

Creating a Map of the City of Austin Using GIS

Objective: Create a map of Austin using GIS.

Materials: Computers, ArcView GIS 3.2, Austin data (able to download for free – see <http://www.esi.utexas.edu/gk12/workshops/gis/gateways.php>)

Time Allotment: 45 minutes

Procedures:

- 1.) Double-click on the ArcView GIS 3.2
 - 2.) Click on ArcView GIS 3.2 symbol
 - 3.) You will get a “Welcome Window”. Click on “Ok” to “Create a New Project with a New View”
 - 4.) A new window will pop up and ask “Would you like to add data to the view now?” Click on “Yes” to add data.
 - 5.) A new window labeled “Add Theme” will open. Go to the “Drives” drop down box and select the D: drive (this is the CD drive, make sure your CD is in the computer)
 - 6.) Click on GIS Data folder
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Adding Layers to your GIS Map...

- 7.) Double-click the layer for the major/minor streets “cenart.shp”
- 8.) Check the box in the legend to activate the theme
- 9.) Look for the “+” under Edit and “Add Theme”
- 10.) Follow steps 7–9 to select data for
 - City of Austin Parks “coa_parks.shp”
 - Travis County Parks “travis_parks.shp”
 - State of Texas “state_parks.shp”
 - Facilities “facility.shp”
 - Hydrology (River, Lakes, and Ponds) “hydro_p”
 - Schools “schools.shp”
 - State Highway 130 (new proposed highway) “SH130.shp”
 - Railroad “railroad.shp”
 - Airport “bergstrom.shp”

Using the tools to help view your map...

- **Zoom in** – magnifying glass with a ‘+’ sign
- **Zoom out** – magnifying glass with a ‘-’ sign
- **Pan** – symbol of a hand
- **Identify tool**- an “i” with a black circle (make sure the theme is selected)

If you lose your map, be sure to “Zoom to Active Theme”

Labeling the layers on your map...

- Double-click on the name of the layer you want to select in the legend
- Type “Ctrl +L” to add labels to your map, be patient, it may take a minute
- Type “Ctrl+R” to remove labels from your map

If you use other layers in between labeling functions, you must select the layer again.

- 1) Go to **View – Properties**
- 2) Go to **Map Units**, using the drop down box, change from **unknown** to **meters**
- 3) Go to **Distance Units**, using the drop down box, change from **unknown** to **miles**. Click OK.
- 4) Single click on **View – Layout – Landscape – OK**. Maximize this window.
- 5) Double click on **View**. Delete the words “**View 1**” and write a name for your map such as “**City of Austin Map**”. You can resize the textbox by clicking on one of the corners and dragging it to the position you want. To move the textbox you can use the arrows on the keyboard or by clicking in the center of it and dragging it to the desired position.
- 6) Double click on the scale bar. Make sure the unit is in **miles** (you may also experiment with other changes).
- 7) Double click on the North Arrow if you wish to change it.
- 8) Now you need to add the names of the cartographers and write the date that the map was created. Click on the “**T**” (Text) that is located on the toolbar. Write **Cartographers:** then your names followed by today’s date and **Data Source: City of Austin**. Then, click ok. Position the textbox by using the arrows on the keyboard.
- 9) If you want to make any final touches on your map, click back on the arrow (Pointer) on the far left of the toolbar, then move or resize the components of the map in order to make a pleasant-looking layout.
- 10) To save the map, you will export it as a jpeg. Go to **File – Export**. At the bottom left of the export window where it says list file of type: scroll to the end and select **JPEG**.
- 11) Save your map according to the teacher’s instructions.

Where it asks for a “file name”, write a name in a format that includes your last name and the date. Do not include any punctuation marks except for a period (.)
- 12) Click OK.

☺ **Great Job!!!**