Maps! Mapping Templates Overview and the Projection Map Template

In this video, I'm going to be talking about the different maps that we have in Flourish, and Flourish really has a bunch of different maps that you can use. And they're all slightly different, and do different things, and are good at visualizing different types of data. So, I'm going to go through them so that you have a better idea the next time you want to go and make a map of something, which one you should choose.

I'm starting here on the template-chooser page because this is where you choose which map you would be using. The first one here is our projection map, which is your basic point and shaded regions map. We have a bunch of different starting points here that you can use. Like, you know, Europe, U.S. counties, U.S. congressional districts, states, and sort of different in UK ones as well.

But you can also upload your own data to this map, which we'll talk about it in a different sort of more specific to the projection map video. But you can basically make a map of any sort of area in the world by uploading your own data here.

But this is definitely just your basic maps. If I go in here, you'll see this is just a shaded map of U.S. congressional districts, oddly, or counties, counties, sorry. And then you can also see there are some points on the map as well. So you can mix and match there with those.

So we go back here. The other sort of map we have, which is not like the three maps that we'll talk about in a second, is this connection globe. So I will show this to you now. This is really good for visualizing connections between two different parts of the world. And it's 3-D, and it's cool. It's sort of one of the original classic Flourish templates, which are very visually striking when someone sees them on a web page. And you can play around with it here. It's pretty cool.

Now go back again. So after those two, we have a series of maps, which are all kind of based on the same map tiles, and they all do slightly different things. But I'm just going to show you the marker map right now. But just know the marker map is here, which is good for using it like a locator map, or you can use it with small amounts of data up to a couple of thousand rows.

But the other maps that we have – they're sort of like these and are built on the same tiles, and are also 3-D, and sort of zoomable, and you can kind of turn around in them and stuff, which I'll show you in a second – is this Arc map, which is kind of a connections glab, but it's flat.

And then this point map, which is really good for displaying lots of different and large numbers of rows. There's also sort of an optional time component as well. And then this 3-D region map, which lets you do the same sort of cloral plather region shading that you do on a normal map, but you can use elevation to visualize that as well.

So I'm just going to go in here just to show you what these look like. So this is the marker map. So there are these really awesome 3D map tiles, and you can zoom in and look around the map. You can also pan at different angles, which is really awesome. And then

there's also this optional inset map here in the corner, which you can add geometry for. But yeah, these are really powerful in stories.

In this video, I'm going to be talking more in depth about the projection map template. So I'm starting here in the template chooser. And here's the projection map. It's the second template that you get in the template user because it is one of our most frequently used templates. So I'm going to be talking more in depth about what you can sort of do with the projection map and explaining some of the features of the projection map.

But before I even get into that, I just wanted to start here and template choosers, so that you can see what your options are before you even get into the template.

So as with any Flourish template, we have these starting points for the projection map. And when it comes to a projection map, the starting points are sort of different maps of different places in the world. So we have some Argentinian maps, Brazil, Europe, quite a few U.K. based maps, a bunch of U.S. maps, a London map, a world map. And if the map that you want to make is one of these, then you're sort of set to go right away. You can just click on it and get going.

But if it's not, especially for a sort of non UK, or U.S., or more local news organizations who might be making more sort of local maps of a single city that's not London, you're going to need to use this blank starting point. So this is sort of a blank projection map that you have to upload your own geometry into.

I'm going to show you both, so how to do both things. I'm going to use one of these starting points to show you how the projection map works, and then I'm going to also show you how to upload your own data and talk about the requirements for that.

So imagine I wanted to come here, and I actually wanted to make a map of something that shows the burrows in London. So I'd click on this and I'd get to something that looks like this. This is a map of London's burrows. And the way the projection map works is it has two different layers. So if we look over here on the settings panel, do that. So we have a points layer, which I will enable, and we have a regions layer. So you can upload both point level data to the projection map, and you can upload sort of region or geometric data to the projection map.

When you use a starting point, there's already going to be both geometry. So the geometry in this case of London, and it's burrows in there. There's also always going to be some sort of points data. In this case, it's kind of almost dummy data like the center point in each burrow. But for example, on our U.S. states maps, it's always like major U.S. cities.

And I'm going to hop over the deed sheet to sort of show you how this works. So for the regions, there's always going to be this geometry column, and this is where the actual coordinates and shapes for these regions that are being drawn are contained. So if you use a starting point that's been premade by us, you never really want to touch this column. You're just going to be working with this stuff. But beyond the geometry, just so I can show you, so if I get rid of this setting, you can see the geometry goes way over here on the right. So it needs that geometry. Those polygons or multipolygons to be able to draw the map.

And then after that, we have like normal things that you would expect for column settings. We have a name. In this case, it's the burrow name. And then we have this value setting. This is what the map, the the sort of geometric regions part of the map, is being colored by. So in this case, it's being colored by this C column, which is the percentage of pupils in that burrow, who are like school age kids in that burrow, who do not have English as their first language. It's highest here in Tower Hamlets, which is interesting.

And this sort of value here can be either a continuous ,number column or it can also be a categorical column. So this, for example, D column would be a categorical value because we have inner and outer London. So whether or not the burrow is inner or outer London. So if I go to the regions there, you'll notice here that the color type is continuous and sequential.

We have a bunch of different coloring options. If I wanted to change this, I could change it to bend. And there's a couple of different options for the bend color type, color palette type. There's also this diverging option. So if you had negative and positive values, you can do that.

But I want to show this to you, because to change the value to a categorical value to color by a categorical value, sometimes the thing that people miss is that you actually have to change both the value here in the datasheet. So if I change this from C to D, but you also have to change this color type to categorical. Otherwise the template doesn't really know what to do with the categorical data that it's reading from from the data sheet.

So that's something to definitely be aware of. We get a lot of help me emails from people who are doing everything right, but they're not actually changing the color palette. And then in this case, you get this color picker, where you can choose a color palette like you would with any normal Flourish chart.

And there's a bunch of other options for the regions there. So there's sort of pop-up options. You can add shadows and stuff like that if you want. And if you want to add metadata, you can always add that with the metadata column settings. So now when I hover, I'm getting the people with non-English first language again. So that's the regions there.

Now I'm going to move over to the points layer and explain how that works. So the points layer is always going to need latitude and longitude, so you can see here that we have latitude and longitude columns. And those are put into the correct column settings here. I would always tell you to make sure you're getting the right one because we have longitude first and then latitude. So sometimes you run one and then you're like, "Why my dots are showing up?" And then beyond that, there's a bunch of different options. So there's always this value, which is what the dots are being sized by. And the named column, you can get rid of it if you don't need it. It's just just a name column. We can also change the color of the dots. If you had some sort of other categorical option for the dots, you could change it and add the color. I just added the name change to show you that they can change.

And there's also metadata option as well. So any points layer? You can do sort of similar things. You can do the regions layer.

Let me go back and make this color some sort of category. You're also gonna get this same sort of color palette picker that you would get anywhere in Flourish. That's only if you

have categorical data for the color. If not, you can do things like change this to some hideous green color and make them completely opaque, if you want. You can make them really, really light. You can barely see them.

There's all different options to customize the map. So you can also do things like add headers, rows and everything like that. You can turn off the legends. You can not show size legends.

There's all these different options that you'd expect in a Flourish template. This is sort of the normal, easy to make. You don't have to do very much. You just have to sort of customize your settings, and you kind of ready to go.

The more complicated option is this blank one, which I will show you right now. So the first thing to know is that geometry should be uploaded to the regions layer here. See how it's completely blank. As a GeoJSON file. So GeoJSON, which would either have ".GeoJSON" or ".JSON" as the file extension, and it needs to be an unprojected GeoJSON file. We have a bunch of tips on our blog posts about the projection map for making GeoJSON files from things like sheet files and whatnot. But just so you know, it should be an unprojected GeoJSON file. You'll get a bunch of errors, and your map kind of won't show up if it's not a GeoJSON file and if it's not unprojected GeoJSON file.

So in this case, I have a good, clean unprojected GEOJSON file, and I'm going to upload it and do overwrite current sheet. And there we go. So this is a map of Chicago neighborhoods, and you'll see a lot of familiar things. So the first column is pulling out this multipolygon, and that's the geometry column. And that's what's actually drawing the map. Then my names are here in the community column, and then area is currently this C-value column. And it's all the same numbers. So it's kind of drawing the entire map the same color.

But there you go. It's kind of as simple as that. Something else that you should know is that unlike in other Flourish templates, this data sheet can merge data files. So if I have this, then I can actually delete all of those rows. If I had this, which is what Flourish read the GeoJSON as, but I wanted to add other data so that I can color this as a cloroplath, Flourish can actually match rows together, which is really cool. So I'm going to show you how that works.

So after you upload your geometry, the next thing you want to do is click this and input your data again. And this may feel a bit weird the first time you do it, but I promise you it will work. And then I have another CSV here on my computer that has the same community names with a bunch of other data about those neighborhoods. So I'm gonna click this, and this is the most important part. Instead of overwrite current sheet, I want to click merge with current sheet. And then I'm going to choose the community, the sort of names that should match each other. So these are both community area names. And these are just the first couple, so it doesn't have to be in the same order. This is just giving you a bit of a preview of what the names are. If it's on the same order, it's totally fine. It should still be able to match them and merge the data sheets together.

So I'm going to click merge, and it's telling me this is great. It's telling me that 77 rows were imported. That's perfect because it's not telling me that any were not matched. If there are some rows that don't have a match in the other sheet, it will tell you here that it threw them away.

But it didn't throw any away because they match perfectly, so that's great. And now you can look in here and empty columns that have all this other information about each of these neighborhoods, which are things that I can add to my map. But instead of this area column that I don't need, it's kind of useless, I'm going to get rid of it. And now I'm going to instead color this by this D column, households below the poverty line. And you can see over here how this switched, so now I'm coloring the map by the percentage of households that are below the poverty line.

So that's pretty awesome. It's definitely worth pointing out that you can also do multiple different values here. So if I wanted to show a bunch of different things on one map, say I wanted to show households below the poverty line and also the unemployment rate, I can add that to the value. And now I have this drop down menu where I can click between the two values, which is pretty cool. So instead of having to make a story to put all these together, you can just do it on the same map. That's pretty awesome.

And the last thing I want to show you was just inporting CSV data again, of point data. So I have another CSV here, and then upload to the point sheet. And it has a bunch of different latitude and longitude for homicides, I believe, in Chicago in 2017. So let's see. You can see that this isn't drawing. I'm not exactly sure what's going on. Oh. So this is perfect. So, you don't see any points here because in my data sheet, I have latitude and longitude. But here in Flourish, the default is to have longitude before the latitude. So all I have to do is switch these in my points. It should start show up. I don't have anything to size the dots by, so it wasn't liking what I was giving it.

But here you can see now all these dots, which are all of the different homicides that took place in Chicago over the course of a year. And I can color them by, you know, location, type of location, or whatnot.

So I think this might be the longest video in the entire series, but I think it's really important to do a video which showed you both using a premade starting point and uploading your own data because there are quite a few different places where you can trip up. And I wanted to point them out and make sure that you have an idea of where they are, so you don't make them or stumble over them.

We have a really great blog post about the projection map, which actually includes another video about the projection map, which I definitely recommend watching, if you're interested in making projection maps of your own. I hope this helped.