

A brief introduction to free map viewers

ISTC Topic:

1.11

In this Chapter you will learn

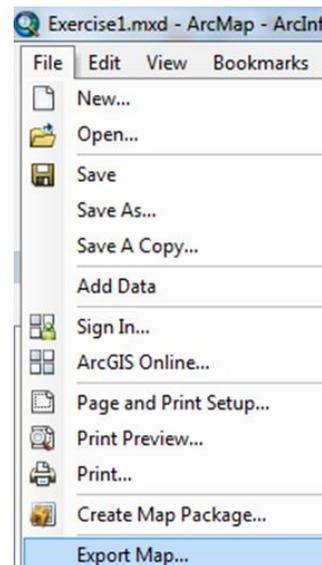
- How to export maps to pdf and view then in Adobe Acrobat
- How to publish maps using Publisher and view maps in ArcReader
- How set up a map in ArcGIS Explorer and ArcGIS Explorer Online

1. A comparison of “free” map viewers

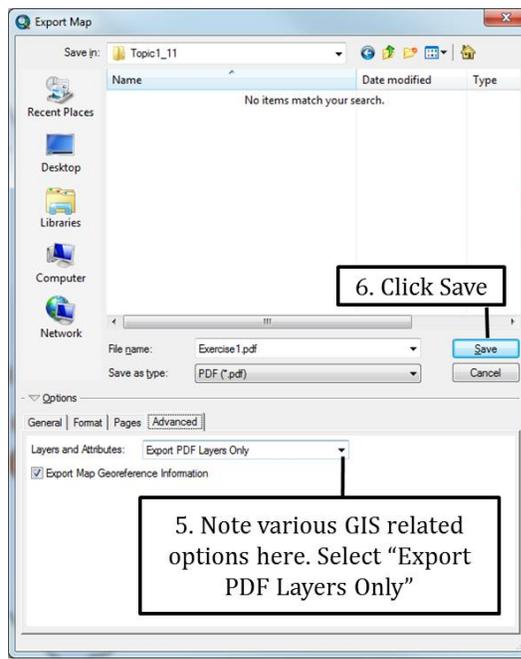
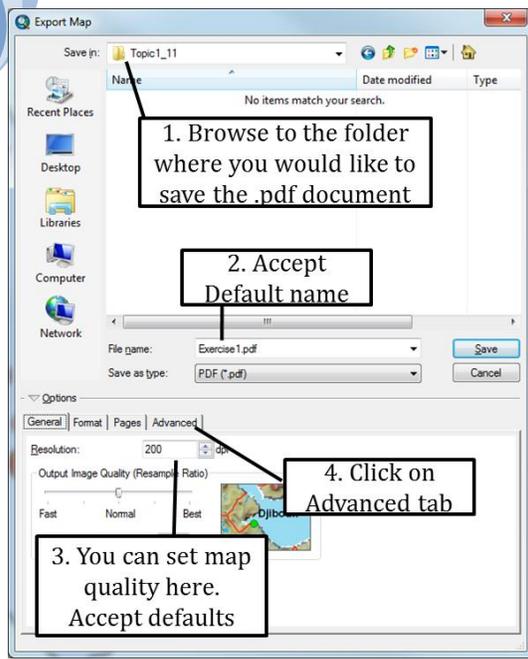
There are a variety of ways to view spatial data, some better than others, and some more expensive than others. Most of you may be familiar with different ArcGIS desktop software packages developed by ESRI such as ArcView, ArcEditor and ArcInfo. Those packages are not free, but allow users a wealth of tools to import, symbolize, analyze, query and share spatial data. Other GIS viewers developed by ESRI are ArcReader, ArcGIS Explorer and ArcGIS Explorer online. Of those viewers, ArcReader has the most capabilities for querying data; however, you can only view maps that have been published using a “publisher extension” to ArcGIS which costs about \$2,000. ArcGIS Explorer and ArcGIS Explorer online are completely free but have limited search capabilities. Additionally, you can view maps that are in PDF format using Adobe Acrobat. The Resources section at the end of this chapter will provide you with the internet addresses you need to download those various map viewers.

Exercise 1: Exporting a map to PDF and viewing it in Acrobat Reader

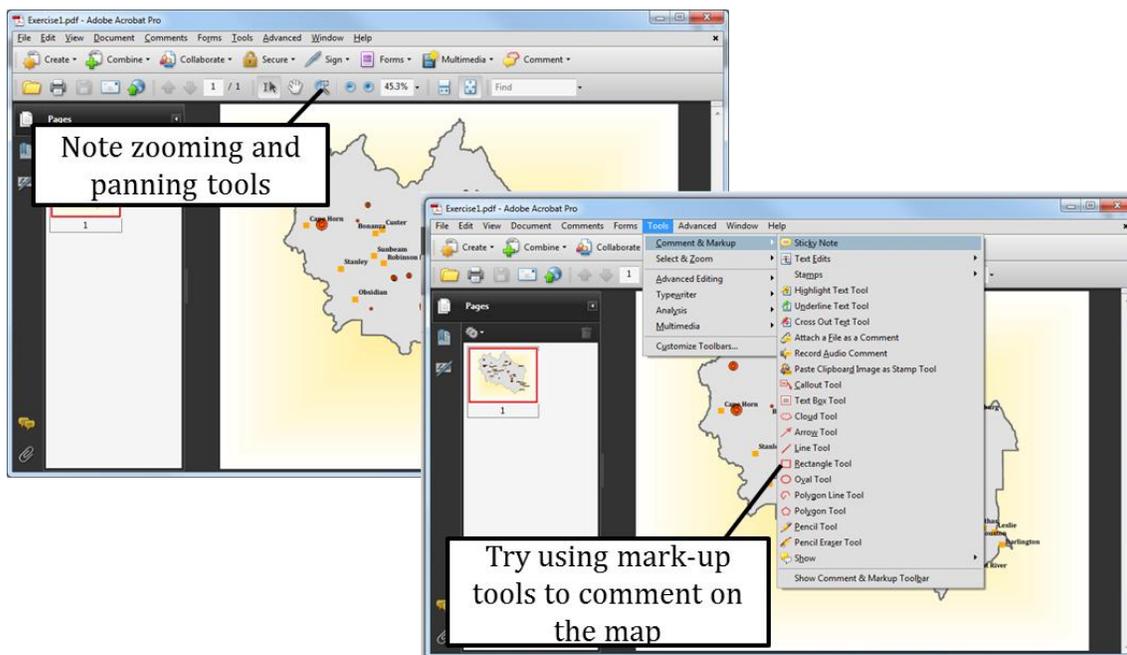
1. Start ArcMap and open Exercise1.mxd.
2. Click File > Export Map as shown on the right.
3. Export you map to PDF as shown at the top of the next page



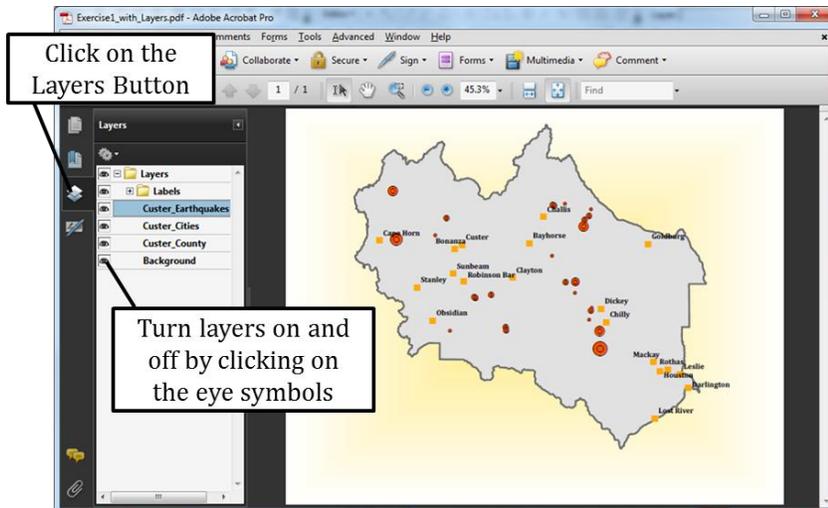
1.11 Exporting a map to PDF format



4. Close ArcMap and start Adobe Reader to view the map you just created.
5. In Adobe click File > Open and browse to the folder where you saved Exercise1.pdf.



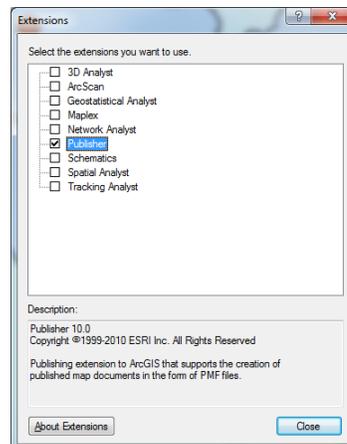
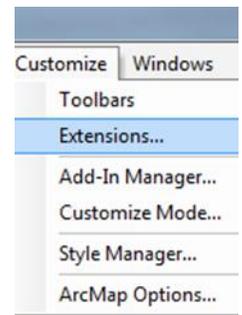
6. Play with the panning, zooming and mark-up tools as shown above. Click on the layer button and try turning layers on and off by clicking on the eye symbols as shown on the next page.



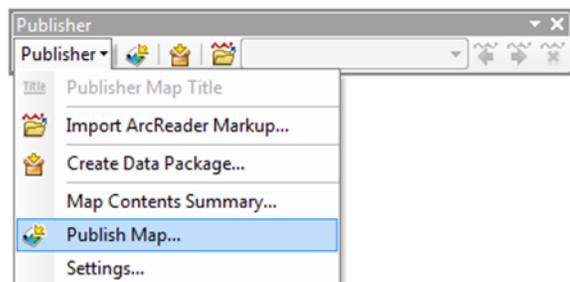
1.11 Publishing a map and viewing it in ArcReader

Exercise 2: Publishing a map and viewing it in ArcReader

1. Open Exercise1.mxd if not already open. The first step towards publishing an ArcReader map is setting up a map document with the layers and symbology you want. In our example we will publish Exercise1.mxd as it is now.
2. Click on Customize > Extensions... as shown on the right.
3. Click the check-box for the Publisher extension as shown above. Then click Close.
4. Click again on "Customize". Select Toolbars and click on Publisher. The Publisher Toolbar should now have been added to your interface.



5. Click on the drop-down button next to Publisher and click "Publish Map..."
6. Save your map as "Exercise1.pmf".
7. Start ArcReader. Click File > Open and open Exercise1.pmf. You should now see a map very similar to the one you published.



8. Note that many of the tools you see, such as zooming, panning, identify, find and measure are the same as those available in ArcMap as shown on the right. Additionally, you are able to print maps.

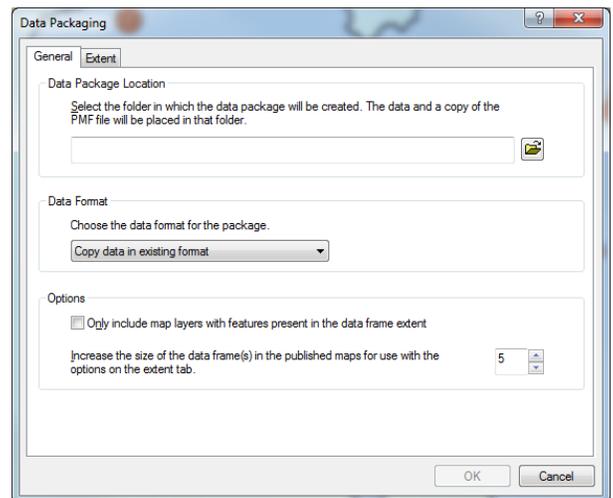
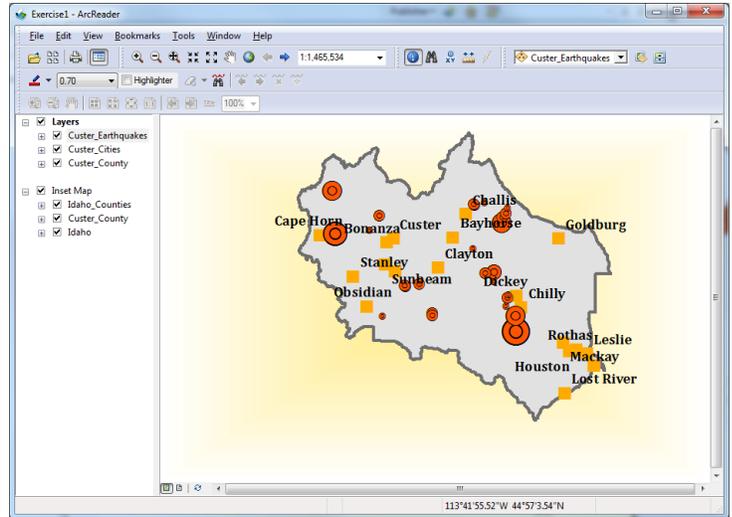
9. Right-click on “Custer_County” in the table of contents and click on Properties. Note that the ArcReader provides for a limited amount of properties – for example you are not able to change the labeling or the symbology. Additionally, you are not able to open attribute tables. Attributes are still available, but need to be accessed through the Identify and Find tools.

10. The Exercise1.pmf file only includes pathways to GIS datasets, information on how to symbolize data and a few other properties. It is important to understand that the .pmf file does NOT contain the actual data. You can solve this problem by creating a data package as explained in the next couple of steps and then sending someone this entire data package.

11. Go back to ArcMap and click on the drop-down box next to Publisher. This time select “Create Data Package”. Select Exercise1.pmf and click Open.

12. In the Data Packaging dialog box which is shown on the right, specify where you would like to save your data package. Choose “Copy data in existing format” for the Data Type and accept all other defaults. Click OK. This package now contains the map as well as all the GIS data that goes along with this.

13. Close ArcReader.

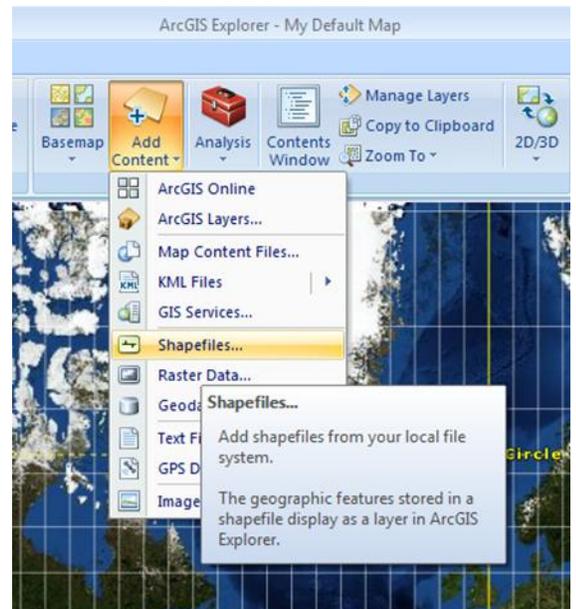




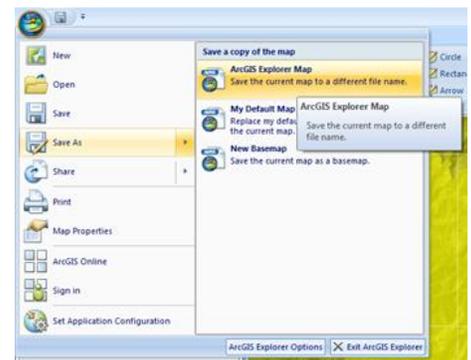
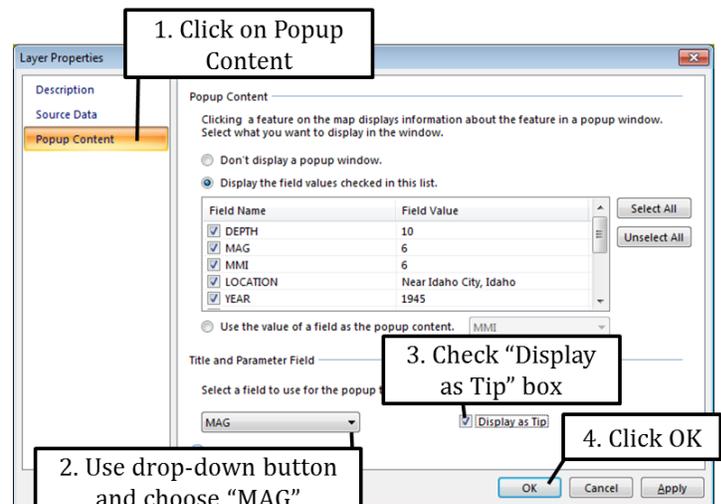
1.11 Exploring ArcGIS Explorer

Exercise 3: Exploring ArcGIS Explorer

1. Open ArcExplorer. You will see a map of the entire world.
2. Click Add Content > Shapefiles. Add the Idaho shapefile and note that the map automatically zooms to Idaho.
3. Add Custer_County and Custer_Earthquakes to your map.
4. Zoom and pan to Custer County. This is different than in ArcMap since you are missing your zoom and pan buttons. Instead roll the wheel on your mouse forward to zoom out, and backwards to zoom in. Click and drag your map if you need to pan.

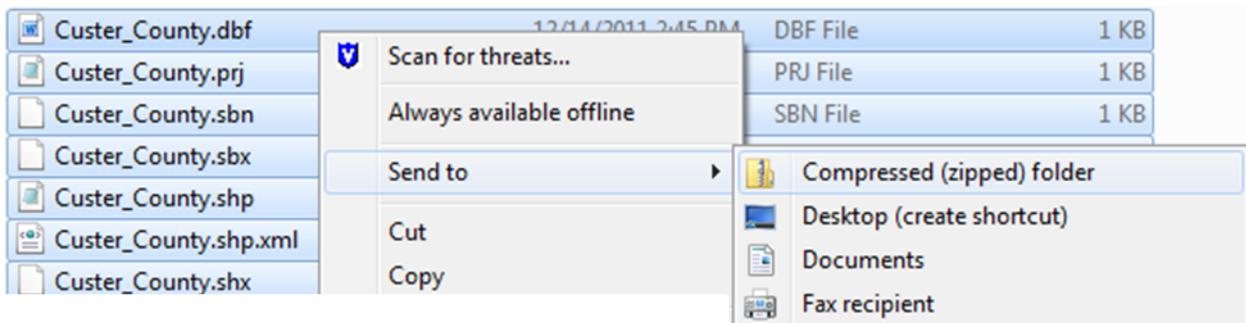


5. Right-click on custer_earthquakes to open its Layer Properties. Display map tips for the MAG attribute field by following the instructions on the right-hand side.
6. To test the map tips hover you mouse over the various earthquake features and note that you can read the magnitude associates with each earthquake.
7. Click on an earthquake on the map to activate the identify tool.
8. Right-click on the custer-earthquakes layer again and choose "Symbol". Change to symbol to one that you like.
9. Note that ArcExplorer has a number of tools such as Measure, mark-up and Basic Analysis Tools. Also note that there is a "Find" button. However – unlike the find button in ArcMap – you cannot use this find button to query your data. This is an important shortcoming of this free viewer.
10. Save your map if you want by clicking on the ArcExplorer button in the top-left of your screen and choosing Save As > ArcGIS Explorer Map.

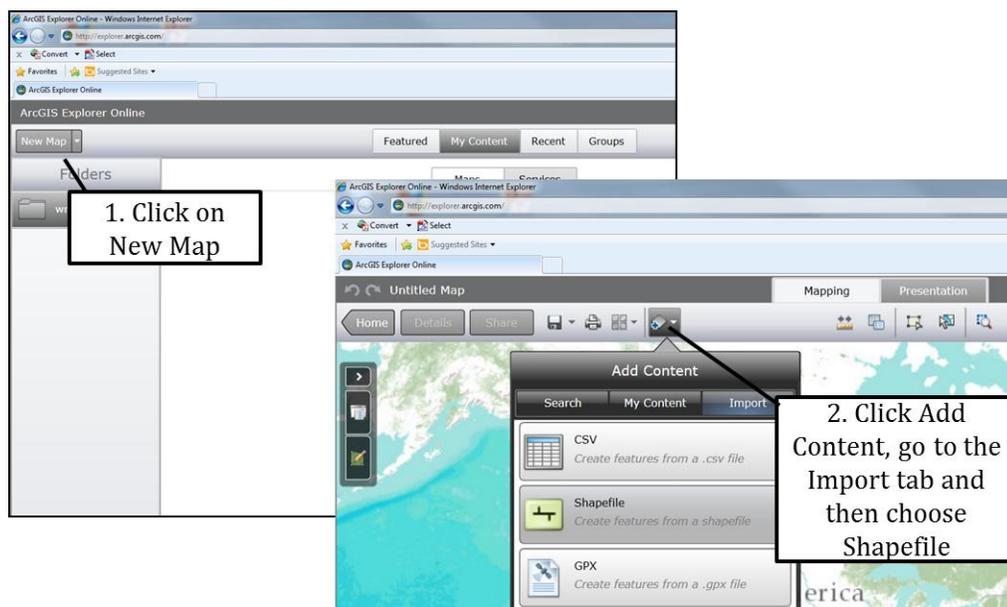


Exercise 4: Exploring ArcGIS Explorer Online

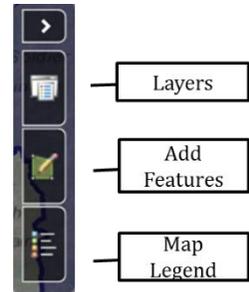
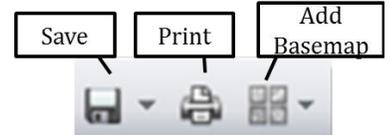
1. Go to <http://explorer.arcgis.com>
2. For this tutorial you will need to have a free ESRI Global User Account. Visit www.esri.com. In the top right corner do a search for "Global User Account" and then click on "Esri Global Account" which will be near the top of the search results. Then choose "Create an Account" near the top.
3. We will upload some of your local shapefile to ArcGIS Online. This site only accepts shapefiles that have been zipped up. Open Windows Explorer (hint: click on your computer's "Start" button in the bottom left corner of your screen and then choose "Computer" or "My Computer") Browse to and then open the topic 1_11 folder.
4. Click on all seven Custer_County files to select them. Then right-click and choose Send to > Compressed (zipped) folder as shown below. A new file called "Custer_County.zip" should now have been added to your Start folder.



5. Also zip up the Custer_Earthquakes shapefile.
6. Go back www.explorer.arcgis.com where you should now see the following window:



- Browse to your Start folder and add the Custer_County shapefile you
- When prompted choose to "Generalize features for web display". Click OK.
- Import the Custer_Earthquakes shapefile as well. Your map automatically zooms to Custer County where you can see the various Earthquakes.
- Click on any of the Earthquakes (remember to click near the bottom of the push-pin) to view all attributes associated with this earthquake.
- Click on the Save Icon as shown on the right. Call you map "Earthquakes in Custer" and click Save.
- Note the buttons on the left hand of your screen (and shown here on the right in on this page) to manipulate layers, add features or adjust the map legend.
- Follow the instructions below to try out the opacity slider and to customize your pop-up.



1. Click on "Layers" button

2. Click on ">" to display details for the Custer_Earthquakes layer

3. Play around with the opacity by sliding the bar left and right

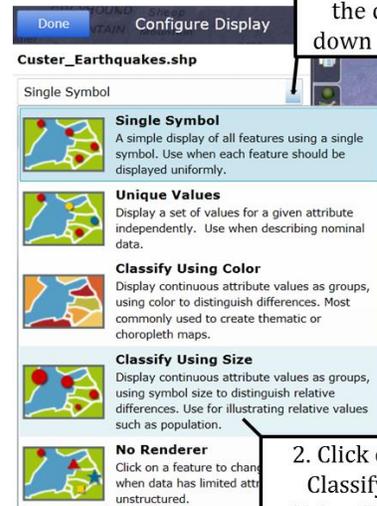
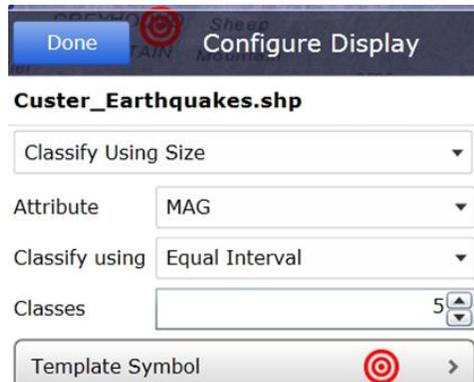
4. Click on "Configure"

5. Click the button in front of "Custom"

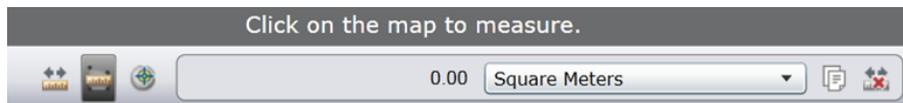
6. Type "This earthquake had a magnitude of". Then click the blue + button and select "MAG"

7. Click OK. Then click on some earthquakes on your map to try out the new pop-ups

- Click on Display > Configure and then choose Classify Using Size as shown on the right.
- Click on Template Symbol and choose the red "Bulls Eye" as shown below to classify based on the Magnitude.

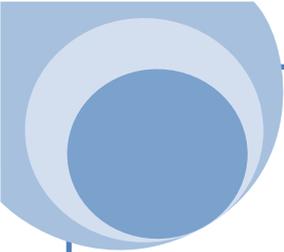


- Click Done.



- Click on the Measure Tool and experiment with measuring distances and areas. When you are done click on the blue "Done" button.
- Play around with the symbology of the other layers and other features and tools available to you in this map. A future ISTC topic is planned for a more in-depth treatment of using ArcGIS Explorer Online.
- Save your map again and then click on the Share button near the top-left of your screen.
- Share your map with the public, or set up a Group (Go to Help in the top right corner of your map > Working with Groups for more information). Note that this dialog box provides a link. Copy this link. Close your web browser and open Anyone who now clicks on this URL will see your map.
- If you wish to embed your map into a webpage or blog in HTML then click on the "Embed" button on the Share dialog box shown on the right.





2. Resources

- ArcReader: <http://www.esri.com/software/arcgis/arcreader/> Note that will need to set up a (free) ESRI account before you can download the reader. This reader can only read maps that have been published by the Publisher extension which can be purchased through ESRI.
- ArcGIS Explorer: <http://www.esri.com/software/arcgis/explorer/download.html>
- ArcGIS Online: <http://explorer.arcgis.com/>
- Adobe Acrobat Reader: <http://get.adobe.com/reader/>