esri Australia

GIS For Schools

Syria's Refugee Crisis (skills lesson)

Lesson Map: http://esriaustralia.com.au/education/SpatialActivity28

Note: A log in is required for this lesson. A completed map can be viewed here and the lesson can be altered where appropriate.

Engage

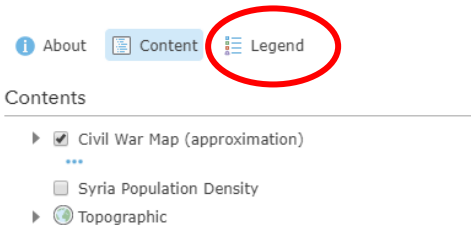
Prior Knowledge

? Use your computer to research the Syrian refugee crisis. What is the Syrian refugee crisis and how did it begin? The Syrian refugee crisis stems from the devastating consequences of the Syrian Civil War. The Syrian Civil War started as a pro-democracy demonstration against President Al-Assad, when the government used deadly force to shut down the protests. This started a civil unrest across the nation. Since then, it has escalated to involve an array of groups, governance and countries. More than 400,00 people have been killed or are currently missing and presumed dead. Now, 12 million people are in need or assistance and around 5 million have fled Syria.

Explore

Conflict Map

→ Click on the Lesson Map URL above to open the map. In the 'Details' pane, under 'Content', tick the first checkbox to turn on the layer 'Civil War Map'. Turn off all other layers.



→ View the legend to see which groups are armed in what areas.

? This layer was based off March 2018 data. At this time, what group held the control of the largest portion of Syria? The government forces held the largest area.

? Turn on the layer 'Syria Population Density'. Do more people live in areas

Download student worksheet here.

Time
35 minutes

Activity
Develop ArcGIS Online skills, whilst exploring the population flows of the Syrian refugee crisis.

Learning Outcome
Students will be able to:

- List key groups in the Syrian Civil War and observe their current spatial distribution
- Add refugee destination country data to their map
- Explore which countries are taking the highest amount of refugees
- Search for other data to add to the map to investigate what life is like in the destination countries (i.e. GDP)

ACARA Curriculum Link
Year 12 Geography: Global Transformations

ACHGE091 | ACHGE093
ACHGE094 | ACHGE116
ACHGE117 | ACHGE118

Teacher Feedback:
To share your feedback on this, or any Spatial Activity, please contact education@esriaustralia.com.au

controlled by the government or areas controlled by other rebel groups? More people live in areas controlled by other rebel groups.

➔ Lets explore how the Syrian Civil War has changed over time. Search for the layer 'Conflict Map 15/9/2015'. Do this by clicking Add > Search For Layers. Make sure to change the search requirements from 'My Organisation' to 'ArcGIS Online' as highlighted below.

? What is the biggest difference you notice between 2015-2018? Students own answer, however ISIS has lost significant territory.

Skills

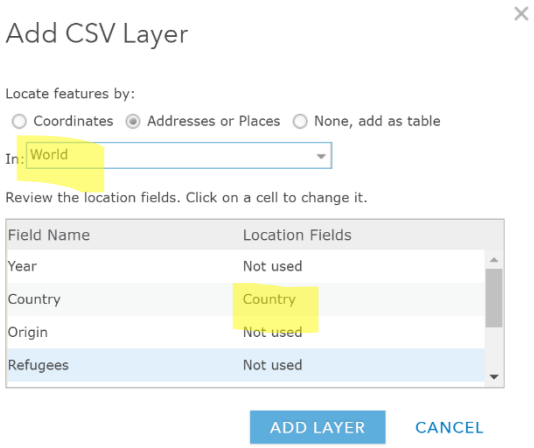
Adding UNHCR data to the map.

➔ Download the data set linked here (Data from UNCHR).

➔ The data set contains the total amount refugees that fled from Syria into other countries during 2016.

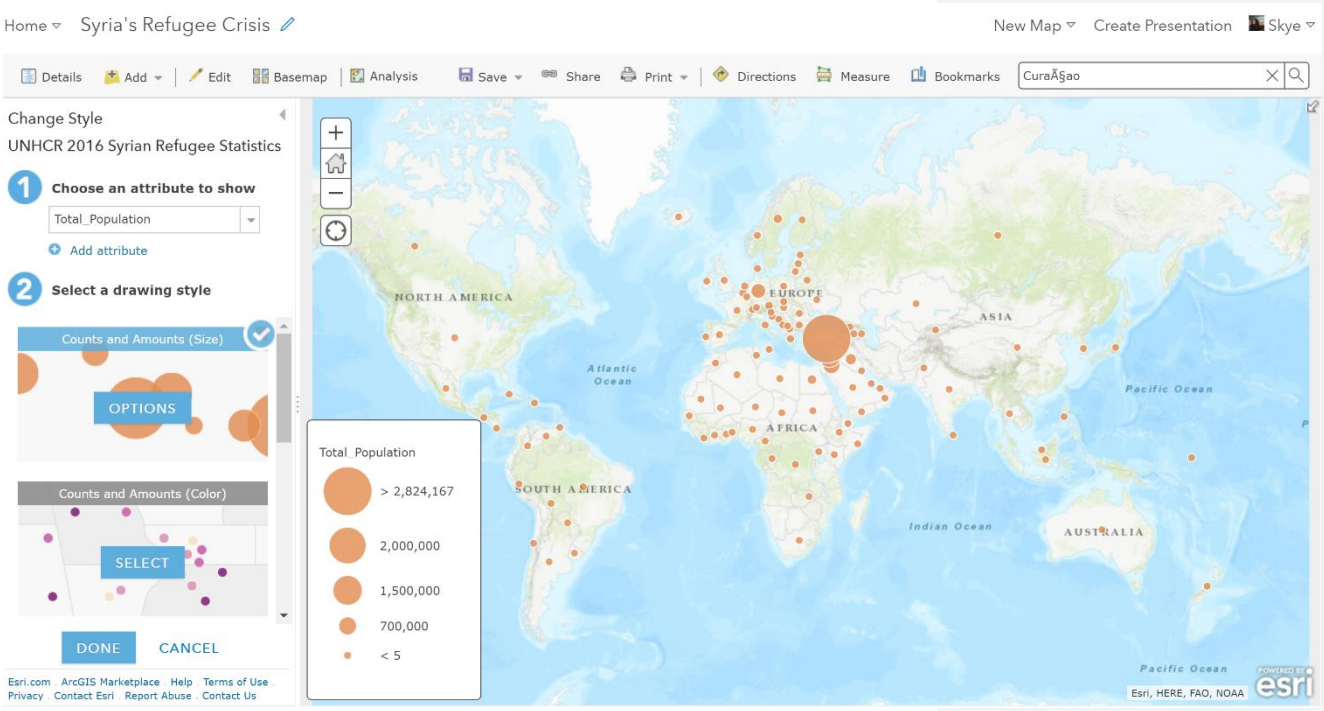
? There is not a reliable and complete data set for a later year as this point. Why might this be? It is very difficult to estimate how many Syrians have fled their country in illegal border crossings, to a range of countries, making it harder to compile a world-wide data set.

- We are going to upload this data set. Click Add > Add From File > Choose File > Import Layer. You need to tell ArcGIS Online to find the data in 'World' and which Excel column to find the locations in, so select 'Country'. See highlighted.

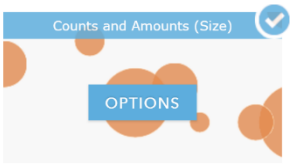


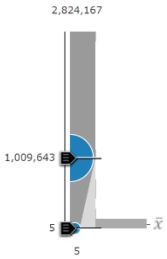
- 2 features are not added to the map as they are regions, not countries. Select 'Ok'.

- It should look something like this:



➔ Because the data set ranges from 0 to nearly 3 million, the scale focuses mainly on Turkey. We want to manipulate the data to see countries that have accepted over 1 million refugees instead.





➔ Select 'Options' and slide the scale down to around 1 million. Press 'Ok' and 'Done'. It should change the size of a few more countries.

? Which countries have accepted the highest population of refugees?

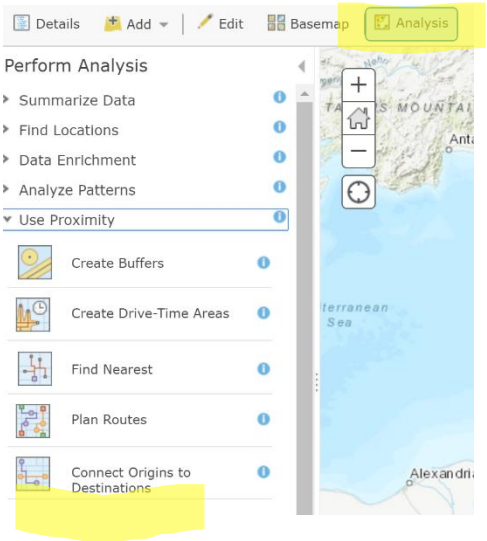
1. Turkey - 2824167
2. Lebanon - 1007749
3. Jordan - 648836
4. Iraq - 230935
5. Egypt - 116013

– We want to represent the data we have just uploaded to show the 'population flows'.

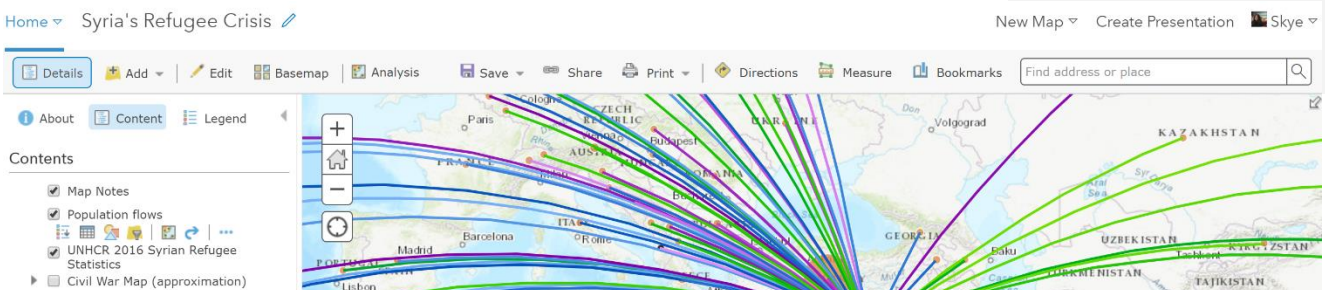
– We are going to drop a pin on Syria, so we can do this. Click Add > Add Map Notes > Type a title 'Syria' > Create > Click Stickpin > Drop on Syria > Select Close

– Select the Analysis tab > Use Proximity > Connect Origins to Destinations

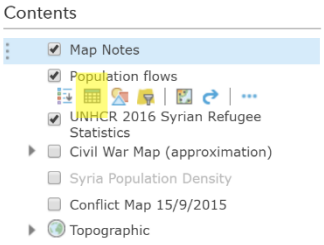
– ArcGIS should automatically populate the fields, but give your layer a name (Step 4) and click off 'Use current map extent'.



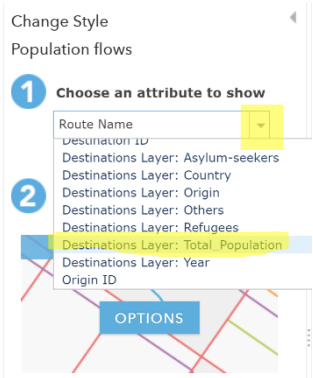
– It should take a few seconds to load and when the computer is done processing, it might look a little crazy with lots of colour (see below).

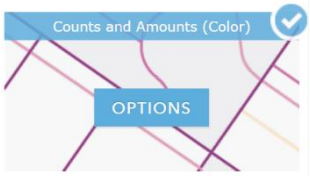


- We want to change the population flows to represent the total number, instead of random colours. We are going to change the style of the flows to do this. Click the title of layer so the icons appear and then click the 'Change Style' button as highlighted to the right.



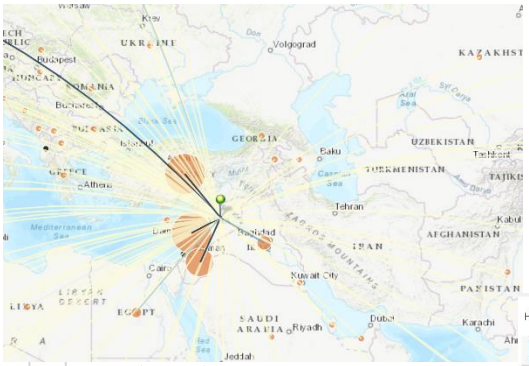
- Select 'Destination Layer – Total_Population' from the drop down arrow, as highlighted.

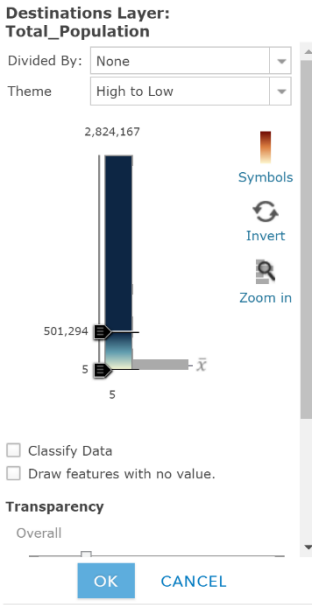




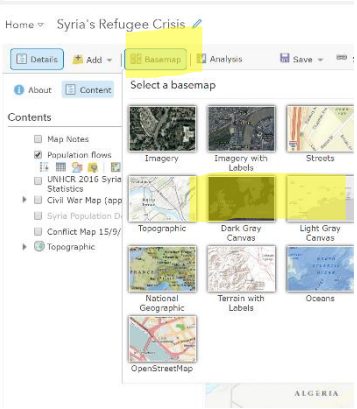
- Because only a small amount of countries had more than 1 million refugees enter their country, we are going to change the style to 'Counts and Amounts (Colour)' to represent the data clearer.

- Just as before, we are going to change the scale to show countries with more than 500000 refugees. Now it should look like the image below.

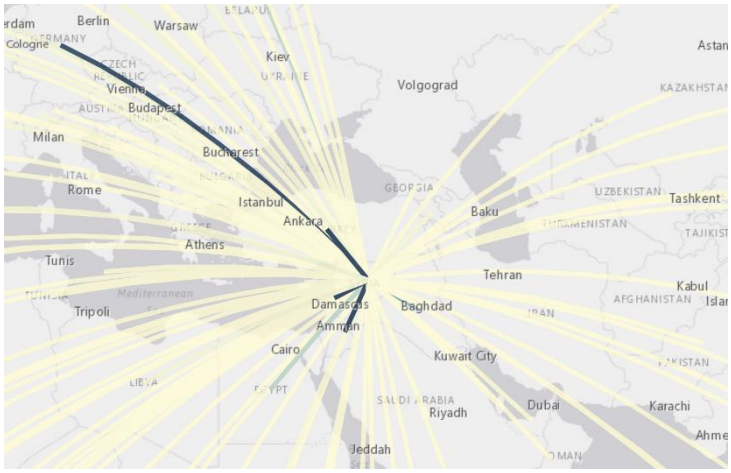




- Click 'Ok' > 'Done' to keep your changes. It can be hard to see details, so turn off all of the other layers, apart from our population flow layer we just created. Changing the basemap to a simple background can also make the flows clearer.



- It should look something like this when you are done. Congratulations! You have created a map layer that tracks population flows out of Syria.



Extend

Secondary layers

- Now we have a completed map layer, we can search ArcGIS Online for secondary layers to make our map more meaningful.

? Turn on the layer '2016 GDP (US$)'. Are richer or poorer countries taking in refugees? Do you agree or disagree with this? Should they be doing more?
Students own answer.

- Let's see if you can find any other layers that can let us know about life in the origin country or destination countries of Syrian refugees.

- Search for layers the same way you did on page 2, when you were finding an earlier version of the conflict map.

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