

Lesson 1: Introduction to ArcGIS

What You'll Learn: how to:

- Start ArcMap
- Add data layers
- Change data symbology
- Add legends, titles, North arrows, and other elements
- Print a map to a PDF
- Create a new map
- Pan and zoom

Data for this exercise are located in the L1 subdirectory.

Videos for this exercise are located in the L1\video\ subdirectory.

What You'll Produce: Two maps, one of lakes and roads, and one of wetlands.

Background: This is the first in a series of introductory exercises for ArcGIS/ArcMap. These are practical skills that complement the theory and practice of GIS described in the textbook "GIS Fundamentals: A First Text on Geographic Information Systems", by Paul Bolstad. These exercises use datasets available at www.paulbolstad.net/gisbook.html, under the "ArcGIS Exercises and Videos" link.

These lesson instructions and data used are available for download, and are described in the word document "GettingStarted.doc" found at the website.

Note that quicktime (.mov) videos are included in most lessons, and shown in bold text at appropriate points, as in **Video: L1_1_Start_ArcMap.mov**.

We assume you have a functioning copy of ArcMap running on your computer. The exercises were developed with ArcGIS, Arcview version 9.2, student edition.

Starting ArcGIS, adding data and creating your first map

First, find the ArcMap icon, shown to the right. The icon is often located

- 1) as a desktop or taskbar shortcut,



or

- 2) in an ArcGIS folder

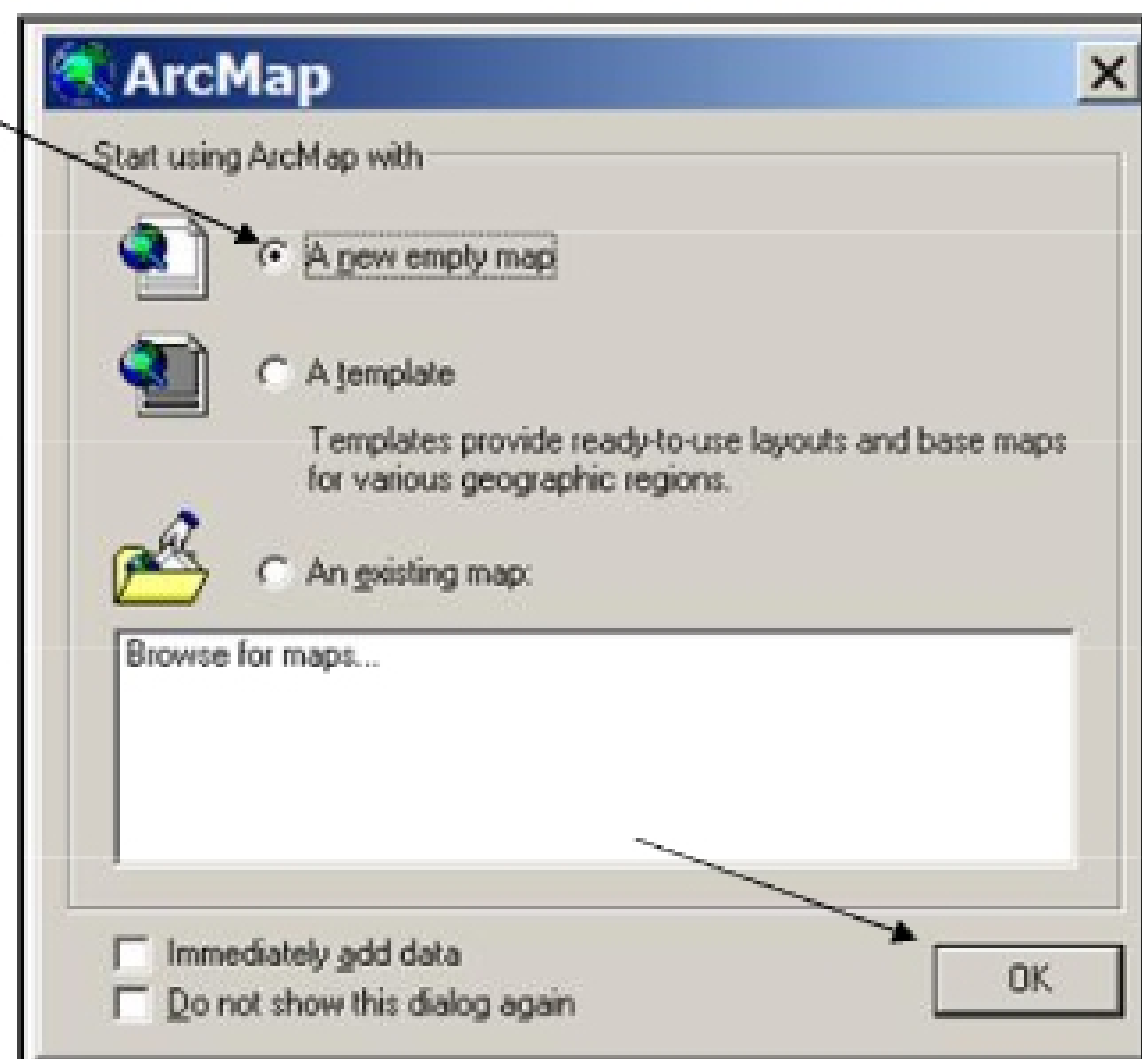
In Windows XP it may often be found by left clicking on the Start button in the lower left of the screen and selecting Programs ⇒ ArcGIS ⇒ ArcMap.

Double left click on the ArcMap icon, and be patient while a start banner displays.

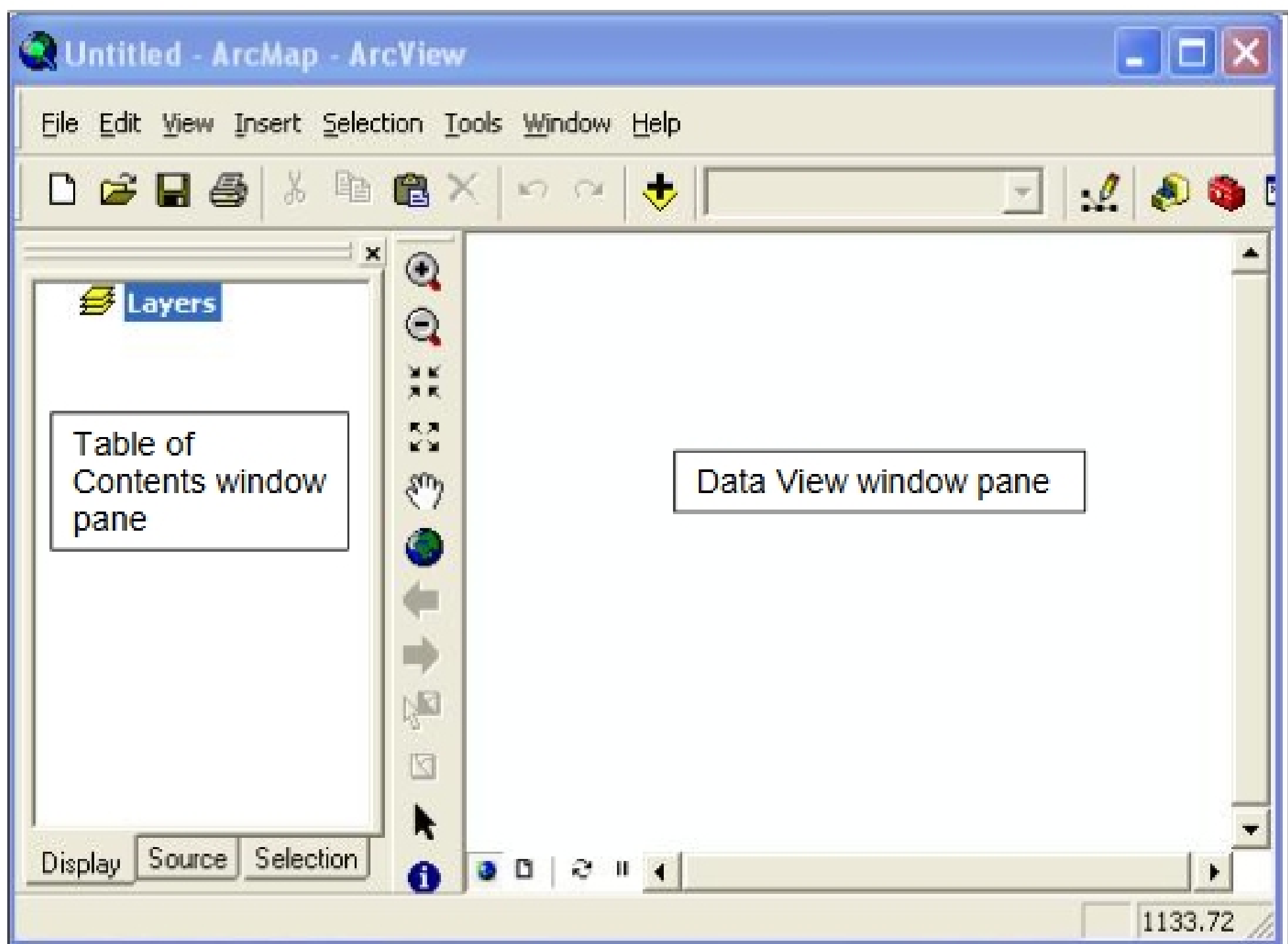
Next, a window should open that is similar to that below. You can elect to create a new, empty map (more precisely, a map project), or open a template or an old map.


You indicate your choice by left clicking on the open radio button, filling it, as shown.

Now single left click on the OK button in the lower right corner of the popup window.



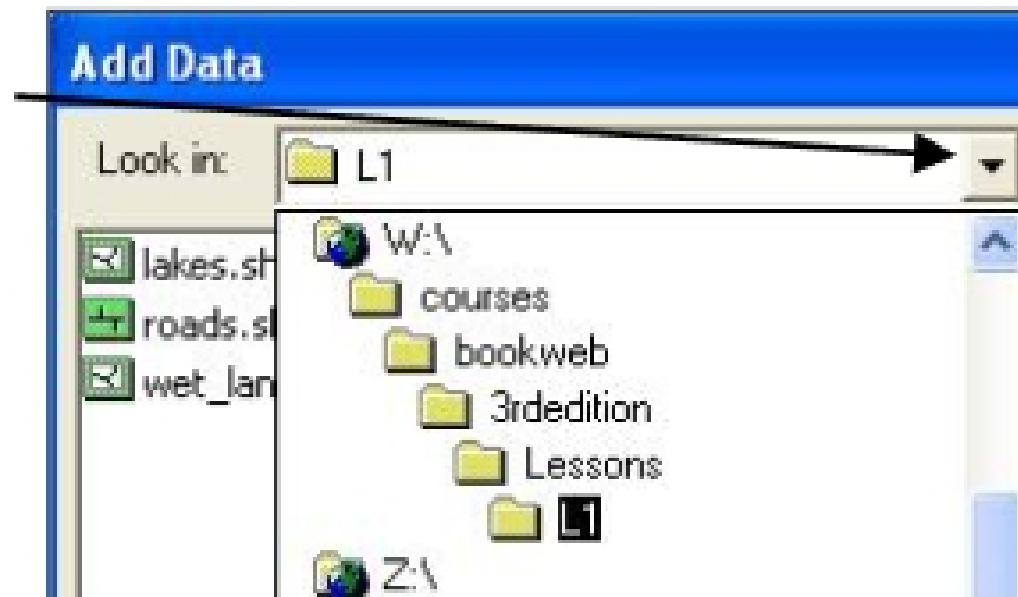
This will open the main ArcMap window, similar to that displayed below. Note there is a **Table of Contents** window pane, a mostly blank area forming the left part of the are various icons and menu bars, each of which allows you to perform some action.



Left click on the **Add Data** button  in the top center of the window frame to add data layers (also called themes).

You will see a dialog box to select a layer or layers for the map.

Click on the display triangle to the right of the "Look in:" sub window, and navigate the directory tree, clicking up and down, until you see your data located in the sub-directory named Lesson\L1.



Double left click on the file named *lakes.shp*.

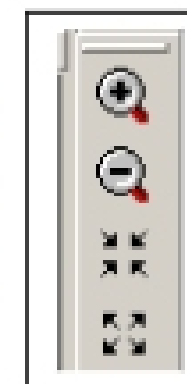
This will add this data layer to your map.

Note that the *Lakes.shp* layer data are displayed in the data view pane, and data names are listed in the table of contents pane on the left.

Repeat the process to add the *roads.shp* data layer.

Panning and Zooming

ArcMap allows you to change the magnification and area that you view in your data pane. There is a cluster of zoom buttons, most easily identified by plus (+) and minus (-) magnifying glasses (see at right). Because the toolbars are "dockable", or movable about the main ArcMap window, they may be in one of several places. They are typically near the table of contents pane, or along the top of the window.



Left clicking on the zoom and pan icons change the cursor function. For example, left clicking on the plus (+) magnifying glass changes it to a "zoom in" cursor. When you have activated this cursor, clicking on the data pane will zoom in on a point.

You can also hold down on a left click and drag to define a zoom to area.

The minus cursor zooms out based on a point click, and the "arrows in" and "arrows out" cursors zoom the entire pane by a fixed amount.

To exit the pan in or out cursors, click on the arrow zoom button in cluster of the pan and zoom tools.

