

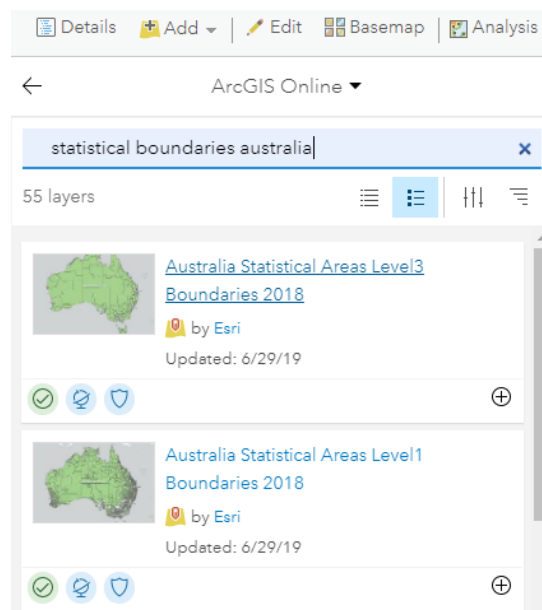
Creating a choropleth map at the local level

This document contains step-by-step instructions on how to create a choropleth map at a local or suburban level.

Before creating a choropleth map at a local level, it is important to consider your goals and why a choropleth map would be useful. When collecting data in the field in a local area, it may be better to instead map your data as point data, rather than through the use of polygons over larger areas.

Before you begin

If you are looking to create choropleth maps using statistical areas (e.g. SA1, SA2, SA3, SA4), postcode areas or state areas, ArcGIS Online has a number of boundary levels already prepared for you to use. Search 'Statistical boundaries Australia' in **ArcGIS Online** and add the required one to the map. Then refer to our [professional development page](#) to learn how to create a choropleth map.

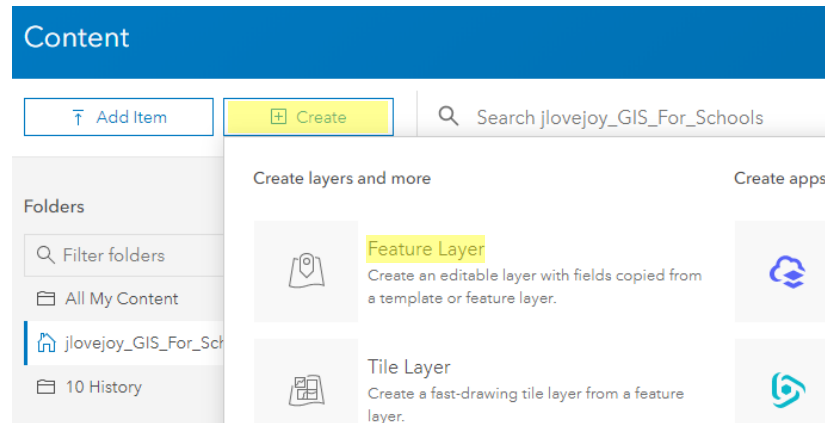


If you are planning to create a choropleth map at a local level (i.e. suburb) then continue through this guide.

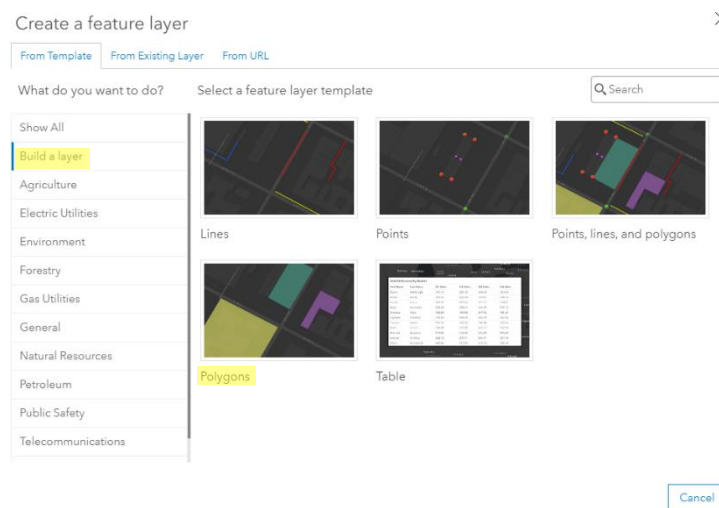
Creating your new feature layer in ArcGIS Online

In order to create a choropleth at a local level (e.g. in one suburb), you will need to first create a new feature layer before opening a new map. In this guide, you will create a choropleth map that displays the amount of litter in different parts of the suburb of Labrador, Queensland.

1. In ArcGIS Online, go to **Content**. Click **Create** in the top-left corner and select **Feature Layer**.



2. Select **Build a layer** from the side panel and choose **Polygons**. Click **Create** and then **Next**.



- Set your map extent over the entirety of the area you will be collecting data from. Do this by panning and zooming on the map as necessary. Alternatively, position the map so that all of Australia is displayed. Once you are happy, click **Next**.

Create a feature layer

Pan and zoom this map to set the map extent for the new hosted layer.



- Enter a title, tags and summary for your feature layer. Save it in an appropriate folder. Click **Done**.

Create a feature layer ×

Specify a title, tags, and summary for the new hosted layer.

Title:

Tags:

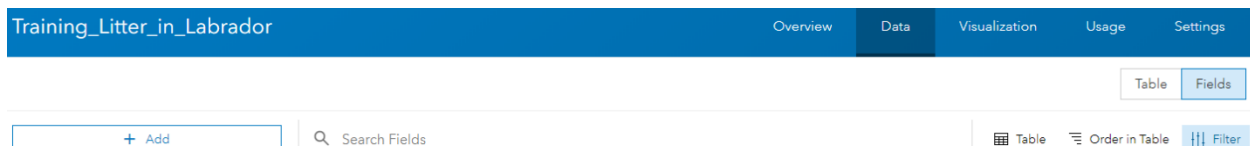
Add tags

Summary: (Optional)

Categories:
 + Assign Category ▾

Save in folder:

- The feature layer's item page will automatically open. Next to **Overview**, click **Data**. Then click **Fields** in the top-right corner. Then press **+ Add** in the top-left corner.



- Add any fields you may need for your polygon areas. For example, create a field for amount of litter, following the steps in the image below. Select **Integer** as the 'Type' as data collectors will be dealing with whole numbers. Press **Add New Field** once you've completed this step.

Add Field
✕

Field Name:

Display Name:

Type: ▼

Default Value: (Optional)

Allow Null Values:

Add New Field
Cancel

Note: if you wish to add additional fields, you can do so here before progressing. Examples for additional fields could include 'pH levels' (select **Double** for Type as this allows decimal numbers) or 'Observations at data site' (select **String** for Type as this allows data collectors to provide text responses; change the **Length** of characters as desired).

Add Field
✕

Field Name:

Display Name:

Type: ▼

Default Value: (Optional)

Allow Null Values:

Add New Field
Cancel

Add Field
✕

Field Name:

Display Name:

Type: ▼

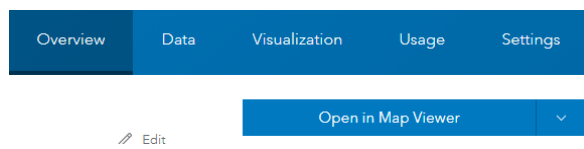
Length:

Default Value: (Optional)

Allow Null Values:

Add New Field
Cancel

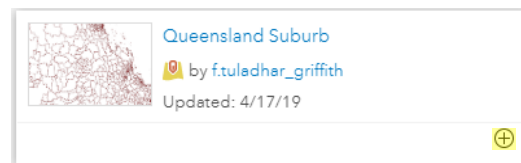
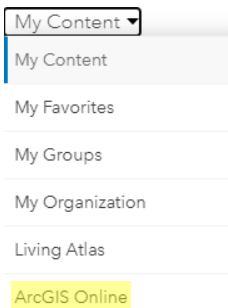
- Return to **Overview** and select **Open in Map Viewer**



Preparing your feature layer for use

- Once your map opens, navigate to **Details**, then **Content**. You will notice that your new feature layer appears in the content column. However, it is not evident on the map just yet.
- Before you configure your polygon feature layer, you must first identify the boundaries of the local area you are collecting data from. Go to **Add** and choose **Search for Layers**. Select **ArcGIS Online** from the drop-down menu.

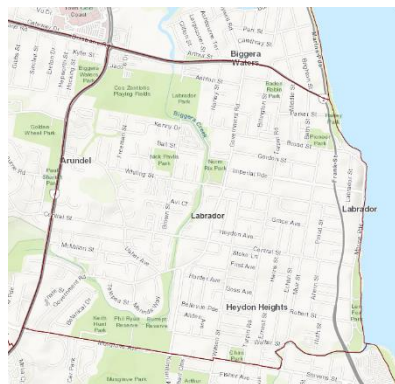
From here, search 'suburb Queensland' in the search bar. Add the one pictured below to your map.



- Locate the suburb of Labrador by using the address search bar:

Labrador, Queensland, AUS


- Refocus the map extent so that the entirety of the suburb of Labrador is evident.



12. Ensure that your polygon feature layer is still on. Then click **Edit**.



13. Click **New Feature**. Move your cursor to the map. Begin to create your polygon area. Click each time you want to create a point. Double-click to finish your polygon.

You can snap the points of two different polygons together by holding down **CTRL** and clicking the two vertices you wish to 'snap' together. See the  below for an example of snapping.



14. As you create each new polygon, you will be given the option to add data to each polygon. As this is a training exercise, you may choose to just add random data as seen in the image below. If you've collected data at several locations, you may choose to use that instead. Alternatively, you may wish to go and collect data at your specified collection points before continuing.

Ensure each polygon has data included. For example, this training resource will assume that you have entered data in the 'Amount of Litter' field for each polygon.

Training_Litter_in_Labrador ✖

Amount of Litter

Observations at data site

pH Levels

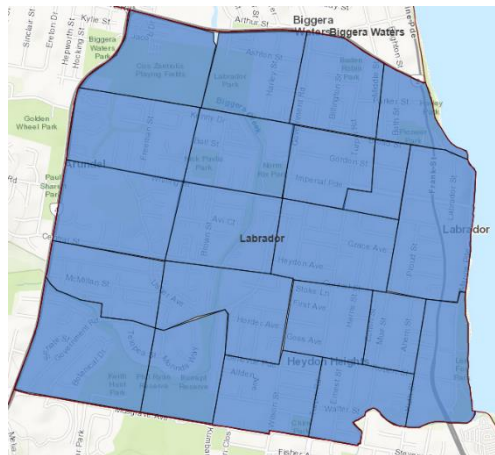
Attachments:


None

Add: No file chosen


Edited by [jlovejoy_GIS_For_Schools](#) 17 minutes ago

15. Once you have finished creating your polygons – and have entered data for each one – you should have something that looks like the image below. Notice that the entirety of Labrador has been covered with self-made polygons. The shape that these polygons take is completely up to your goals and needs.

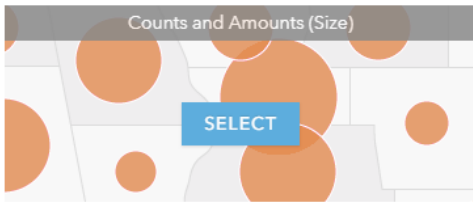



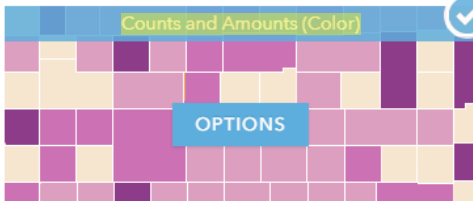


16. Go to the **Content** tab. Hover over your 'Litter in Labrador' layer and select the **Change Style** icon . For **Choose an attribute to show**, select the 'Amount of Litter' field. For **Select a drawing style**, select 'Counts and Amounts (Color).'

Change Style
Training Litter in Labrador

1 Choose an attribute to show
 
[Add attribute](#)

2 Select a drawing style

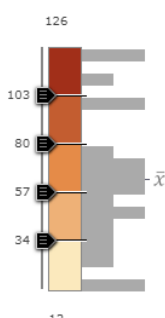
Counts and Amounts (Size) 


Counts and Amounts (Color) 
 

17. By clicking **Options** you are able to create specific classes for your data and choose the colour symbology.

Amount of Litter

Divided By: None



Symbols

Legend

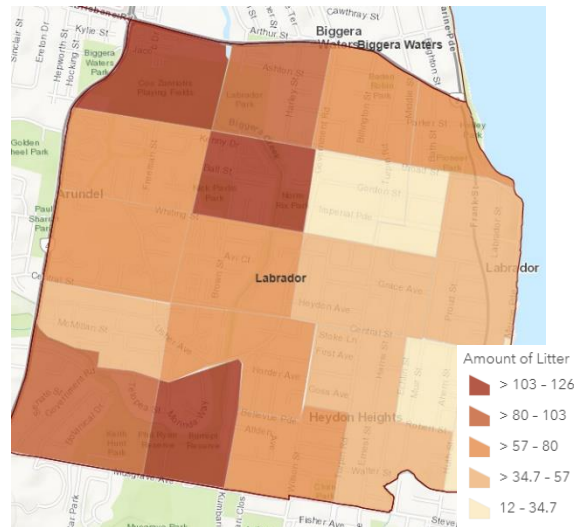
Classify Data

Using Manual Breaks

With 5 classes

Round classes: Select an option

Draw features with out of range or no value.



18. Click **OK** and then **DONE** to finalise your changes.

Saving your map

Remember to save your map. So far, you have simply been creating polygons for your new feature layer. In order to view the map – along with any other feature layers you may have included – again you will need to **save** your map.

You have now successfully created a choropleth map at a very local scale. As stated at the beginning of the guide, it is important to consider your goals as to why you may want a choropleth map at this scale. Depending on the data you plan on collecting, it may be better to map your data as ‘points’ rather than ‘polygons.’

In this guide the polygons were formed randomly, without much forethought. It is important to consider how to define your polygon shapes and sizes and why this is the most suitable way to do so before your data is collected.

Next Steps:

Request a free ArcGIS Online Account for your school:

Australian schools can request a free ArcGIS Online account as part of Esri Australia's Classroom GIS Initiative. A school subscription provides additional map layers, content, features and privacy. Learn more about ArcGIS Online, and apply for your ArcGIS Online School subscription at <http://esriaustralia.com.au/education>

Speak to Esri Australia's Education Program Manager:

Australian schools can seek additional support or speak to our Education Program Manager by emailing education@esriaustralia.com.au.