

INSTRUCTIONS FOR USING GIS

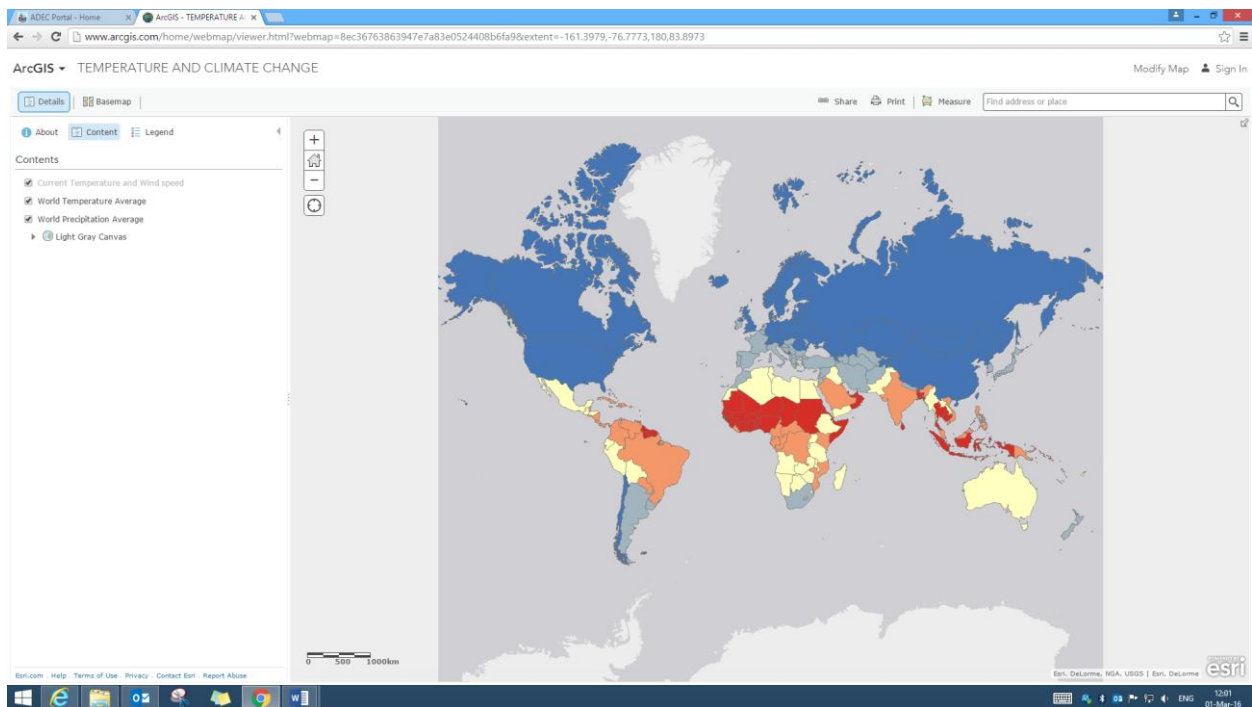
1. Open Firefox or Chrome.



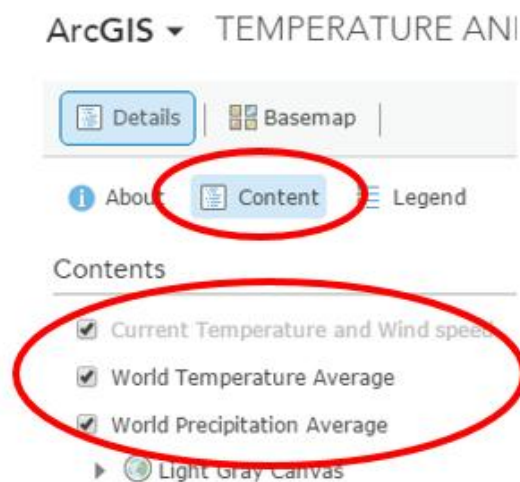
2. Go to

<http://arcg.is/1T5w2bj>

3. Your map should look like this:



4. The **'Content'** button gives 3 layers of information. Students can add or remove layers by clicking on the tick box.



5. The legend shows the meaning of the colours on the map

ArcGIS ▾ TEMPERATURE AND WIND SPEED

Details | Basemap | Legend

Legend

Current Temperature and Wind speed

World Temperature Average

Annual

25.326675 - 28.299874
23.390216 - 25.326674
18.713501 - 23.390215
8.811247 - 18.713500
-9.142714 - 8.811246

World Precipitation Average

Annual

1819.439004 - 3268.266166
1162.803559 - 1819.439003
721.112489 - 1162.803558
434.795215 - 721.112488
32.913309 - 434.795214

Means the parts coloured red on the map have an average annual temperature between 25.3 °C and 28.3 °C.

6. Zoom in on the map by either scrolling up and down on the mouse or by using the + and - on the top left hand corner of the map.



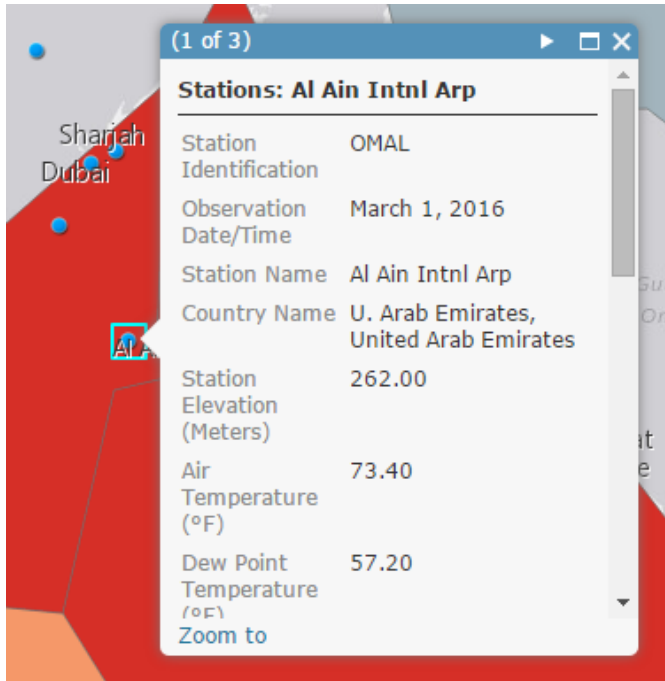
ArcGIS ▾ TEMPERATURE AND CLIMATE CHANGE

Details | Basemap | Legend

Map navigation controls: +, Home, -

Map showing temperature distribution in the Middle East region.

7. Click on a blue dot on the map for a particular city or place. A box with information will appear.



The box contains information on a number of aspects of weather. If all 3 layers are on, the box will give the information for all 3. Students can move from the information in one layer to the next by clicking on the arrow



Students can scroll down within the box to see the full range of data available.

Students need to be careful about whether the data is provided in degrees Fahrenheit or degrees Celsius when making comparisons.

8. To convert from Fahrenheit to Celsius, students can use Excel.

	A	B
	Temp in Fahrenheit	Temp in Celsius
1		
2	74.3	$=(A2-32)*5/9$
3	75.2	

- Enter the temperature in Fahrenheit into cell A2.
- In cell B2, write the formula for converting Fahrenheit to Celsius $C = \frac{5}{9}(F - 32)$. Type as in the picture on the left.

	A	B
	Temp in Fahrenheit	Temp in Celsius
1		
2	74.3	23.5
3	75.2	24
4		
5		

- Click on the square in the bottom right hand corner of cell B2 and drag down. This will calculate the temperature in Celsius for any values you have in column A.

9. Students can now zoom in and out on various places in the map to gather the data that they require. They need to consider whether they are collecting data in two data sets that they can compare (First Task) or data with two variables for a scatter graph (Second Task).