ENHANCING GIS DATA

Always remember when working with Canvas with GIS+ that you’re not only limited to importing, projecting, or exporting GIS data. With Canvas’ multitude of tools and features as well as Visualization command, you can create a GIS project that will get noticed, not only for data, but presentation as well.

Objectives
After this exercise you will be able to:
» Colorize Shapefiles
» Visualize Data
» Select a projection

Required knowledge to perform this exercise:
» Open palettes
» Apply fill and stroke colors
» Scale objects (reduce size)
» Apply or replace symbols

STEP 1: OPEN SHAPEFILE
For this example, we opened some shape files for the state of New York.
Now that you have the Files/Layers List dialog box open as default, you can give them a projection of UTM Zone 18N. On this dialog box click on Projection button to change the projection to UTM Zone 18N.

The File Coordinate System dialog box will now open. Then click on Select button to open the Projected Coordinate Reference Systems dialog box will now open and select on the left side the WGS 84 / UTM zone 18N, then click OK.
You will notice that in the Projection column change to UTM zone 18N. We'll use a different colorization technique for each one. Select the first row and click the Properties button to open the Layer Properties dialog box.

You can select each files and change the colorization and shapes. To start click on Properties button. The Layer Properties dialog box will open and you can change the shape as circle, rectangle, triangle or symbol object as well as the colorization method. After you are finished, click OK to continue to the following layer.

Now that the projection and colorization techniques have been established, we can click the Next button to move to the GIS result.

Each Shapefile is on a different layer which gives us control of how the map is displayed.
STEP 2: IMPROVING THE MAP

As you can see the information is accurate, however for presentation purposes, the project could be improved somewhat. For the airport, train station, and port layers, we can use the Visualize data command to select an appropriate library object that represents information that layer; e.g., for the airport layer, go to GIS > Visualize Data, then in Symbol section select Single and select an airplane using our Symbol Library and set the size between 0.5 to 1 pt.

The map below contains the new symbol.
**STEP 3: APPLYING BACKGROUND**

For the layer of cd106, we removed any fills for the time being. Opening the Document Layout dialog box select the cd106 layer, then select all the shapes by pressing Ctrl+A and remove the fill ink color.

Then we created a large rectangle around the map using the Rectangle tool. Then we created a new layer called background. We cut and pasted the rectangle to the new layer and then sent background to the bottom of the stacking order with the Arrange command. Assign a purple gray gradient fill and stroke to the rectangle. The gradient ink will come through since none of the polygons have a fill.
STEP 4: APPLY EFFECTS TO SYMBOLS
On the airport layer, select all the symbols pressing Ctrl+A and assign them a white fill so they contrast against the rectangle.

On the park layer, select all the polygons and assign them a green gradient fill and stroke. On the fhwa_uza layer, select all and assign a pinkish gray gradient fill and stroke to all the objects.

Now on the bottom image you will see the end result of this step.
STEP 5: CONVERT TO PDF AS LAYERS

Now that we finalized modifying the New York map presentation, it is time to convert to PDF format and also make use of the PDF layer technology. A PDF with layer allows the viewer to turn on and off the layers to view different aspects of the drawing.

To start converting this presentation as PDF, select File > Save As and type on File Name NY_presentation. Then in Save as type select PDF - Acrobat files and click OK.

It is very important to correctly select the PDF Options when exporting. On the left side of the PDF Options dialog box select “Create PDF layers”. Refer to the selected options below to finalize this tutorial.