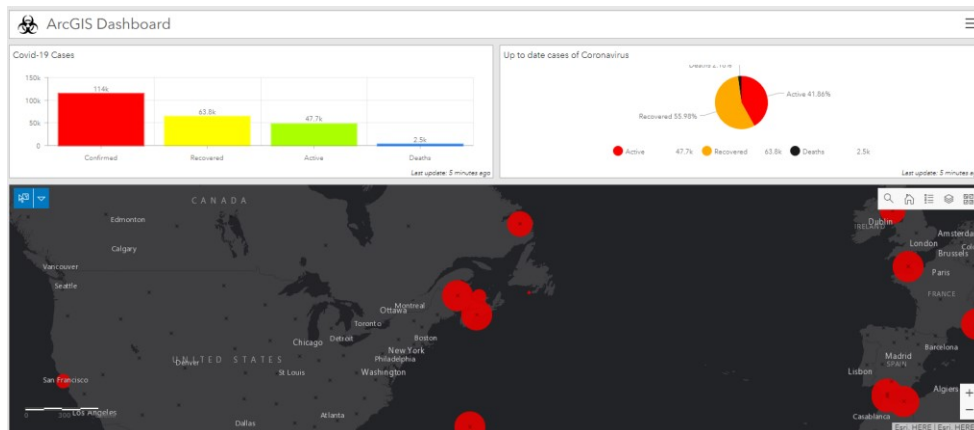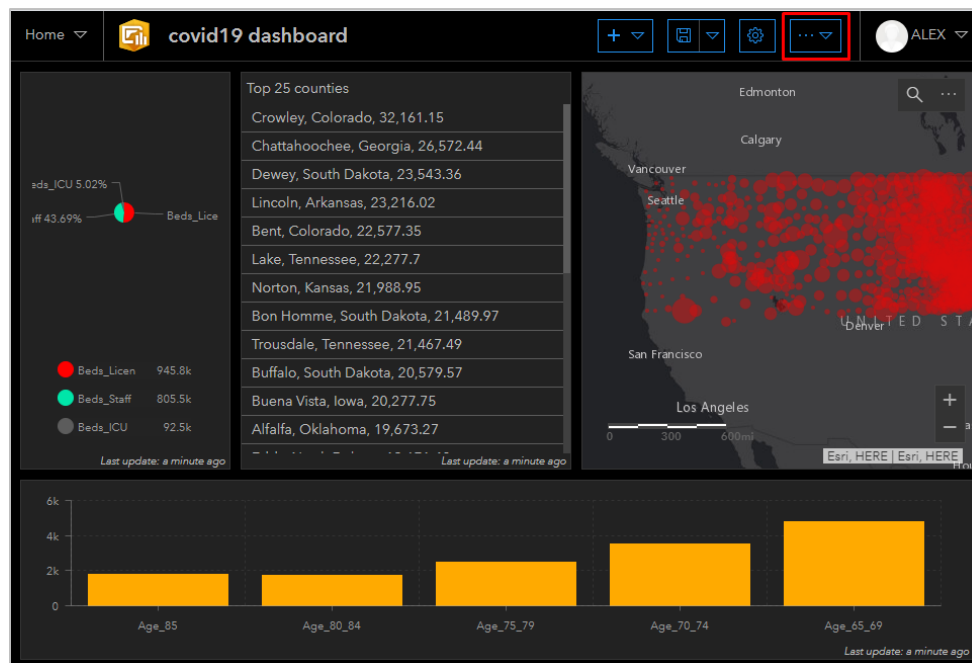

Figure 25

Click the button highlighted in Figure 26 and copy the *Share Link*.

To score 40 points in this exercise, submit a word document with 1) the link to your dashboard, 2) a screenshot of your dashboard, and 3) a paragraph explaining what your dashboard is good for. Highlight its strengths and weaknesses and outline future improvements. You may use your own data, or the Johns Hopkins COVID-19 data as used in this tutorial.

You can go back to your dashboard anytime by logging on to arcgis.com, and clicking the *Apps* icon, then the *Dashboards* icon, as seen in Figures 9 and 10. In the following screen, you can choose to either view or edit your dashboard (pencil icon).