

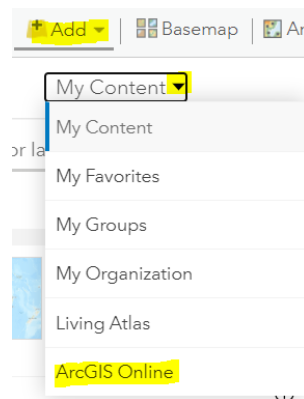
Finding boundary layers for choropleth maps

This document contains instructions for locating boundary layers in ArcGIS Online. Boundary layers portray the extent of any area and can also be used to map additional data to. You can join your own data to boundary layers to create features like a choropleth map.

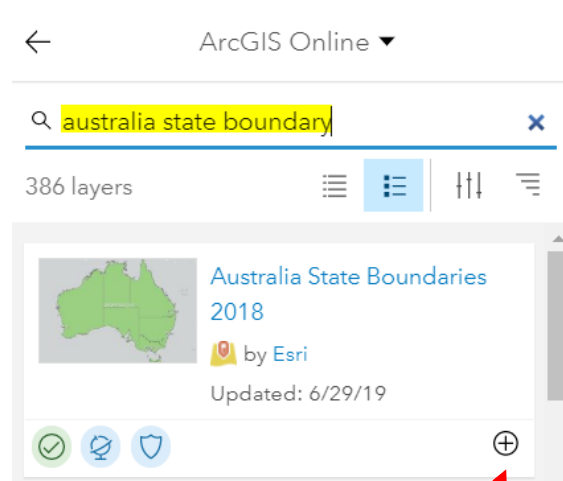
Once these boundary layers are located, you can also use tools like ‘Snipping tool’ to copy and paste a blank boundary layer to a worksheet or exam paper. This blank boundary layer could serve as a mapping or choropleth activity. Students could populate the boundaries with data under exam conditions or in regular lessons.

Locating boundary layers

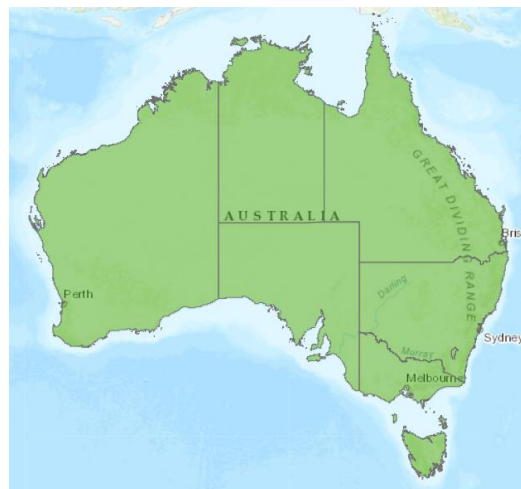
1. In ArcGIS Online, go to **Add** and select **Search for layers**. Choose **ArcGIS Online** from the drop-down menu.



- In the search bar, use generic search terms that incorporate the type of boundary layer you are looking for. For example, try using 'Australia state boundary' if you were looking for the state and territory boundaries of Australia.



- Press the + icon to add it to the map.
- Your boundary layer has now been added to the map.



Some useful boundary layers

Type the titles – as they appear in the images below – into the search bar to find the desired layer.

World boundaries




Australian boundaries



Australia Country Boundary 2018
by Esri
Updated: 6/28/19



Australia State Boundaries 2018
by Esri
Updated: 6/29/19



Australia Statistical Areas Level1 Boundaries 2018
by Esri
Updated: 6/29/19



Australia Statistical Areas Level2 Boundaries 2018
by Esri
Updated: 6/29/19




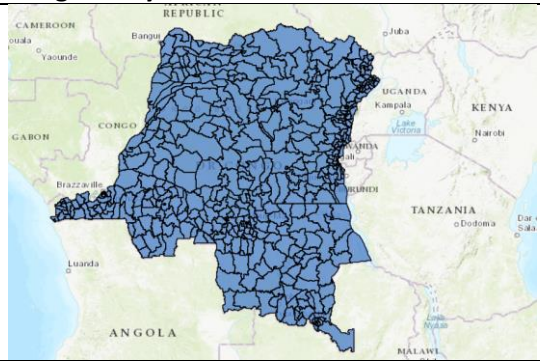


Australia Statistical Areas Level3 Boundaries 2018
by Esri
Updated: 6/29/19



Australia Statistical Areas Level4 Boundaries 2018
by Esri
Updated: 6/29/19

Miscellaneous boundary layers

You can find boundary layers for all countries at a range of levels. Sometimes what you are looking for has been shared in ArcGIS Online. At other times, you may find a data provider or online source that allows you to import the boundary layer into ArcGIS Online. It is recommended that you use general search terms when you go to search for a boundary layer that is more obscure. Furthermore, try swapping the order and phrasing in and out to see if new words yield a new result. Some examples are below:



Search terminology	Search results	Image of layer
<p>'DRC health zones'</p> <p>Looking for boundary layer that reflects health zones in the Democratic Republic of the Congo</p>	 <p>DRC_Zone_de_sante_0401 2019 by lopesi_unhcr Updated: 8/29/19</p>	
<p>'China province boundary'</p> <p>Looking for a layer that shows Chinese provinces</p>	 <p>China Province Boundaries 2018 by Esri Updated: 7/3/19</p>	

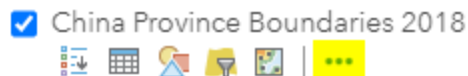
Using your boundary layers for printable choropleths

Finding a blank choropleth map that is suitable for exam requirements can be challenging. You can repurpose a boundary layer so that it can be used as a blank choropleth map that students can populate under exam conditions. Follow the steps below to learn how.

1. Search for the boundary layer that is appropriate for the task question. Add it to your map in ArcGIS Online as per the steps in the previous section.



2. Go to **Content** and hover over the boundary layer title. Select the **Change style** icon. 
3. Click on **Options** under **Select a drawing style**.
4. Change the Symbol colour to white. This will allow students to populate the choropleth. Click **OK** and then **Done**. 
5. You may want to add labels to each boundary area. Hover over your boundary layer title and click on the **More Options** icon.



6. Choose the **Create Labels** option. Customise your labels by choosing what text in the layer is to be displayed (name), the font and font size. You may need to experiment with the sizing of the font as it can get in the way.

Label Features

Text: NAME

Font: Arial

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Halo 1



7. You can also change your basemap so that the boundary layer is more identifiable.
8. Once you are happy with the changes, use 'Snipping Tool' to cut the desired visual and paste it into a question and response booklet (example below).



9. You may decide that having labels for all areas – in this case provinces – is not necessary and that students may only be adding data for a limited number of areas. You will be required to create your desired labels in a separate document over the top of the visual you have pasted i.e. Microsoft Word.

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.