

ArcView 3.2 GIS Exercise 1 - Introduction

ArcViews' Interface

ArcView basic features are views, tables, charts and scripts. These features are stored in one file called a *project*. ArcView projects are saved in project files (.prj) that store all necessary information to allow ArcView to reopen projects whenever needed.

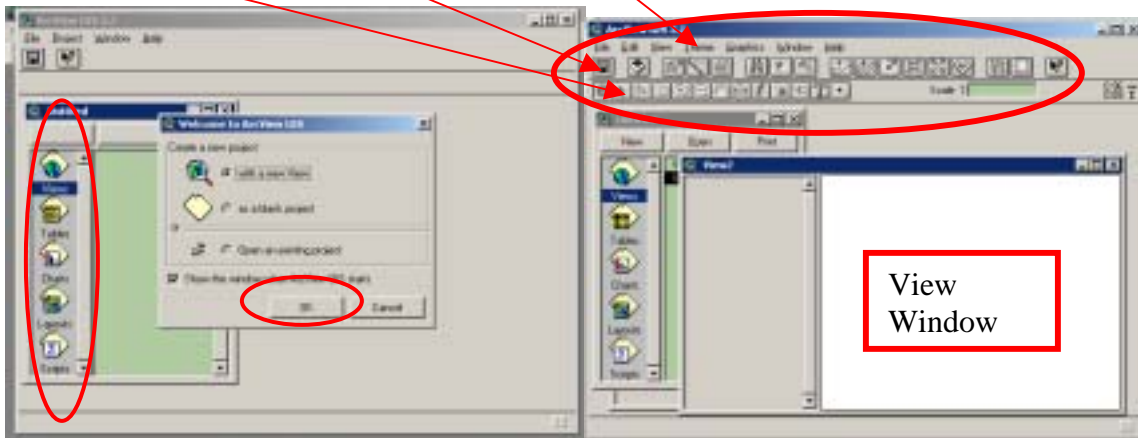
Adding a View:

Opening a View window causes the “menu bar” at the top of ArcView to become visible.

The menu bar contains pulldown menus.

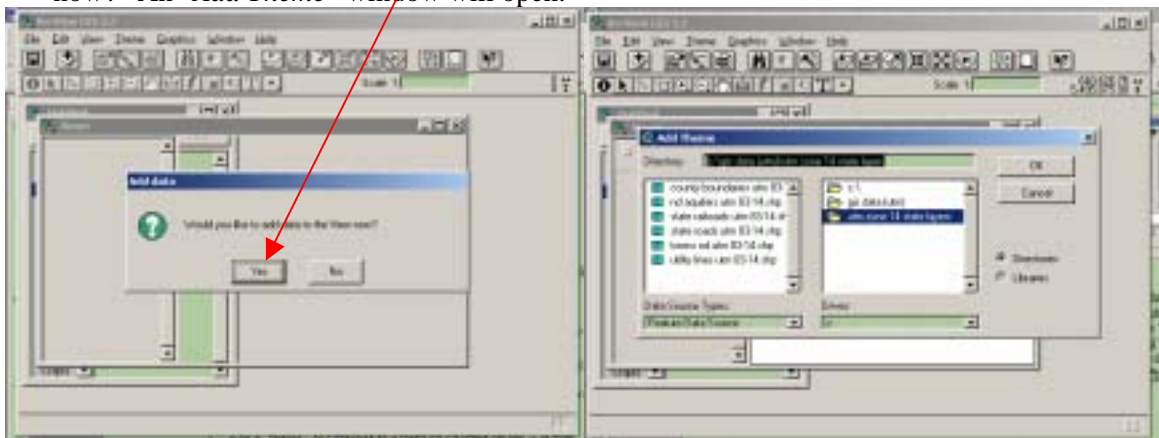
The “button bar” located beneath the menu bar contains buttons giving you quick access to various controls.

The “tool bar” located beneath the button bar contains various tools you can work with. Click on a tool to use it.



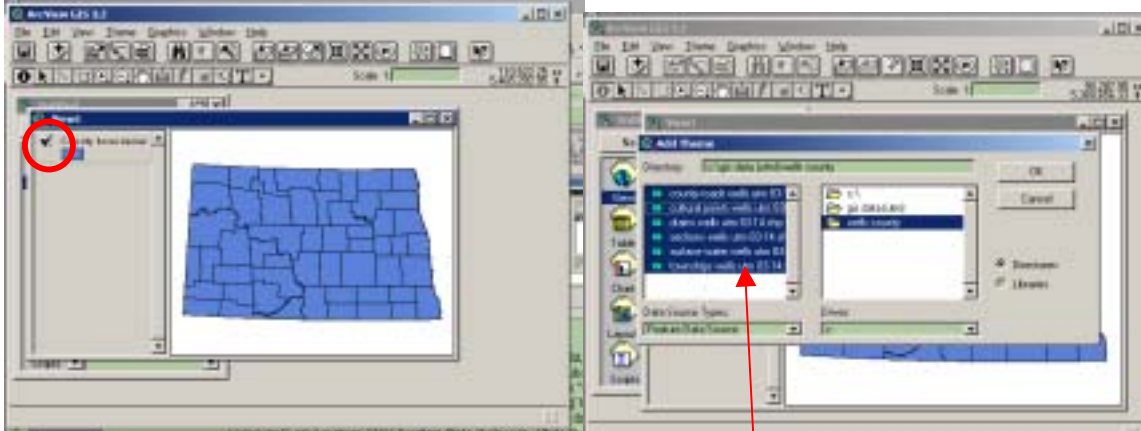
Steps to create a project:

1. Start ArcView. A “Welcome to ArcView GIS” window will open. Check “OK”.
2. In the Add Data window, click “Yes” to the question “Would you like to add data to the view now?” An “Add Theme” window will open.



3. In the “Add Theme” window navigate to the “c-drive” on the right, click on the “GIS Data(utm)” directory, then on a “UTM Zone 14 State Layers” subdirectory. Finally, click on the “county boundaries utm 83-14” file in the left window. Click “OK”.
(Note: A theme in ArcView is one layer of data a map.)

4. Display a theme in a view by checking the box in the view legend beside the theme name.



Adding Themes:

Add additional themes by clicking on the  button on the button bar. An Add Themes window will open.

5. Add the following additional themes from the “GIS Data(utm)” directory, and the “UTM Zone 14 State Layers” subdirectory: “ND Aquifers, State Railroads, State Roads, Towns ND, Utility Line.”
6. Add the following themes from one of the County subdirectories: “County Roads, Cultural Points, Drains, Sections, Surface Water and Townships.” (Note: multiple themes can be added at the same time by holding the “shift key” down while selecting the desired themes with the left mouse button.)

Setting View Properties:

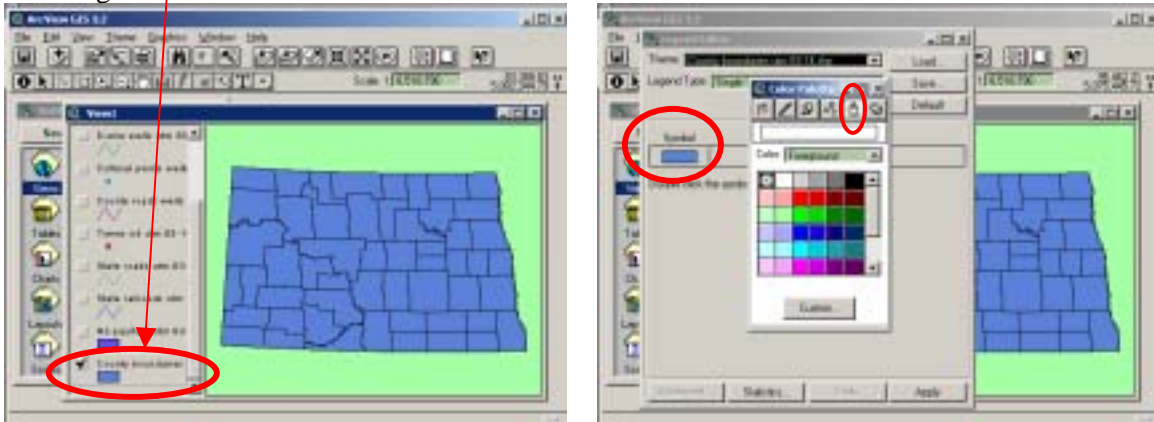
7. Use the View pulldown menu and choose “Properties.” A View Properties window will be displayed.

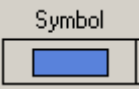




8. In the View Properties window:
 - a. Set the Map Units: Meters
 - b. Set the Distance Units: Miles
 - c. Set the Background Color: Light green. (Click the Select Color button.)
 - d. Dismiss the window.

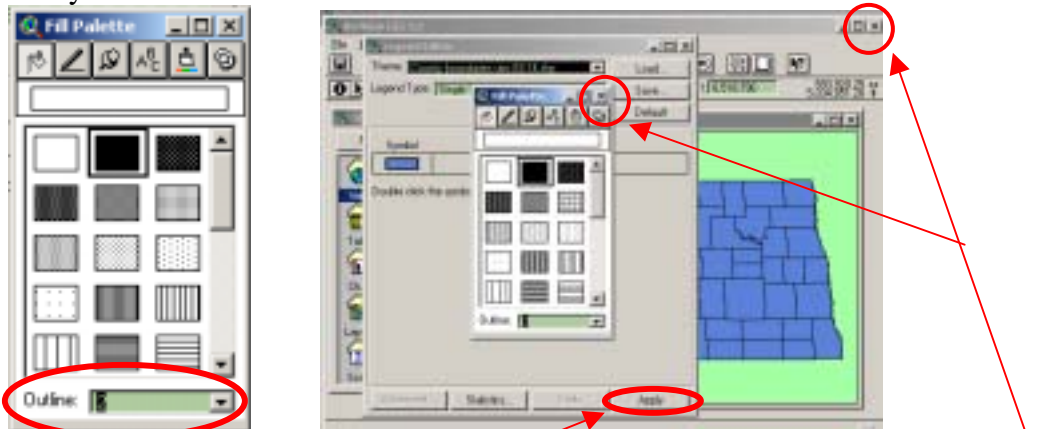
Editing Theme Display Properties:

9. Double click on the “county boundaries utm 83-14” in the view legend. This will display a “Legend Editor.”











10. In the Legend Editor window, double click on the theme symbol . This will display a “Fill Palette” window.

- a) Click on the “Paint Brush”  in the upper right of the Fill Palette window
 b) Choose a light green color.
 c) Next click on the “Fill” symbol . The Palette window will change to show fill symbols



- d) Click on the “pull-down menu” to the right of the word “Outline” in the Fill Palette window and select “2”.
 b) Click on the word “Apply” in the lower right of the Legend Editor window.
 c) Dismiss the Legend Editor window by clicking the x at the upper right of the window.
 d) Dismiss the Fill Palette window.
11. Edit the other theme colors and symbols as follows:

- a) “State Roads”: Double Jointed line, color Dark Red. .
 (Editing a line theme will require the additional step of selecting the “Pen Marker Palette” by clicking on the “Pen”  symbol in a palette window and then selecting desired line type and size.

- b) "State Railroads": railroad line symbol , color purple.
- c) "ND Aquifers": solid fill polygon , aqua color
- d) "Utility Lines": line with arrow , green color
- e) "ND Towns": size 8 dot , color red
(Editing a point theme will require the additional step of selecting the "Pen Marker Palette" by clicking on the "Marker"  symbol in a palette window and then selecting desired point type and size.
- f) "County Roads": single line, dark red.bb
- g) "Cultural Points": size 8, yellow color
- h) "Surface Water": solid fill polygon, blue color
- i) "Drains" single blue line.
- j) "Sections" empty polygon 
- k) "Townships", empty polygon, outline size 2.

Labeling a Theme:

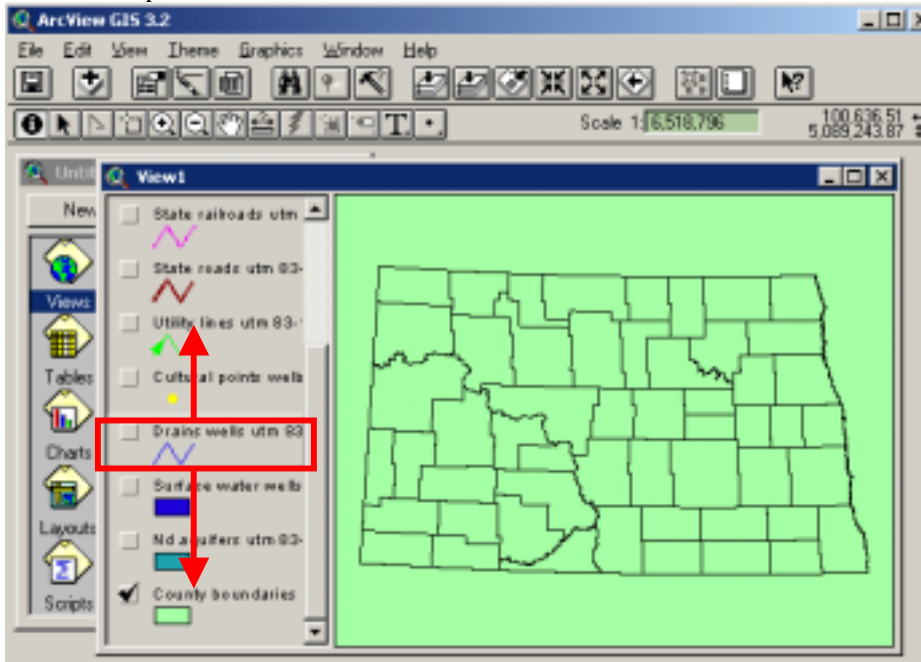
12. First set the text size and style. Choose the "Window" pulldown menu, and select "Show Symbol Window." This will display a "Font Palette" window. In the Font Palette Window choose "ABC", and set the font size to "7" and the style to "bold." Dismiss the window.



- 13. Choose the theme to label by making that theme active. (Make the "county boundaries utm 83-14" theme active by clicking once on the theme name in the view legend).
- 14. Click on the "Theme" pulldown menu and select "Auto Label". This displays an "Auto-label" window.
- 15. In the auto-label window use the "Label field" pulldown menu to select "County Nam". Also click on the "Use theme's Text Label Placement Property". Click on the OK button.

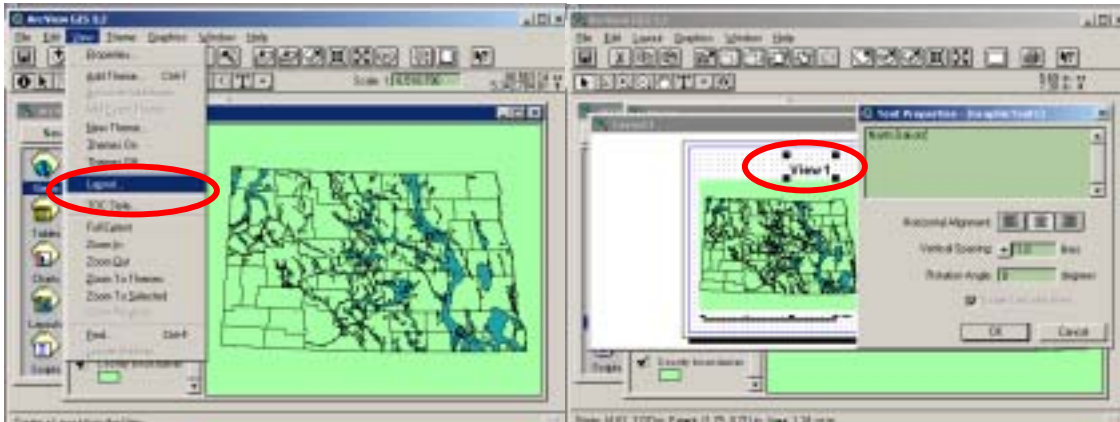
Selecting Order of Drawing the Layers

ArcView draws the layers from bottom to top, therefore it is necessary to set the order of themes in the view legend, otherwise a line theme will not be visible through a solid fill polygon theme drawn on top of it.



16. Move the themes up or down in the view legend by selecting one theme at a time with the mouse pointer, holding the left mouse button down, and moving it to the desired position.
17. *Set the drawing order in the view legend as follows from top to bottom:* Township, County Roads, Sections, State Railroads, State Roads, Towns ND, Utility Lines, Cultural Points, Drains, Surface Water, ND Aquifers, county boundaries.

Preparing a layout (map) for printing:



18. Display the county boundaries and ND aquifers themes.
19. Use the "View" pulldown menu to choose : "Layout". This will display a "Template Manager" window. Choose "Landscape" and click "OK" This will display a "Layout" window.
20. With the Layout window active, double click on the layout title "View 1". This will display a "Text Properties" window.
21. In the "Text Properties" window, Change the title to "North Dakota". Click "OK". If the title is in the wrong place move it to where you want it.
22. To print the layout choose "print" from the file pulldown menu.
23. In the Print menu, choose the appropriate printer and click "OK"

Saving a project:

24. Use the File pulldown menu to select "Save Project As".
25. In the "Save Project As" window save the project with the name "North Dakota Project" on the c-drive and in the "Temp" directory.