

Working with Map Elements

ISTC Topic:

3.10

In this Chapter you will learn

- How to create and manipulate map elements such as titles, north arrows and scale bars.

1. Moving and positioning map elements

Figure 1.1 shows the main components, or **elements**, of a map. Those elements always include a main map body, a north arrow, a title and information about the scale of the map. Additionally, maps can also include inset maps, legends, metadata and other information that is displayed as text, tables or graphs.

When making a visually pleasing map it is best to think of the different map elements as puzzle pieces that need to fit together. Consult topic 3.9 for background information and tips on how to make a visually pleasing map that effectively communicates a message.

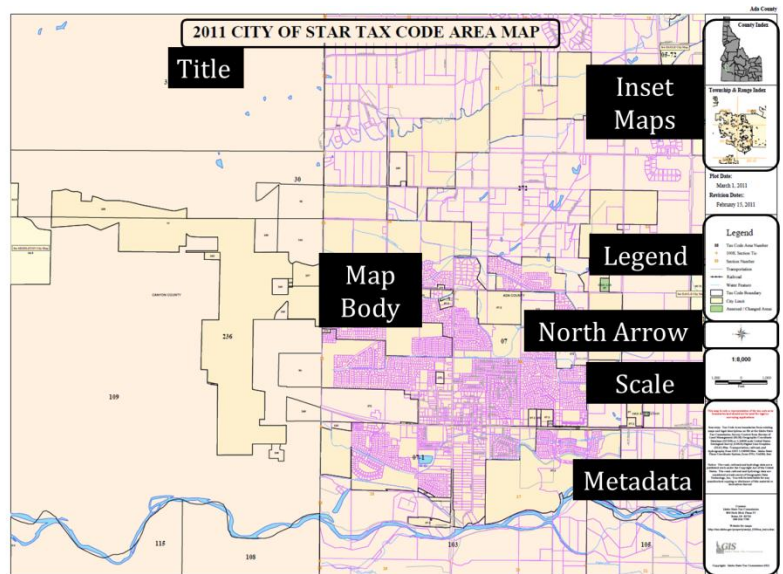


Figure 1.1. Tax Code Areas map for the City of Star illustrating the various map elements commonly found on a map.

Exercise 1: Moving and Sizing Map Elements

1. Start ArcMap and open Exercise1_Moving_and_Sizing_Map_Elements.mxd in the Topic3_10 folder. Switch to the layout view (hint: View > Layout View) and look at the elements on this map.

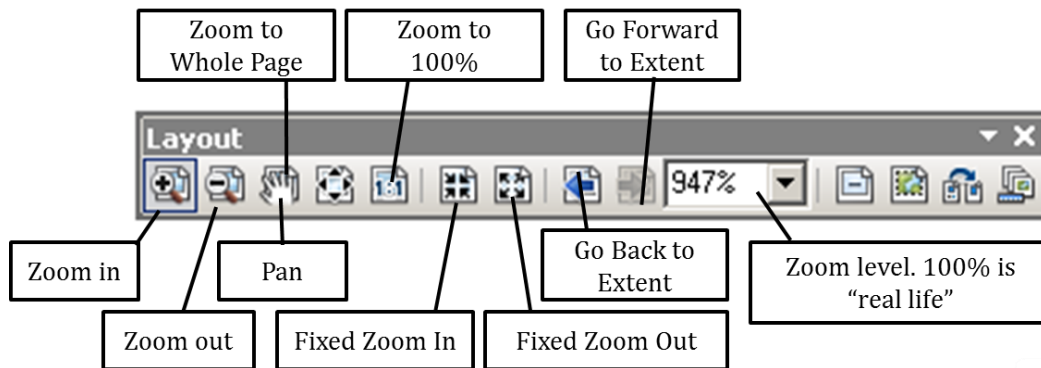
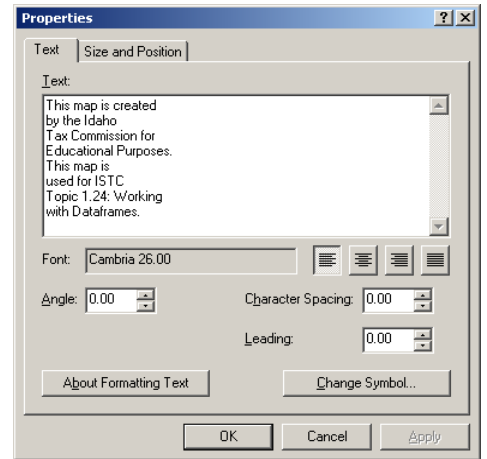


2. Using the Select Elements Tool move and size all the elements so they fit together in a way to produces a well-balanced, visually pleasing map.



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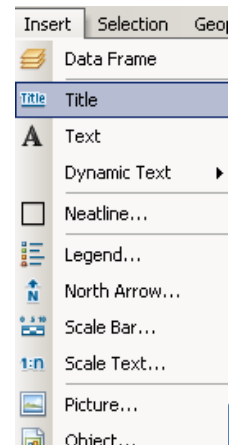
- Note that you can change the carriage returns a text elements by double-clicking on them to open their properties. You can insert carriage return by going to the Text tab of the properties dialog box, for example as has been done in the figure on the right.
- When you are done, save your map in the Topic3_10 folder. If you are doing this tutorial in a classroom setting leave you map open and take a look at the map compositions of your fellow students.
- There are many right ways to map this map. One possible outcome can be found in the Exercise1_Possible_Map.mxd in the intermediate folder.
- Next we will take a look at the Layout toolbar and the options it provides to zoom in and out of you map page. The main tools are listed below. Remember that you are zooming and panning around the “piece of paper” that shows your map and its map elements. You are not zooming around your map geographically for example from one county to the next. Practice using the various tools on the Layout Toolbar. If you do not see this toolbar click on Customize > Toolbars and click on “Layout”.

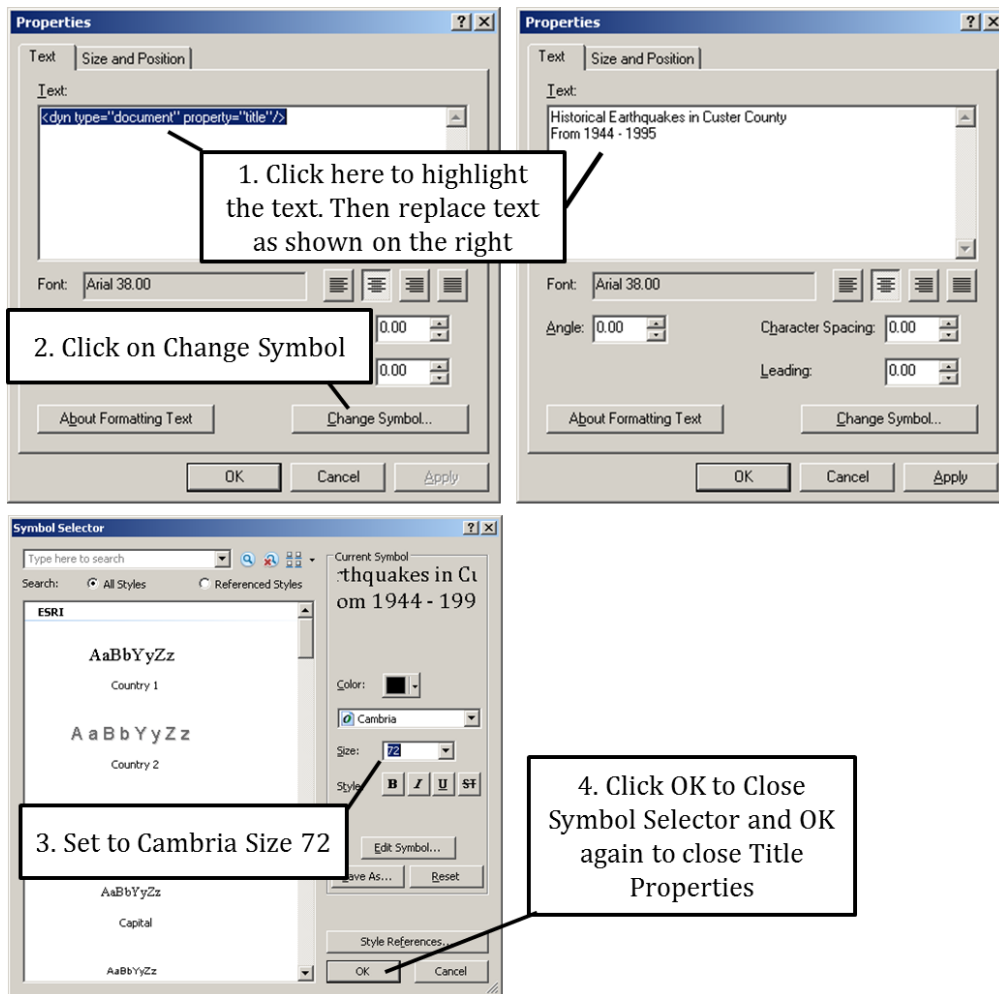


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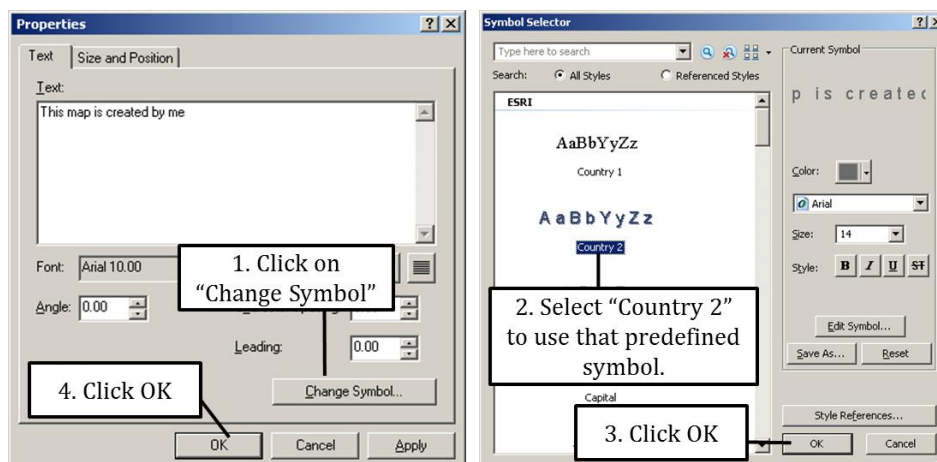
Exercise 2: Inserting map elements: Title, Text, Picture, Scale and North Arrow

- Start ArcMap and open Exercise2_Adding_Map_Elements_to_Your_Map.mxd. Switch to the layout view to see a map body and an inset map, but not much else. Let’s start by adding a title.
- Click Insert > Title as shown on the right.
- Follow the direction below to change the font type and size for the title. To open the properties for the Title (or pretty much any map element except for the data frames) simply double-click on the element.

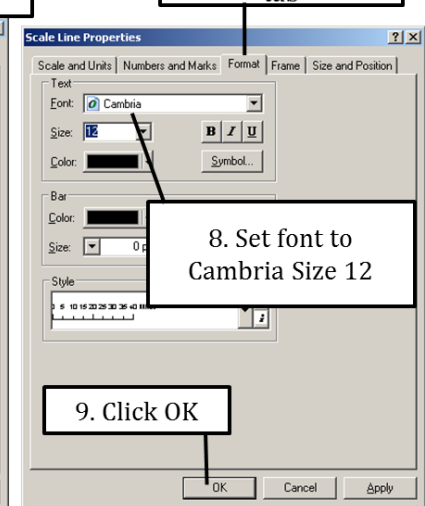
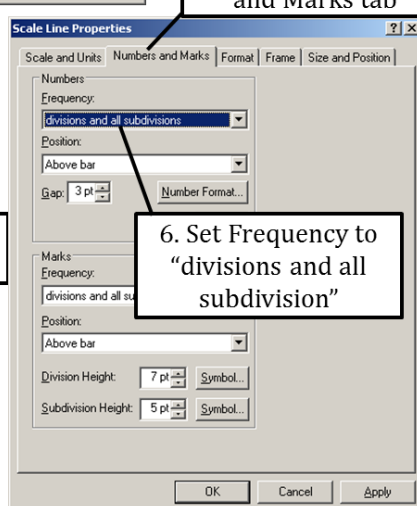
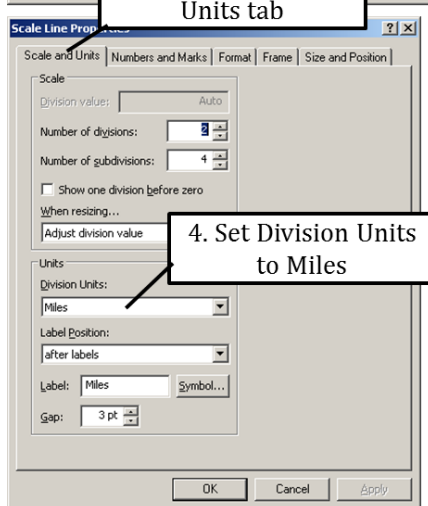
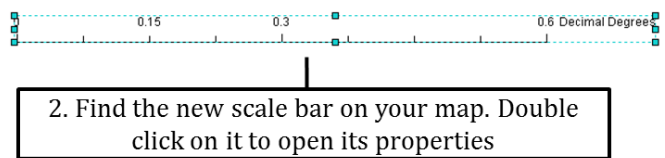
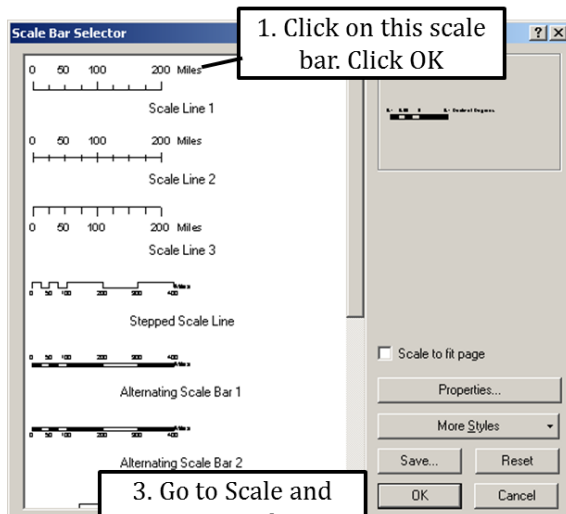
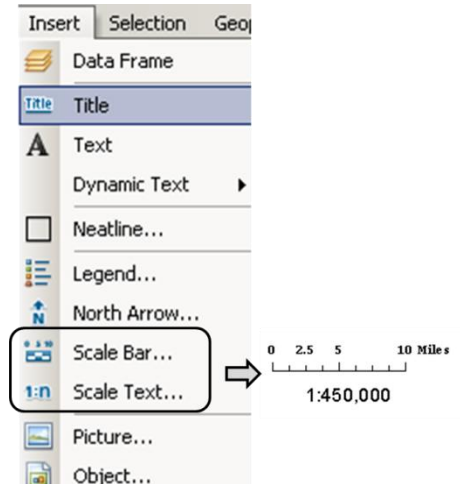




- To add other text box click on "Insert" along the top of your screen and choose "Text". You will probably have to squint to see the text element on your map. It will appear bigger once you type out the text you want, for example "This map is created by me". Click Enter. Then use the Select Elements tool to grab the text box and move it to the side of your map where you can see it better.
- Double-click on the text element to open its properties. Use the instructions below to change the font and font size to a predefined symbol.



- Many maps include photos, logos, graphs or other type of pictures. Click Insert > Picture. Scroll to the Start folder in insert "GIS_is_GREAT.bmp". This file was created using the free Paint program that you can find in Start > Programs > Accessories. Size the picture any way you like and move it to a corner of your map.
- To insert a scale click Insert. You have the choice of inserting a scale bar, or a scale text. Examples of either type of scale are shown in the figure on the right. First we will insert a scale bar by clicking Insert > Scale Bar...
- Follow the directions below to format the scale bar.



9. Click Insert > Scale Text. Pick any style you like. Once placed on your map double-click on it to open its properties. On the Format tab change its Font to Cambria Size 18.

10. Click Insert > North Arrow.

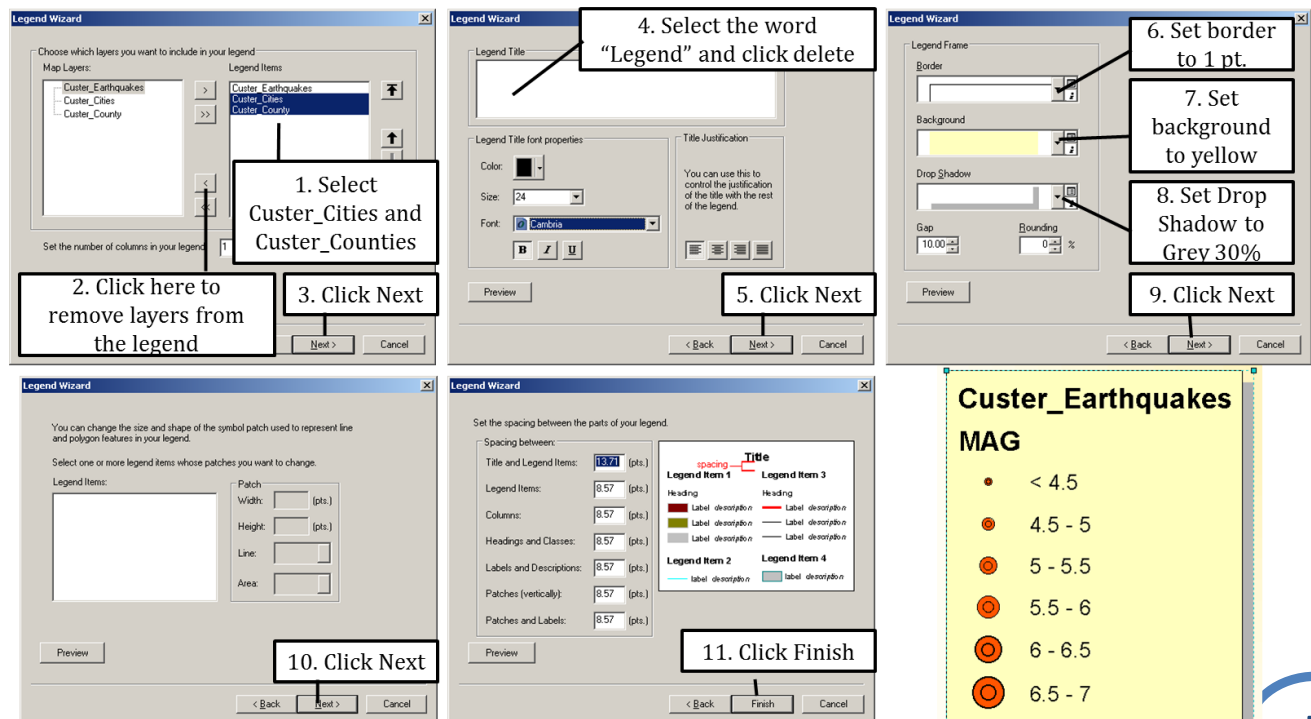
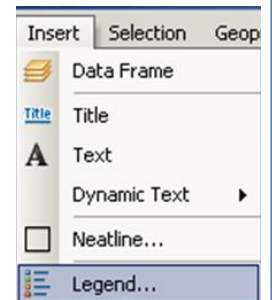
11. Click on the properties and change the color of your arrow as shown on the right. Click OK twice to close the dialog boxes. Then size and move your north arrow to fit with the rest of your map.



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Exercise 3: Inserting map elements: Legends

1. Start ArcMap and open Exercise3_Adding_a_Legend_to_Your_Map.mxd from the Topic3_10 folder. Go to the Layout view. We want to add a legend to the main map body showing the various earthquake magnitudes in Custer County.
2. Right-click on the "Layers" data frame and choose "Activate".
3. Click Insert > Legend as shown on the right. Follow the directions below to complete the Legend Wizard.



- Notice that the legend you just created includes the words “Custer_Earthquakes” and “MAG”, neither of which looks good on your map. Double-click on the legend to open its properties and then follow the directions below to remove those words.

1. Click “Style...”

2. Click on “Properties...”

3. Uncheck this box

4. Uncheck this box

5. Click on “Label Symbol”

6. Set font to “Cambria”

7. Click “OK” four times

- Perhaps you would prefer that the legend included the word “Magnitude” to indicate the meaning of the numbers and symbols. To do this open the Layer properties for the Custer_Earthquakes shapefile (hint: right-click > Properties) and go to the General tab. Change the Name of the layer to “Magnitude”. Note that this does not change the name of the shapefile itself, just the name under which this shapefile appears in this map document.

1. Go to General tab

2. Change the Layer Name to “Magnitude”

- Double-click on the legend again to open its properties. As before, on the Items tab click on “Custer_Earthquakes” and then on “Style”.

7. As before, click on Properties. This time place a check mark for “Show Layer Name” as shown on the right.
8. Click OK a number of times to close all the dialog boxes. View the new legend – it should now include the word “Magnitude” on the top as shown below
9. Move and size the legend if needed. Then save and close your map.

